INSTITUTE OF ADULT EDUCATION

PROCEEDINGS OF THE INTERNATIONAL CONFERENCE TO MARK 50TH ANNIVERSARY OF THE INSTITUTE OF ADULT EDUCATION IN TANZANIA

Theme: Lifelong Education for Sustainable Development

Edited by:
Michael Ng'umbi, Philipo Sanga, Anathe Kimaro & Eric Samba

INSTITUTE OF ADULT EDUCATION

PROCEEDINGS OF THE INTERNATIONAL CONFERENCE TO MARK THE 50TH ANNIVERSARY OF THE INSTITUTE OF ADULT EDUCATION, TANZANIA

Edited by Michael Ng'umbi, Philipo Sanga, Anathe Kimaro & Eric Samba

Conference dates: 25th to 27th August 2025 at the Julius Nyerere International Convention Centre (JNICC), Dar es Salaam Tanzania

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Preface

The Institute of Adult Education (IAE) in Tanzania organised an international conference on Lifelong Education to celebrate its 50th anniversary. The conference, held from 25th to 27th August 2025 at the Julius Nyerere International Convention Centre (JNICC) in Tanzania, aimed at commemorating the IAE's 50th anniversary since its establishment by the Tanzania Parliamentary Act no. 12 of 1975. The objectives of the conference were to: (a) raise awareness among the public that adult and non-formal education is a necessary tool for sustainable socio-economic development, (b) highlight the crucial role of literacy as a foundation for lifelong learning, (c) accelerate the recognition of adult and non-formal education as an important element in the realization of national and international education and development agendas, (d) renew the political momentum and commitment to adult and non-formal education and (e) cultivate and stimulate entrepreneurship skills among youth and adults. The conference, with the attendance of about 1100 delegates from Tanzania, Uganda, Nigeria, Zambia, China, and South Korea countries, was inaugurated by the Prime Minister of the United Republic of Tanzania, Hon. Kassim Majaliwa Majaliwa (MP).

There were live and virtual presentations, which included four keynote speeches given by Prof. Eustella Bhalalusesa (Former Commissioner for Education); Prof Michael W. Ng'umbi (former Rector, Institute of Adult Education); Dr Godson Gatsha (Deputy Vice Chancellor-Students' Services, Botswana Open University); and Dr Sadrag P. Shihomeka (Senior Lecturer: Public Relations, Media Technology and Political Communication, Namibia University of Science and Technology).

Plenary and parallel sessions took place from day one to day three of the conference, with presentations and subsequent discussions organised into sub-themes: Development of adult and non-formal education; Lifelong education in the digital age; Alternative education pathways and quality education; Financing of adult and non-formal education programmes; Research in adult and non-formal education programmes; Position of vocational education in contemporary society; Open and distance learning in promoting lifelong learning; The future of adult education; Adult education and community development; and The role of artificial intelligence in adult and lifelong education. Following a thorough blind peer review process, 28 papers were accepted for publication in the proceedings. The conference committee would like to express our sincere appreciation to both the authors and the thoughtful yet constructive reviewers.

The success of the conference relies heavily on the collective efforts and support from various individuals and institutions. The Institute sincerely thanks the members of the conference committee, the reviewers of the papers, and all other individuals and organisations for their contributions that made this conference a resounding success.

Conference Organisers

Conference host: Prof. Philipo Lonati Sanga, The Rector of the Institute of Adult Education

Conference Committee Chairperson: Dr. Anathe Kimaro, Head of Quality Assurance Unit, Institute of Adult Education

Conference Convener: Dr. Belingtone Eliringia Mariki, Director of Research, Consultancy and Publications Unit of the Institute of Adule Education

Conference Committee: Prof. Mbowe Kabung'a, Dr. Aristarick Lekule

Conference Website (*https://50years.iae.ac.tz/*): Mr. Enock Mayengo, Mr. Germanus Kyafula

Awards

Hon. Kassim Majaliwa Majaliwa (Prime Minister of the United Republic of Tanzania): In recognition of his support for IAE and adult education in the country through his attendance and official opening of the IAE Conference on Lifelong Education

Ambassador Dr Nicholas Kuhanga (Former Vice Chancellor of UDSM): In recognition of his practice and professional contribution under Mwalimu Nyerere's philosophy on Adult Education in the country.

Mr Yusuph Kassam: In recognition as the first Directo of the Institute of Adult Education

Mrs Lambertha Mahai: In recognition of her long service as the Former Director of the Institute of Adult Education

Dr Fidelis Mafumiko: In recognition of his leading role as the Former Director of the Institute of Adult Education

Prof. Michael W. Ng'umbi: In recognition of his leading role as the Former Rector of the Institute of Adult Education

Mr Salum Mnjagilila: In recognition of his leading role as the Former Director of the Adult Education Section, Ministry of Education and Vocational Training.

Representatives from: Public Procurement Regulatory Authority (PPRA), NMB bank, Mshale Company and DVV International, in recognition of their financial support to the Conference

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SUMMARY OF CONFERENCE PROCEEDINGS

Summary of Activities for Day One, 25th August 2025

Official Opening Ceremony

The conference began with participants' registration from 08:00 to 08:30 hours. The Master of the Ceremony called the Conference to order at 10:00 a.m. by advising/calling the attendees to prepare for the arrival of the Guest of Honour, the Prime Minister of the United Republic of Tanzania, Hon. Kassim Majaliwa Majaliwa (MP), in the conference hall. The Guest of honour arrived at 10:30 am. Before making his way to the hall, he visited different exhibition pavilions at the JNICC reception halls.

After the Guest of Honour's entry into the conference hall at 11:00 hours, the Tanzanian national and the East African anthems were sung under the leadership of the JWTZ Brass Band. Thereafter, religious leader, Sheikh Majaliwa Kauto and Bishop Prof. Rejoice Ndalima were invited to open the ceremony, each with a short prayer.

Introductory Remarks by Permanent Secretary, Ministry of Education, Science and Technology (MoEST), Prof. Carolyne Nombo

Thanked the Guest of Honour for accepting the invitation to join the celebration of the Institute of Adult Education's 50th anniversary. She also thanked all the participants and stated the purpose of the conference, which reflected the theme, ***'Lifelong Learning for Sustainable Development'***.

Prof. Nombo concluded her remarks by introducing participants including Hon. Prof. Adolf Mkenda-Minister for Education, Science and Technology; Mr. Edward Mpogolo - District Commissioner of Ilala District (representing the Dar es Salaam Regional Commissioner); Ambassador Dr Nicholas Kuhanga; Prof Zacharia Mganilwa - Chairperson of the IAE governing council; Prof. Eustella Bhalalusesa-former commissioner for education in Tanzania; Director of Adult Education from Zanzibar; Heads of Institutions; Former Directors of IAE; Colleagues/delegates from Botswana and Namibia; Development Partners including World Bank; DVV International; KOICA; UNICEF; UNESCO and CARE International; IAE staff; IAE alumni; guests and all participants.

GREETINGS FROM PARTICIPANTS

Hon. Edward Mpogolo, Ilala District Commissioner

He welcomed the guest of honour and all participants in the Dar es Salaam region. He congratulated the Institute for Adult Education (IAE) on its 50th anniversary and acknowledged its important role in providing educational opportunities for out-of-school youth and adults. Hon. Mpogolo informed the participants that President Dr Samia Suluhu Hassan has strengthened the education sector by hiring more teachers and increasing their salaries. He also emphasised that the President has improved infrastructure to support the implementation of the fee-free basic education policy in the country.

Prof. Zacharia Mganilwa, Chairperson of the IAE Governing Council

Prof. Zacharia Mganilwa, in a special way, thanked Hon. Kassim Majaliwa for participating in the Lifelong Learning conference in celebrating the 50th anniversary of the IAE. Prof. Mganilwa pointed out the role of the IAE in ensuring adult and non-formal education extends to all citizens within the country. In fulfilling this role, Prof. Mganilwa briefly highlighted most of the recent partnerships between the Institute and the Tanzania Prisons Service in ensuring that prisoners have access to educational opportunities during their sentences. Prof. Mganilwa also expounded on the role of the IAE in aligning with the Education and Training Policy (ETP) 2014, 2023 Edition, specifying the need for promoting lifelong education programmes among Tanzanian community. In conclusion, Prof. Mganilwa highlighted the Institute's role in creating and implementing educational programmes for individuals of various ages. This includes those who did not have the opportunity to pursue formal education or complete their studies, as well as those who wish to enhance their education by acquiring new skills.

Prof. Philipo Lonati Sanga, Rector, Institute of Adult Education

Professor Philipo L. Sanga began his speech by welcoming and thanking the guest of honour, Hon. Kassim Majaliwa, along with all the participants, for attending the conference. He acknowledged that the presence of the guest of honour demonstrated his commitment to supporting adult and non-formal education in the country. The rector expressed sincere gratitude to Hon. Prof. Adolf Mkenda and the Ministry of Education, Science and Technology for unwavering support of the Institute for Adult Education (IAE). He also recognised the invaluable assistance from the IAE Governing Council, management, and staff in ensuring the success of the lifelong learning academic conference celebrating the IAE's 50th anniversary. Besides, he

extended his heartfelt appreciation to the institutions that supported the conference, including DVV International, CARE International, the Public Procurement Regulatory Authority (PPRA), and Mshale Tanzania.

Professor Sanga outlined several adult and non-formal education initiatives implemented by the IAE to support out-of-school youth and adults. These programmes include:

i) Integrated Programme for Out-of-School Adolescents (IPOSA);

ii) Integrated Post-Primary Education Programme (IPPE);

iii) Integrated Community-Based Adult Education Programme (ICBAE); and

iv) Secondary Education Quality Improvement Project (SEQUIP).

In conclusion, he envisaged that in the coming 50 years, the IAE will become the leading and model institution concerning adult and non-formal education within the African continent.

Goodwill Message from Representatives of the Development Partners, Mr Matteo Mwita, DVV International

On behalf of DVV International and all other development partners of adult and non-formal education, Mr Matteo Mwita delightedly appreciated the invitation to celebrate 50 years of the IAE. He acknowledged that the foundation of adult and non-formal education rests upon the IAE, and that it has geared up to provide education and develop necessary adult education curricula. He further emphasised that DVV International has been working simultaneously with IAE in developing Integrated Community-Based Adult Education (ICBAE) curricula as well as building community learning centres (CLCs). He lastly commented that DVV International is dedicated to continuing to work with the IAE to strengthen the adult and non-formal education sector in Tanzania.

Minister for Education, Science and Technology, Hon. Prof. Adolf Mkenda (MP)

Hon. Prof. Adolf Mkenda modestly appreciated the guest of honour, Hon. Kassim Majaliwa, for accepting to participate in the 50th Anniversary of the IAE celebrations. Prof. Mkenda firstly recognised the efforts of the late father of the nation, Mwl. Julius Kambarage Nyerere, after Tanzania's independence, set out to eradicate three national enemies: illiteracy, poverty and diseases. Hon. Prof. Mkenda then revisited the historic year of 1975, when the IAE was established, so as to successfully provide adult education to all citizens. He informed the guest of honour and all participants that the

role of the IAE in providing adult and non-formal education has been fulfilled through various programmes such as the Integrated Programme for Out-of-School Adolescents (IPOSA) and the Integrated Post-Primary Education Programme (IPPE). The minister concluded his remarks by inviting the guest of honour to give awards, launch the Open School Management Information System (OSMIS) and thereafter, to launch a book titled "Adult and Non-Formal Education Transformation in Tanzania".

Opening Speech by the Guest of Honour, the Prime Minister, Hon. Kassim Majaliwa

Hon. Kassim Majaliwa opened his speech by expressing his sincere gratitude for being invited to participate in the 50th anniversary of the IAE celebrations. He also congratulated the Ministry of Education, Science and Technology and the IAE for organising lifelong education to celebrate the 50th anniversary of the IAE. Hon. Majaliwa conveyed greetings from the President of URT, Her Excellency Hon. Dr Samia Suluhu Hassan and Vice President Hon. Dr Philip Mpango. Hon. Kassim Majaliwa highlighted that the conference has successfully gathered different adult and non-formal education experts inside and outside the country**.**

Additionally, he emphasized that the conference serves as a platform to evaluate the journey of the IAE over the past 50 years and to consider future directions. He encouraged conference participants to propose resolutions that will enhance adult and non-formal education, which the IAE is responsible for implementing. He reiterated that the IAE's role extends beyond simply providing knowledge on the three Rs (reading, writing, and arithmetic). Hon. Majaliwa acknowledged the various contributions the IAE has made, including advising on policies and academic improvements in adult and non-formal education, conducting research to inform decision-making in adult and non-formal education in the country, and coordinating numerous adult and non-formal education programmes in the country.

The Prime Minister also explained the importance of leveraging technology in adult education for the purpose of reducing constraints of delivering education to unreached people in the country. He further emphasised that there is a need for the IAE to develop appropriate use of technology in delivering education through both Open and Distance Learning (ODL) and blended learning modes. Before winding up, the Prime Minister called for action and directed the following:

i) The ministry, in collaboration with the IAE, should increase the scope of adult and non-formal education to reach those residing in the inaccessible areas in Tanzania;

ii) The ministry, in collaboration with the IAE, should invest in vocational education to equip people with practical knowledge and skills;

iii) The ministry, in collaboration with the IAE, should improve the teaching and learning environment in cooperation with the development partners.

iv) The IAE, in cooperation with the development partners, should continue researching in order to identify the needs of the Tanzanians to improve their living conditions;

v) The IAE to continue cooperating with national and international institutions in pioneering adult education; and

vi) The IAE, in collaboration with other stakeholders, should ensure that individuals creating their innovations are recognised and protected.

Having issued the six directives, the PM thanked the IAE community and the media for keeping the Tanzanian community well informed.

He then launched the OSMIS system, the book on Adult and Non-formal Education in Tanzania and finally declared the conference officially open.

Awards presentation – Prime Minister, Hon. Kassim Majaliwa

In this event, awards were issued to institutions and individuals who were the pioneers and active supporters of the development of adult and non-formal education in the country, as well as those who made the IAE 50th anniversary celebrations successful. The exercise was led by Dr Reuben Ndimbo (Convener of the Conference). The awards were in the form of a special plaque. The following received the awards:

i) Ambassador Dr. Nicholas Kuhanga - Former Minister for Education and Vice Chancellor, University of Dar es Salaam;

ii) Mr. Yusuph Kassam - Former Director of the Institute of Adult Education;

iii) Mrs. Lambertha Mahai - Former Director of the Institute of Adult Education;

iv) Dr. Fidelis Mafumiko - Former Director of the Institute of Adult Education;

v) Prof. Michael W. Ng'umbi - Former Rector of the Institute of Adult Education;

vi) Mr. Salum Mnjagilila - Former Director of the Adult Education Section, Ministry of Education and Vocational Training. Other awards were presented to four (4) institutions that financially sponsored the conference, including: PPRA, NMB, Mshale Company and DVV International.

CONFERENCE SESSIONS AND PRESENTATIONS

The three-day programme included paper presentations, plenary sessions and panel discussions that were organised around thematic areas.

Day One: 25th August, 2025

Keynote Speeches: Afternoon Session

This session was chaired by Prof. Michael W. Ng'umbi (IAE). The session had two (2) presentations delivered by Prof. Eustella Bhalalusesa (UDSM) and Dr Godson Gatcha (Open University of Botswana).

1st keynote speaker: Prof. Eustella Bhalalusesa (UDSM)

Topic: The Role of Open and Distance Learning in Promoting Lifelong Learning

Prof. Bhalalusesa extended her gratitude and was very proud of the IAE for making her the person she is today. She commended the IAE for organising the conference. She quoted from Mwl. J.K. Nyerere said, "Education is something which never stops; we need to acquire it from the time we are born until we die." She added that, if a country wants to acquire something, there is a need to educate adults. Bhalalusesa emphasised that promotion of adult and non-formal education is possible through open and distance learning because of its flexibility. She further urged that investment in open distance learning simultaneously promotes lifelong learning. She also reminded participants that technology is the key source in the promotion of lifelong learning through open distance learning. She finally insisted, "Living is learning and learning is trying to live better".

2nd keynote speaker: Dr Godson Gatcha (Open University of Botswana)

Topic: Conceptualising Lifelong Education and Community Engagement for Sustainable Development

Dr. Gatsha started his speech by giving an experience from Botswana. He emphasised that the promotion of lifelong learning is practicable when it is directly engaged with the community. He also urged that the wrong perception of open distance learning and the institutions offering that mode of learning is born due to minimal engagement of the community. For example, he said there was an institution in Botswana that rejected a PhD work obtained through ODL. It is such discrimination and a negative perception of the ODL mode. This is the reason why Open and Distance Learning does not last due to differences in perceptions. He concluded that Adult Education is not valued, and extra efforts need to be invested to improve the situation.

Parallel Session 1 - Day One in RUAHA HALL

This session started 1430-1730 hours, chaired by Dr Sempeho Siafu (IAE). Four presenters included:

Dr Only Jeon (Institute of African Studies, Hankuk University of Foreign Studies - South Korea). 'Analysing Sustainability Factors in Tanzania's Adult Education Using the AHP Approach'

Mr Abtwalibu Salimu (Institute of Adult Education). Youth Perspectives on Integrating Life Skills, Entrepreneurship and Literacy Skills in Adult Education

Patroba E. Mgonya, Regina V. Mukama (National Institute of Transport), Shemeli M. Magambo (Institute of Adult Education) on The Influence of Integrated Community-Based Education Post Functional Literacy Programmes on Economic Growth of Tanzanian Regions

Mugabe Mtani (Institute of Adult Education) on the role of Community Learning Centres (CLCs) in enhancing Adult Learning and Education in Dodoma and Coast Regions

1st Presentation: Analysing Sustainability Factors in Tanzania's Adult Education Using the AHP Approach, (Dr Only Jeon).

The study intended to examine the key sustainability factors that contribute to the sustainable development of adult education in Tanzania. Employing the Analytical Hierarchy Process (AHP), sustainability factors were identified, classified and structured based on an extensive literature review, and their relative importance was evaluated by seven Tanzanian adult education experts. Findings indicated that social factors (34.4%) ranked highest in performance, followed by personal (27.9%), economic (25.8%), and environmental factors (11.9%).

The results suggest that, to ensure the sustainable development of adult education in Tanzania, educational policies should prioritise social factors, particularly enhancing social support systems, strengthening career-related professional connectivity, and fostering robust learning communities.

2nd Presentation: Youth Perspectives on Integrating Life Skills, Entrepreneurship and Literacy Skills in Adult Education (Mr. Abtwalibu Salimu)

The study explored the insights of sixteen (16) research participants regarding the integration of life skills, entrepreneurship and literacy skills in adult education curriculum. Through in-depth interviews and thematic analysis, the study aimed to understand youth perceptions, experiences and suggestions for enhancing the

effectiveness of these integrated skills in empowering adult learners. Findings revealed that youth view the combined approach as vital for fostering economic independence, social development and personal growth while highlighting key challenges and opportunities for programme improvement.

3rd Presentation: The Influence of Integrated Community-Based Education Post Functional Literacy Programmes on Economic Growth of Tanzanian Regions (Patroba E. Mgonya, Regina V. Mukama & Shemeli M. Magambo)

This study examines the role of these programmes in influencing economic growth across mainland Tanzania's regions. It employs cross-sectional time series data on adult education from 2019 to 2023, derived from national surveys and regional socio-economic profiles. The findings reveal that both income-generating and extension activities under ICBAE significantly contribute to the economic growth of the regions, validating the central tenets of human capital theory. The study recommends strengthening the implementation and reach of post-functional literacy programmes across districts to maximise their economic impact.

4th Presentation: The Role of Community Learning Centres (CLC's) in Enhancing Adult Learning and Education in Dodoma and Coast Regions (Mugabe Mtani)

The study intended to explore the significant role of community learning centres in promoting adult learning and education. It also highlights the challenges faced by these centres and their potential to meet the evolving and diverse needs of adult learners in a rapidly changing educational landscape. The findings revealed that centres offer a wide range of learning services and employ the REFLECT approach, actively engaging adult learners in developing literacy skills through programmes tailored to their community's specific needs.

Parallel Sessions Day One in Mikumi Hall

This session started at 1430-1730 hours at Mikumi hall and was chaired by Dr Godson Gatsha. Seven presenters included:

Prof. Kija Steven Magembe (Institute of Adult Education). 'Rethinking Digital Competence in Higher Education: Are Academic Staff Prepared for the Digital Age?'

Dr. Charles Raphael (Tengeru Institute of Community Development). Technological Advancements Facilitating Lifelong Learning: A Systematic Literature Review of Practical Implementation in Tanzania

Dr. Mustapha Almasi (Mzumbe University). 'Enhancing Lifelong Learning Through Blended and Micro learning in Tanzania Adult Learning Environments: A Comparative Analysis'

Dr. Itiha O. Mwachande (Institute of Social Work, Tanzania). 'Influence of Digital Devices on Equity and Accessibility in Lifelong Learning Opportunities: A Case of Mwanga- Kilimanjaro, Tanzania'

Potfa P. Luhala. 'Technology for Enhancing Education Sector: Development, Challenges, and Educational Impact of Artificial Intelligence in Adult and Lifelong Learning in Tanzania

Michael W. Nicodemus, Jimmy E. Kihwele (Mzumbe University) & Ester P. Kabelele (Institute of Adult Education). Potentials and Limitations of AI Integration in Enhancing Lifelong Learning: Experiences from Adult Learners

Dr. Joseph Kabage (Open University of Tanzania). Assessment in Blended Learning System: The Case of the Open University of Tanzania'

1st Presentation: Rethinking Digital Competence in Higher Education: Are Academic Staff Prepared for the Digital Age? (Prof. Kija Steven Magembe)

This study aimed to assess the digital competence of academic staff in Tanzanian higher learning institutions, focusing on: (1) their confidence in using digital tools for teaching, research and academic communication; (2) key challenges in digital technology adoption; and (3) the influence of demographic and institutional factors (e.g., age, gender, academic rank and institution type). A descriptive cross-sectional survey design using a mixed-methods approach was employed. Quantitative data were analysed with SPSS (descriptive statistics, t-tests, ANOVA), and qualitative data via thematic analysis. Findings revealed that 68% had moderate digital confidence, 20% high, and 12% low. 72% were proficient in basic digital tasks, while only 38% demonstrated advanced skills. Male staff and those in public institutions reported higher digital competence. Major challenges included inadequate infrastructure (75%), limited training (64%), and skill gaps among senior staff (50%). The study concludes that while most staff have basic digital competence, gaps remain across gender, rank, and institution type. Recommendations in this study include upgrading infrastructure, offering regular targeted digital training especially for female and senior staff, and promoting peer mentoring through communities of practice.

2nd Presentation: Technological Advancements Facilitating Lifelong Learning: A Systematic Literature Review of Practical Implementation in Tanzania (Dr. Charles Raphael)

The study intended to examine technological advancements using a systematic literature review. It specifically delved into practices implemented to facilitate lifelong learning. The findings revealed that technological advancements and practical implementation of LLL include education reforms and policy changes, integration of ICT in education, e-learning and Open and Distance Learning, AI and adaptive learning technologies, community learning spaces and Folk Development Colleges, Technical and vocational education and Training and STEM Education, youth empowerment through innovation, and teacher professional development.

3d Presentation: Enhancing Lifelong Learning Through Blended and Micro learning in Tanzania Adult Learning Environments: A Comparative Analysis (Dr Mustapha Almasi)

The study intended to investigate how blended learning and microlearning can transform adult education in LRAs and enhance lifelong learning**.** A mixed-methods approach, which involves needs assessment and literature reviews, was used. Interviews and focus group discussions were applied to understand the participants' experiences with the approaches and their efficacy. Time constraints and lack of flexibility (RII= 0.86) were the most significant challenges of traditional face-to-face learning. Blended learning and microlearning were perceived as more effective than traditional learning. Furthermore, blended learning and microlearning were associated with significantly higher effectiveness scores compared to traditional face-to-face learning.

4th Presentation: Influence of Digital Devices on Equity and Accessibility in Lifelong Learning Opportunities: A Case of Mwanga- Kilimanjaro, Tanzania (Dr. Itiha O. Mwachande)

This study aimed to examine the influence of digital devices on the equity and accessibility of Lifelong Learning Opportunities in Mwanga District, Tanzania. The study employed an interpretivist research philosophy. The findings indicate that there is poor internet infrastructure to support digital devices like desktop computers, laptops and smartphones for lifelong learning opportunities. Recommendations for this study state that the government needs to invest much on internet accessibility for equity and accessibility of digital devices to support lifelong learning opportunities.

5th Presentation: Technology for Enhancing Education Sector: Development, Challenges, and Educational Impact of Artificial Intelligence in Adult and Lifelong Learning in Tanzania (Potfa P. Luhala)

The study aimed to examine the current situation of AI usage in Tanzanian adult learning institutions by identifying key barriers to the effective use of AI. In addition, the study evaluates its influence on the entire process of teaching and learning among adult learners and educators. A mixed method was used. The results indicated that, although AI tools are taking over in education use, obstacles relating to infrastructure, technology, and policy hinder their adoption. It is important to invest in infrastructure, provide training, and develop a policy that governs AI use.

6th Presentation: Potentials and Limitations of AI Integration in Enhancing Lifelong Learning: Experiences from Adult Learners (Michael W. Nicodemus, Ester P. Kabelele & Jimmy E. Kihwele)

This study investigates the financing mechanisms of adult education in Tanzania, with an emphasis on policy inadequacies that impede long-term sustainability. Using a mixed-methods approach, the research analyses government budgetary allocations, donor contributions, cost-sharing models, and private sector involvement in financing ODL programmes. The study recommends stronger government commitment in financing adult education, improved coordination amongst development partners, and creative financial strategies such as employer-sponsored training programmes, education levies, and adult learner loan schemes.

7th Presentation: Assessment in Blended Learning System: The Case of the Open University of Tanzania (Dr Joseph Kabage)

This study employed a qualitative research approach whereby interviews and documentary reviews were used to collect data from 10 lectures and 10 postgraduate students. The findings indicated that lecturers didn't test students' submitted work to determine the level of plagiarism, and there was no means of identifying whether the submitted work was done by the same candidate. This study recommends that students' work should be subjected to peer review, and students should present their work orally through Zoom so as to validate their work.

Parallel Sessions Day One in Mount Meru Hall

Thematic focus: *Lifelong Learning*

This session started 1430-1730 hours at Mount Meru Hall and was chaired by Dr Sadrag Panduleni Shihomeka (Namibia). Four presenters included:

Jovitius C. Sabatho (Tanzania Institute of Education). 'Integrating Chinese Language in Tanzanian Adult Education: Opportunities for Lifelong Learning in a Globalised Economy'

Edward Noel M.P (Mzumbe University). Nurturing Lifelong Learning in Tanzanian Secondary Schools: A Foundation for Adult Education and Sustainable Community Development

Charles Raphael (Tengeru Institute of Community Development) & Rehema Songambele (Institute of Adult Education). Evolving Societal Needs Driving Lifelong Learning Initiatives in Tanzania: A Systematic Literature Review

Jackson E. Muhoho (Tengeru Institute of Community Development). Bridging Governance and Lifelong Learning: A Transformative Model for Adult and Non-Formal Education in Tanzania's Public Sector

1st Presentation: Integrating Chinese Language in Tanzanian Adult Education: Opportunities for Lifelong Learning in a Globalised Economy (Jovitius C. Sabatho- Tanzania Institute of Education)

This paper explores the potential for integrating Chinese language education into Tanzania's adult learning systems as a strategic component of lifelong learning in the era of globalisation. Using document review and international benchmarking, the study identifies best practices from other African countries and Confucius Institutes, while assessing policy gaps and institutional readiness within Tanzania. Findings reveal strong justification for inclusion, driven by economic trends, community needs, and digital learning opportunities. The paper concludes by proposing a roadmap for curriculum development, teacher training, and resource mobilisation, emphasising digital platforms as a cost-effective solution. Recommendations are provided to inform policy dialogue and institutional planning toward internationalising adult education in Tanzania.

2nd Presentation: Nurturing Lifelong Learning in Tanzanian Secondary Schools: A Foundation for Adult Education and Sustainable Community Development (Edward Noel M.P)

This paper presents how Tanzanian secondary schools can lay the groundwork for lifelong learning in adult education and sustainable community development. Findings reveal that when secondary schools deliberately promote lifelong learning through critical thinking, self-direction, adaptability, and a continuous learning mindset, they develop essential competencies that extend into adult life. The paper concludes that embedding lifelong learning at the secondary level can enhance adult education and

sustainable development. It advocates for a coherent educational strategy that incorporates lifelong learning principles across all levels of the education system.

3rd Presentation: Evolving Societal Needs Driving Lifelong Learning Initiatives in Tanzania: A Systematic Literature Review (Charles Raphael & Rehema Songambele)

This systematic literature review examines societal needs which drive lifelong learning (LLL) initiatives in Tanzania. It focuses on peer-reviewed articles, policy documents, reputable organisational publications and official reports published between 2015 and 2025. The findings reveal that the societal needs driving LLL initiatives are workforce development (enhancing employability and vocational skills), promoting adult literacy and poverty reduction, promoting digital literacy and inclusion, supporting marginalised groups and gender equality, and government commitment and policy support.

4th Presentation: Bridging Governance and Lifelong Learning: A Transformative Model for Adult and Non-Formal Education in Tanzania's Public Sector (Jackson E. Muhoho)

The study intended to explore how integrating adult and non-formal education principles into governance frameworks can transform public sector institutions, drawing insights from practical engagement in institutional reform at St. Francis Regional Referral Hospital in Ifakara. The findings support the potential of lifelong learning as a transformative agent in fostering responsive, inclusive, and sustainable governance systems

Parallel Sessions Day Two: Ruaha Hall (paper presentation)

This session started at 10.30-1300 Hrs in Ruaha Hall under the leadership of Dr. Joshua E. Mushi. Five presenters included:

Dr. Janeth Kigobe (Open University of Tanzania). 'Expanding the Mandate of the Institute of Adult Education: A Strategic Shift toward Reskilling and Upskilling for Economic Growth in Tanzania'

Mr. Fidelis Byenobi & Dr. Honest Kipasika (Institute of Adult Education). 'Motivational Challenges Faced by Returning Adult Learners in Morogoro Region'

Dr. Tulia Michael (Tanzania Institute of Education). The Financing Status of Adult and Non-Formal Education Programmes in Tanzania.

Pamela R. Chalo (Huazhong University of Science and Technology). Assessment of Professional Learning Communities Activities conducted by Secondary School Biology Teachers in Dodoma City: from a Social Constructivism Perspective.

Leonard S. Misana (Dar es Salaam University College of Education). Preparing Tanzanian Youth for a Changing World: The Role of New Literacies and Multiliteracies in Lifelong Learning.

1st Presentation: Expanding the Mandate of the Institute of Adult Education (IAE): A Strategic Shift toward Reskilling and Upskilling for Economic Growth in Tanzania (Dr Janeth Kigobe)

This paper proposes an urgent revival and expansion of IAE's functions, including reskilling and upskilling programmes that empower Tanzanians with job-relevant, hands-on competencies.

2nd Presentation: Motivational Challenges Faced by Returning Adult Learners in Morogoro Region (Fidelis Byenobi & Dr Honest Kipasika)

This quantitative study investigates internal, external, and programme-related challenges among ODL students in five districts of Morogoro Region in Tanzania. Results indicate that internal challenges, especially managing time and balancing education with work and family commitments, are prevalent, with significant variability between districts ($p < .05$). External challenges, such as insufficient employer support and schedule conflicts also varied by locale ($p < .01$), whereas programme-related issues (e.g. feelings of isolation, inadequate materials) were more uniformly experienced. Policy implications include strengthening support services (time management training, employer engagement, family support initiatives) and enhancing programme flexibility and resources.

3^{d} Presentation: The Financing Status of Adult and Non-Formal Education Programmes in Tanzania (Dr. Tulia Michael)

A qualitative approach was used in this study. A Phenomenology research design was used in this study. Data Collection Methods used were: In-depth Interview and Focus Group Discussion. Both thematic and content analyses were used to analyse the data. Thematic analysis followed six steps of Cresswell (2014) whereby data from interviews and FGD were analysed. Content analysis was used to analyse text materials from policy and strategy documents. Findings of the study indicated that the financing status of ANFE programmes was inconsistent. Limited funds for adult and non-formal education programmes. While programmes such as IPPE, IPOSA, and AEP received funding, COBET and ICBAE received little to no direct financial support. Diminished prioritisation of financing ANFE activities. Lack of an incentive scheme for adult and non-formal education practitioners. Ineffective mechanism of paying honoraria to facilitators. Low participation of NGOs in supporting the financing of ANFE programmes.

4th Presentation: Assessment of Professional Learning Communities Activities conducted by Secondary School Biology Teachers in Dodoma City: from a Social Constructivism Perspective (Pamela R. Chalo)

The purpose of this study was to assess Professional Learning Communities (PLC) activities conducted by secondary school biology teachers in Dodoma City from a social constructivist perspective. The study was guided by social constructivist theory and employed a quantitative research approach, utilising a cross-sectional survey research design. Findings revealed that collaborative lesson planning was the most frequently practised PLC activity across both public and private schools. In contrast, action research and inquiry-based learning activities, despite their pedagogical significance, were the least conducted. The study also found that most PLC activities reflected the core principles of social constructivist theory, emphasising peer collaboration and reflective practice. Recommendation: To enhance the effectiveness of PLCs, the government should introduce targeted training programmes aimed at building teachers' capacity to carry out effective action research and integrate it into their regular professional practices, as well as how to conduct PLC sessions more effectively. Expanding PLC networks to include collaboration among neighbouring schools, as well as at district and regional levels, will further enhance professional interaction and knowledge sharing among teachers.

5th Presentation: Preparing Tanzanian Youth for a Changing World: The Role of New Literacies and Multiliteracies in Lifelong Learning (Leonard S. Misana)

This paper argues that the well-intentioned goal of enabling secondary school young adults to graduate with relevant skills may remain relatively unattained unless the current classroom practices are adjusted to incorporate New Literacies. The study concludes that Tanzanians need to reimagine literacy and our current pedagogical practices in Tanzanian secondary education to empower Tanzanian youth with lifelong learning skills and competency to navigate the rapidly changing world.

Parallel Session: Day 2 in Mikumi Hall, 10.30-1300 Hrs

Thematic focus: Technologies

There were six presentations in this session, which commenced at 1030-1300 hours and was chaired by Dr Sempeho Siafu (Institute of Adult Education). Six papers were presented:

Haruni J. Machumu (Mzumbe University). Exploring the use of AI tools to personalise adult education in Tanzania

Abdallah J. Seni (University of Dodoma). Understanding the Constraints and Opportunities of Adult Lifelong Learning in the Digital Age: A Systematic Review'.

Bahati Johnson Kibona & Subiri Katete (Institute of Adult Education). 'Integrating Artificial Intelligence in Distance Learning Systems at the Institute of Adult Education in Tanzania.'

William H. Ndimbo (Mpwapwa Teachers' College). The Future of Adult Education: Models, Opportunities, and Challenges within Tanzanian Advancing Technology.' And

Renatus Makolo, Fredrick Shengoma & Deo Shao (University of Dodoma). The Role of Artificial Intelligence (AI) in Tanzanian Public Secondary School Teachers and Lifelong Education.'

1st Presentation: Exploring the use of AI tools to personalise adult education in Tanzania (Dr. Haruni J. Machumu)

This study investigated the potential and emerging role of artificial intelligence (AI) in personalising adult education experiences within the Tanzanian adult education context. The study employed a qualitative exploratory design. Findings highlight both opportunities and obstacles: while AI tools can facilitate tailored learning pathways, flexible pacing, and contextualised content delivery, significant challenges remain, including limited digital literacy, lack of affordable internet, and policy gaps. The study proposes a framework for integrating AI into adult learning programmes in Tanzania.

2nd Presentation: Understanding the Constraints and Opportunities of Adult Lifelong Learning in the Digital Age: A Systematic Review (Abdallah J. Seni).

This study aimed at understanding the Constraints and Opportunities of Adult Lifelong Learning in the Digital Age. A total of 10 articles were critically and intensively reviewed and analysed. Findings indicated that the digitisation of adult learning has enhanced flexibility of enrolment and exit points, age, modality and mode of delivery and subject content. The findings further indicate obstacles in applying technologies to lifelong learning, such as possible isolation, a decrease in social interaction and the digital divide among adult learners. The paper recommends the need to lessen the digital gap facing adult learners.

3rd Presentation: Integrating Artificial Intelligence in Distance Learning Systems at the Institute of Adult Education (IAE) in Tanzania (Bahati Johnson Kibona & Subiri Katete)

This study addresses this gap by examining the attitudes and experiences of education professionals towards AI adoption in DL at the Institute of Adult Education (IAE) in Tanzania. Guided by the Technology Acceptance Model (TAM). The findings revealed that while AI presents significant advantages, such as personalised learning and enhanced learner support, its adoption faces notable challenges, including limited

infrastructure, lack of training, and ethical concerns. The study concludes that successful AI integration requires context-specific strategies, stakeholder capacity building, and inclusive policy frameworks.

4th Presentation: The Future of Adult Education: Models, Opportunities, and Challenges within Tanzanian Advancing Technology (William H. Ndimbo).

This study explored the future of adult education within the context of rapid technological advancement in Tanzania. It focused on models, opportunities, and challenges. The study findings revealed a higher demand for blended learning models and the use of project-based learning. The findings furthermore established significant opportunities for future adult education, including economic growth, technological literacy that adults will be more technological literate and lifelong learning, whereby adults will continue up-skilling at their own pace.

5th Presentation: The Role of Artificial Intelligence (AI) in Tanzanian Public Secondary School Teachers and Lifelong Education (Renatus Makolo, Fredrick Shengoma & Deo Shao)

The objective of this study is to explore the role of artificial intelligence (AI) in education. The research data were analysed inferentially using multiple linear regression applied to a sample of 50 computer science teachers in the Nyamagana and Ilemela districts. The study found that AI is utilised at 30%, regardless of its applications, which offer solutions to many educational challenges that previously hindered access to teaching and lifelong learning. AI plays a crucial role in enhancing smart learning (SL), interactive learning (IL), and intelligent tutoring (IT). The study suggests that the education sector should adopt modern methods of teaching and learning through the use of AI technology.

Day two parallel session-SEALOUS HALL

This session started at 10:30-1300 hours under the leadership of Dr. Joyceline Semwenda (Institute of Adult Education). Seven presenters included:

Neema R. Mgawe (Institute of Adult Education). 'Enhancing Future Lifelong Learning Among Employed Personnel at Morogoro Municipal Council, Tanzania.'

Jackson E. Muhoho (Tengeru Institute of Community Development). 'Digital Inclusion and Lifelong Learning in Community Development: Opportunities and Challenges in Rural Tanzania.'

Ezra Nathanel Ntazoya (Institute of Adult Education). 'Exploring the strategies for sustainability and effectiveness of ODL Programmes at the Institute of Adult Education: Experience from Mpanda Centre.'

Charles Raphael (Tengeru Institute of Community Development). 'Theoretical Frameworks Facilitating Lifelong Learning in Tanzania Following Technological Advancements and Shifting Societal Needs: A Systematic Literature Review.'

Jackson E. Muhoho (Tengeru Institute of Community Development). 'Integrating Lifelong Learning and Governance for Public Sector Transformation in Tanzania: The case of St. Francis Hospital.'

Elkana S. Ntebi & Moabu J. Chandafa (Mbeya University of Science and Technology). Among Adult Learners in the 21st Century in Arusha and Mbeya

Amina Abubakari and Baraka Kionywaki (Institute of Adult Education). 'Factors Influencing Dropout of Girls Enrolled in the SEQUIP-AEP Programme.'

1st Presentation: Enhancing Future Lifelong Learning Among Employed Personnel at Morogoro Municipal Council, Tanzania (Neema R. Mgawe)

The study aimed to identify strategies to enhance continuous professional development. A case study approach was employed. Data was collected by using a questionnaire and an interview. The findings indicated that although 83% of respondents were aware of training opportunities, only 38% had participated in training programmes in the past year. Furthermore, 67% perceived the training selection process as biased, and 68% reported the absence of a formal training policy. The study shows key barriers identified included limited financial resources (76%), unfair selection criteria (57%), lack of self-motivation (31%), and high workloads (49%). affects lifelong learning within the Morogoro Municipal Council. Despite the recognised importance of lifelong learning in improving public service delivery, these barriers hinder its effective implementation.

2nd Presentation: Digital Inclusion and Lifelong Learning in Community Development: Opportunities and Challenges in Rural Tanzania (Jackson E. Muhoho)

This paper investigates the role of digital inclusion in promoting adult education and community development in rural Tanzania. It identifies enablers and barriers such as infrastructure, digital competence, affordability, and cultural attitudes, while highlighting ICT's potential to increase learners' confidence, economic opportunities, and civic participation. A Qualitative, community-based research design was used. Findings of the study indicated that. Mobile phones and ICT hubs increase access to education. Similarly, ICT supports entrepreneurship and agricultural extension services. Digital tools strengthen civic participation and governance. The recommendations of the study are to invest in ICT infrastructure in rural areas,

subsidise devices and internet access, mainstream digital literacy in adult education, develop gender-sensitive strategies and foster public-private partnerships.

3rd Presentation: Exploring the strategies for sustainability and effectiveness of ODL Programmes at the Institute of Adult Education: Experience from Mpanda Centre (Ezra Nathanel Ntazoya)

The study focused on theoretical insights to shed light on the challenges faced by tutors and students using the ODL mode of delivery. The findings suggest that, unless the recommended strategies for implementing the ODL delivery mode are adopted, both tutors and students will continue to face challenges, leading to a lack of programme effectiveness. It is recommended that the IAE Council and Management promote additional intervention studies to address the challenges affecting education provision through the ODL mode across all Tanzanian regional centres. The findings suggest that strategies for implementing the ODL delivery mode must be adopted, and both tutors and students will continue to face challenges, leading to a lack of programme effectiveness. It is recommended that the IAE Council and Management promote additional intervention studies to address the challenges affecting education provision through the ODL mode across all Tanzanian regional centres.

4th Presentation: Theoretical Frameworks Facilitating Lifelong Learning in Tanzania Following Technological Advancements and Shifting Societal Needs: A Systematic Literature Review (Dr. Charles Raphael)

This systematic literature review examines the theoretical frameworks underpinning lifelong learning (LLL) in Tanzania, primarily in relation to technological advancements and evolving societal needs. It focuses on peer-reviewed articles, policy documents, reputable organisational publications, and official reports published between 2015 and 2025. The findings reveal that the theoretical frameworks facilitating LLL include technological pedagogical content knowledge, the learning society paradigm, community-based learning models, open education, and connectivism. Between 2015 and 2025, Tanzania has made significant progress in adopting theoretical frameworks to facilitate LLL following technological advancements and shifts in societal needs. The review recommends ongoing enhancement of LLL in Tanzania through strategic investments, policy reforms, and stakeholder collaboration.

5th Presentation: Integrating Lifelong Learning and Governance for Public Sector Transformation in Tanzania: The case of St. Francis Hospital (Jackson E. Muhoho)

The study intended to link adult education with governance for transformation. A mixed-methods approach was used. Interviews, focus groups and performance reports were used as data collection methods. Key challenges include: Weak accountability

structures, Outdated or missing guidelines, Underutilised resources, Lack of strategic leadership skills for executives and non- executives (lack of coherent meet of the top and the bottom)

6th Presentation: Factors Influencing Dropout of Girls Enrolled in the SEQUIP-AEP Programme (Amina Abubakari and Baraka Kionywaki)

Two objectives guided the study: the first was to identify the key socio-economic, cultural, and institutional factors contributing to the dropout of girls enrolled in the SEQUIP-AEP programme, and the second was to assess the effectiveness of support mechanisms within the programme in retaining students and preventing further dropouts. Findings from this study highlight challenges such as financial constraints, social stigma, lack of adequate support systems, and personal circumstances that hinder sustained participation. Based on these insights, the study recommends enhanced mentorship programmes, increased financial aid, and the implementation of targeted policies to address socio-cultural barriers. Strengthening institutional frameworks and improving community engagement could play a vital role in ensuring long-term success for the girls enrolled in SEQUIP-AEP.

Day Two Parallel Sessions: Ruaha Hall

This session started at 1400-1600 hours at Ruaha Hall and was chaired by Dr Tulia Michael. Three presenters included:

Mwajuma Mohamed (Institute of Adult Education). 'Advancing Non- Formal Education in Tanzania: The Role of the IPOSA Programmeme in Empowering Out-of-School Adolescents.'

Dr Benadeta Kapinga & Dr Anathe R. Kimaro (Institute of Adult Education). 'Status of learning opportunities in non-formal secondary education in Ilala District, Tanzania'.

Dr Godfrey M. Mnubi (Institute of Adult Education). Adult Literacy Programmeme for Improving the Livelihoods of Maasai and Nomadic Communities in Tanzania.'

1st Presentation: Advancing Non- Formal Education in Tanzania: The Role of the IPOSA Programmeme in Empowering Out-of-School Adolescents (Mwajuma Mohamed)

This paper intends to explore the advancement of adult and non-formal education in Tanzania, with a focus on the Integrated Programmeme for Out-of-School Adolescents (IPOSA) as a key initiative targeting out-of-school youth. The paper highlights the programmeme's contribution to lifelong learning and youth

empowerment, urging improved policies, collaboration across sectors, and greater investment to enhance its reach and effectiveness.

2nd Presentation: Status of learning opportunities in non-formal secondary education in Ilala District, Tanzania (Dr Benadeta Kapinga & Dr Anathe R. Kimaro)

The study intended to explore the status of learning opportunities in Non-Formal Secondary Education in Ilala District, Tanzania. The study was specifically guided by two objectives, i.e., to assess the characteristics of learners enrolled in non-formal secondary education and to examine learners' perceptions of the availability of learning opportunities in non-formal secondary education. The findings revealed that adults enrolled in the NFSELOs due to a lack of access to formal secondary schools, dropped out of formal secondary school, failed form two and form four national exams and due to the need to upgrade themselves as well as employment. The study revealed that learning opportunities were affected by several factors, including lack of instructional and learning materials, lack of qualified teachers, use of part-time teachers, inappropriate methods employed by teachers, unfavourable learning environment, financial constraints, as well as teachers' attendance irregularity. The study recommends that the Institute of Adult Education should be made the main coordinator of such opportunities, registering all other NFSE providers for easy monitoring and quality assurance of the programmeme implementation.

3rd Presentation: Adult Literacy Programmeme for Improving the Livelihoods of Maasai and Nomadic Communities in Tanzania (Dr Godfrey M. Mnubi)

The paper aimed to ascertain the status, successes, challenges and lessons learned from implementing the literacy skills programmeme, to replicate it in the future. A quantitative research method was employed, using an assessment tool to measure the literacy levels of the target learners as well as the significance of the learning environment. The assessment findings indicate that the majority of female and male learners (86%) achieved successful performances in writing, scored levels of very proficient 50% and proficient 36%. In terms of reading abilities, the majority of leaners 91% achieved successful performances, scored very proficient (51%) and proficient (40%) levels. Additionally, 89% of learners achieved successful performances in doing arithmetic by scoring 54% very proficient and 35% proficient levels, respectively. This result shows that, although ALPIL had been successfully implemented, there was still a need for more inclusive literacy classes in the country, particularly for disadvantaged communities, such as pastoralists and other nomadic communities, to equip them with literacy skills for improved and sustainable livelihoods.

Day Two: Parallel Sessions: Mikumi Hall

This session started at 1400-1600 hours under the leadership of Dr Emmanuel Onesmo Nyamweru (Institute of Adult Education). Six presenters included:

Prof. Kija Steven Magembe (Institute of Adult Education). 'ODL Students' Attitudes Towards Virtual Classrooms: A Pilot Study at The Institute of Adult Education in Morogoro - Campus, Tanzania.'

Ogunyinka K. Ola & Adediran, Richard A. Adeyemi, Federal University of Education, Ondo, Ondo State, Nigeria. 'The Impact of Artificial Intelligence on Adult Learning Skills Acquisition Programmes in Suburb Areas of Ibadan Metropolis.'

Ambode A. Abiodun (Adeyemi Federal University of Education, Ondo, Ondo State, Nigeria). 'Rebranding Lifelong Education: Implications for Future National Development in Nigeria.'

Tajudeen A. Akinsooto (Awolowo University, Ile-Ife, Osun State, Nigeria). 'From Classroom to Marketplace: Undergraduate Entrepreneurship as a Pathway to Lifelong Learning and a Learning Society at Obafemi Awolowo University.'

Adejoke Clara BABALOLA (Obafemi Awolowo University, Ile-Ife, Osun State). 'Informal Learning Experiences of Obafemi Awolowo University Students Concerning Internet Fraud.'

Dr Joseph Kabage **(**Open University of Tanzania**)**. 'Assessment in Blended Learning System: The Case of the Open University of Tanzania.'

1st Presentation: ODL Students' Attitudes Towards Virtual Classrooms: A Pilot Study at The Institute of Adult Education in Morogoro-Campus, Tanzania (Prof. Kija Steven Magembe)

This study investigated students' attitudes towards virtual classrooms at the Institute of Adult Education in Tanzania. A descriptive survey design with a mixed-methods approach was adopted, using structured questionnaires and semi-structured interviews. Descriptive statistics and inferential statistics were used to analyse quantitative data. Thematic analysis was applied to qualitative responses. Findings revealed that 70% of students had positive attitudes toward virtual classrooms (mean score = 3.84), with 62% appreciating the flexibility provided. However, only 40% believed virtual learning was as effective as face-to-face methods. Digital access and prior online learning experience significantly influenced students' attitudes. The study concludes that students generally view virtual classrooms favourably, but perceptions of effectiveness remain moderate. Recommendations include improving digital

infrastructure, enhancing student exposure to virtual tools, and strengthening pedagogical quality to improve engagement and learning outcomes.

2nd Presentation: The Impact of Artificial Intelligence on Adult Learning Skills Acquisition Programmes in Suburb Areas of Ibadan Metropolis (Ogunyinka K. Ola & Adediran, Richard A)

The study explored the impact of Artificial Intelligence on the learning ability and skills acquisition of adult learners in the suburban areas of Ibadan metropolis. The study focused on AI technologies and their potential in adult learning and skills acquisition programmes of learners for their economic growth and development. It also looked at the evolving artificial technologies such as Large Models (LLM) for personalised adult learning, machine learning Algorithms for adaptive adult learning systems, Virtual Reality (VR) and Augmented Reality (AR) for immersive adult learning and skills acquisition experiences. The study findings revealed the inability of the learners to cope with the use of AI for their learning programmes. Also, the study revealed that AI is relatively new to the learners, thus their inability to cope with the learning programme. Findings suggest the need for enlightenment programmes and awareness on the use of IA, and also, adult educators must strive to develop AI-driven literacy programmes and awareness.

3rd Presentation: Rebranding Lifelong Education: Implications for Future National Development in Nigeria (Ambode A. Abiodun)

The study intended to examine some critical educational theories towards the attainment of lifelong learning/education for national development in Nigeria. The study suggested ways and means the introduced models can be applied in effectively achieving less cost, constant skills, training and retraining, and impactful knowledge attainment.

4th Presentation: From Classroom to Marketplace: Undergraduate Entrepreneurship as a Pathway to Lifelong Learning and a Learning Society at Obafemi Awolowo University-Tajudeen A. Akinsoto

This paper explores how undergraduate entrepreneurship at Obafemi Awolowo University functions as a form of lifelong and informal learning, contributing to the construction of a learning society. Using a descriptive case study of 15 student entrepreneurs, the study examines the barriers they face, including financial constraints, administrative hurdles, and negative peer perception. Findings in this study indicate that student entrepreneurship is positioned not merely as an economic pursuit but as a critical educational process that exemplifies lifelong learning in higher education and contributes to building a learning society.

5th Presentation: Informal Learning Experiences of Obafemi Awolowo University Students Concerning Internet Fraud (Adejoke Clara Babalola)

This research identified the learning experiences of Obafemi Awolowo University students on internet fraud and highlighted their coping. A case study research design was adopted for this study among undergraduate students of Obafemi Awolowo University, Ile-Ife, Osun State. The results showed that catfishing and Ponzi schemes, among other schemes, were the most common types of internet fraud amongst students in Obafemi Awolowo University. Students were scammed primarily through social media platforms like WhatsApp and Facebook. Additionally, some experienced scams related to fake investment platforms and fake online vendors. This study emphasised the importance of safeguarding personal information and avoiding sharing sensitive details online.

6th Presentation: Assessment in Blended Learning System: The Case of the Open University of Tanzania (Dr Joseph Kabage)

This study employed a qualitative research approach whereby interviews and documentary reviews were used to collect data. The findings indicated that lecturers didn't test students' submitted work to determine the level of plagiarism, and there was no means of identifying whether the submitted work was done by the same candidate. This study recommends that students' work should be subjected to peer review, and students should present their work orally through Zoom so as to validate their work.

Parallel Sessions Day Two: Parallel Session at Selous Hall

This session started at 1400-1600 hours and chaired by Prof. Mbowe Kabung'a (Institute of Adult Education). Four presenters included:

Raiza Mtandi, Agripina Masashua (Mzumbe University) & Ester Kabelele (Institute of Adult Education). 'Policy Gaps and Financial Sustainability in Adult Education: A Case Study of Open and Distance Learning (ODL) Programmes in Tanzania.'

Ezra N. Ntazoya (Institute of Adult Education). 'Stakeholders' Perspectives on Social-Emotional Support to SEQUIP Learners: A Case of Kashato TRC-Mpanda.'

Baraka Kionywaki & Amina Abubakari (Institute of Adult Education). 'Reintegrating Drop-Out Girls into Education: A Case of SEQUIP-AEP Programme in Tanzania.'

Linda Macha & Anathe R. Kimaro (Institute of Adult Education). 'Trainees' Perception on the Integration of Entrepreneurship Knowledge and Skills in VET Courses.'

1st Presentation: Policy Gaps and Financial Sustainability in Adult Education: A Case Study of Open and Distance Learning (ODL) Programmes in Tanzania (Raiza Mtandi, Agripina Masashua & Ester Kabelele)

This study investigates the financing mechanisms of adult education in Tanzania, with an emphasis on policy inadequacies that impede long-term sustainability. Using a mixed-methods approach, the research analyses government budgetary allocations, donor contributions, cost-sharing models, and private sector involvement in financing ODL programmes. Stakeholder interviews, policy evaluations, and case studies of key institutions are used to collect data. Findings reveal that, although Tanzania has progressive policies that support adult education, their implementation is hindered by a lack of public funding, poor donor coordination, and low investment from the public sector. The study recommends stronger government commitment in financing adult education, improved coordination amongst development partners, and creative financial strategies such as employer-sponsored training programmes, education levies, and adult learner loan schemes.

2nd Presentation: Stakeholders' Perspectives on Social-Emotional Support to SEQUIP Learners: A Case of Kashato TRC-Mpanda (Ezra N. Ntazoya)

The study sought to underscore the stakeholders' perspectives on social-emotional support to SEQUIP learners. It was conducted at Kashato T.R.C. in Mpanda Municipality, Katavi region. Data gathered through interviews, focus group discussions, and observations were analysed qualitatively using thematic analysis, while data obtained from documentary reviews were analysed using content analysis. The findings indicated that parents and other stakeholders play a crucial role in creating an enabling environment that supports SEQUIP learners socially and emotionally. It was also found that establishing sustainable guidance and counselling services is important for social awareness among the learners.

3rd Presentation: Reintegrating Drop-Out Girls into Education: A Case of SEQUIP-AEP Programme in Tanzania (Baraka Kionywaki & Amina Abubakari).

This study explores the SEQUIP-AEP Programme's role in providing alternative pathways for girls who have discontinued their secondary education. Two objectives guided the study: the first was to investigate the reasons behind school girls' dropouts, and the second was to assess the challenges faced by girls re-entering secondary education through SEQUIP-AEP. Findings from this research offer insights into policy improvements and suggest targeted interventions to enhance the effectiveness of SEQUIP-AEP. Recommendations include increasing financial and psychosocial support for affected girls, implementing community sensitisation programmes to

reduce stigma, and strengthening mentorship and counselling services within the AEP Learning centres.

4th Presentation: Trainees' Perception on the Integration of Entrepreneurship Knowledge and Skills in VET Courses (Linda Macha & Anathe R. Kimaro).

In this study, the focus was on assessing the perception of the trainees on the integration of entrepreneurship knowledge and skills in VET courses. The study employed mixed research methods. Data were collected through questionnaires, interviews, observation, and documentary review. The study revealed that VET courses incorporated aspects of entrepreneurship knowledge and skills. A significant proportion of the participants (62.8%) agreed that these courses had adequately equipped them with the essential entrepreneurship knowledge and skills required in the job market. The study also found that hat inadequate teaching and learning facilities, a shortage of qualified entrepreneurship instructors, and inadequate enterprise attachment were the major challenges that hindered the acquisition of entrepreneurship knowledge and skills among VET trainees. It was recommended that VET institutions should ensure that learners have sufficient time for enterprise attachment.

Discussions

The collection of presentations across the four thematic clusters reflects a rapidly evolving adult and lifelong learning landscape in Tanzania and neighbouring African contexts. Together, the papers explore issues of digital transformation, artificial intelligence (AI), financing, institutional reforms, non-formal education, gendered barriers, ODL effectiveness, and community learning. Despite their varied focus, the presentations converge on a shared narrative: **lifelong learning is becoming more technologically driven, policy-dependent, and socially complex**, demanding responsive frameworks, stronger financing, and inclusive practices.

Plenary session Day Three: Experience Sharing

This session started at 0900 hours under the leadership of Dr Belingtone E. Mariki (IAE). Two speakers included Mrs Lambertha H. Mahai (Retired IAE Director) and Mr Leonard Katoba (IAE Retiree). The Discussant was Mr Jackson E. Muhoho

Parallel Sessions Day Three: Ruaha Hall, 10.30-12.30

This session started at 10.30-12.30 hours and was chaired by Dr Honest Kipasika (Institute of Adult Education). Five presenters included:

Neema R. Mgawe (Institute of Adult Education). 'Strengthening Community Development through Adult Education: A Case Study of Kilosa District Council, Tanzania.'

Casmir A. Akaro (DUCE), Perpetua J. Kalimasi & Harun J. Machumu (Mzumbe University). 'Vocational Education Training Skills and VET Graduates' Employability: A Case of Selected VET Graduates in Morogoro Region, Tanzania.

Subiri Katete (Institute of Adult Education), Janeth Kigobe & Zamzam Nyandara (Open University of Tanzania). 'Government Technical Graduates' Attitudes on Self-Employment in Dar es Salaam City, Tanzania.'

Athumani Gabriel Mathew (PhD Student, Huazhong University of Science and Technology, Wuhan, China). Perceptions of Caretakers towards Schooling for Street Children: Experiences from Drop-In Centres (DIC) in Kinondoni Municipality, Tanzania.'

Mwajuma Mohamed (Institute of Adult Education). The Relevance of the Adult Learning and Education System Building Approach (ALESBA) in Improving the Provision of Adult and Non-Formal Education (ANFE) Programmes in Tanzania.

1st Presentation: Strengthening Community Development through Adult Education: A Case Study of Kilosa District Council, Tanzania (Neema R. Mgawe).

This study explores the role of adult education in promoting community development within Kilosa District Council, Tanzania. Using a mixed-methods approach, the study collected data from adult learners, facilitators, community leaders, and education officers across four wards in Kilosa. The findings suggest that adult education improves individual capacities, enhances participation in local development, and promotes self-reliance. Recommendations are made for improving policy implementation, resource allocation, and programme design.

2nd Presentation: Vocational Education Training Skills and VET Graduates' Employability: A Case of selected VET Graduates in Morogoro Region, Tanzania (Casmir A. Akaro, Perpetua J. Kalimasi & Harun J. Machumu).

The study explores the link between Vocational Education Training (VET) skills and VET graduates' employability in the Morogoro region, Tanzania. A mixed research design was applied to collect data from VET graduates, employers and instructors through questionnaires. Findings exposed that there is a crucial direct link between VET skills and VET graduates' employability. Moreover, the findings disclosed that both employers and VET graduates had positive perceptions towards the suitability of employment for VET graduates. The study concludes that VET skills like social skills,

self-learning abilities, entrepreneurial thinking, and technical expertise influence graduates' employability.

3rd Presentation: Government Technical Graduates' Attitudes on Self-Employment in Dar es Salaam City, Tanzania (Subiri Katete, Janeth Kigobe & Zamzam Nyandara)

The study investigated the government technical graduates' attitudes toward self-employment in Dar es Salaam City, Tanzania. The study used a mixed research approach and an explanatory sequential design. Data collection was done through questionnaires and interviews, and data were analysed thematically (for qualitative data) and descriptive analysis (for quantitative data). The findings revealed that technical graduates generally have a positive perception of self-employment. Based on the findings, the study recommends that Technical Institutions under NACTVET revise the curriculum to align with the current needs of technical graduates for self-employment.

4th Presentation: Perceptions of Caretakers towards Schooling for Street Children: Experiences from Drop-In Centres (DIC) in Kinondoni Municipality, Tanzania (Athumani Gabriel Mathew)

This qualitative study employs a phenomenological design to explore the lived experiences and views of 33 caretakers with 1-5 years of experience, which is useful in mentoring street children. The findings reveal that caretakers' perception of schooling is that schooling is a fundamental need and can be useful for behavioural change among street children. Positive perceptions from caretakers have an influence on school attendance among street children; this creates opportunities to pursue higher education, hence shaping their future. This study insists on the link between the importance of positive caretaker perceptions and supportive policies as an important part in improving the educational outcomes for street children.

5th Presentation: The Relevance of the Adult Learning and Education System Building Approach (ALESBA) in Improving the Provision of Adult and Non-Formal Education (ANFE) Programmes in Tanzania (Mwajuma Mohamed)

This study examines the relevance of ALESBA in enhancing the governance, delivery, and sustainability of ANFE, with a specific focus on the Integrated Community-Based Adult Education (ICBAE) programme in Tanzania. Drawing from qualitative methodology including document analysis, policy reviews, and stakeholder interviews, the study would demonstrate how ALESBA provides a structured and participatory process for diagnosing, designing, and strengthening adult education systems. Findings indicate that ALESBA not only enhances system coherence but also enables localized, context-relevant approaches to adult learning. The paper concludes that wider

adoption of ALESBA presents a viable opportunity to transform ANFE into a more responsive, integrated, and sustainable country's education system.

Day Three Parallel Sessions: Mikumi Hall

This session started at 10.30-12.30 hours; it was chaired Dr. Mustapha Almasi (Mzumber University). Five presenters included:

Belingtone Mariki (Institute of Adult Education). Utilising Artificial Intelligence in Open and Distance Learning

Kessia Kiwia (Twiga Primary School, Tanzania). 'From Algorithms to Action: How AI-Enhanced Lifelong Learning Can Drive Sustainable Development in the 21st Century.'

Jackson E. Muhoho (Tengeru Institute of Community Development). Reimagining Adult and Non-Formal Education in the Digital Age: Opportunities and Challenges for Inclusive Lifelong Learning in Tanzania

Anagrolia Faustino Mahenge (Suye Secondary School Arusha City Council, Arusha). Artificial Intelligence and Machine Learning: The Future of Lifelong Learning

1st Presentation: Utilising Artificial Intelligence in Open and Distance Learning (Belingtone Mariki)

This study examines the knowledge, skills, and barriers associated with AI adoption among ODL students at the Institute of Adult Education (IAE) in Tanzania. Using a mixed-methods approach, including surveys, interviews, and focus group discussions, the research explores students' familiarity with AI-powered tools and identifies the key challenges that hinder their effective use in learning. This study aimed to contribute to the advancement of AI-supported learning and ultimately improving learning experiences among ODL students in Tanzania.

2nd Presentation: From Algorithms to Action: How AI-Enhanced Lifelong Learning Can Drive Sustainable Development in the 21st Century (Kessia Kiwia).

This paper examines how artificial Intelligence (AI) enhanced educational platforms can transform adult learning experiences by providing personalised, adaptive, and accessible learning pathways that directly address sustainability challenges. The paper addresses critical challenges, including digital equity, data privacy, and the need for human-centred design in AI educational tools. The findings demonstrate that strategically implemented AI technologies can democratize access to quality education, enhance learning effectiveness, and create walkable solutions for building sustainability-focused competencies across diverse adult populations.

3rd Presentation: Reimagining Adult and Non-Formal Education in the Digital Age: Opportunities and Challenges for Inclusive Lifelong Learning in Tanzania (Jackson E. Muhoho)

This paper examines how digital platforms, mobile learning, and open educational resources (OERs) are reshaping the delivery and accessibility of adult education, particularly among underserved and rural populations. The study uses qualitative insights from TICD-based outreach programmes and national digital initiatives to highlight how technology can enhance engagement, participation, and learning outcomes in non-formal education. It concludes with strategic recommendations for educators, policymakers, and development partners on designing inclusive digital education systems that uphold the principles of equity and lifelong learning.

4th Presentation: Artificial Intelligence and Machine Learning: The Future of Lifelong Learning (Anagrolia Faustino Mahenge)

This paper examines the role of AI and ML in promoting lifelong learning within Tanzania's educational framework, focusing on how these technologies can foster inclusivity, personalization, and competency development for learners of all ages. A desk-based review of scholarly literature, policy documents, and case studies was conducted. Findings of this study revealed that AI and ML can enable personalized learning pathways, support learner-centred teaching, and enhance the acquisition of key competencies such as problem-solving, creativity, and digital literacy. To harness these benefits, policymakers, educators, and technology stakeholders must collaborate to ensure equitable, ethical, and sustainable integration.

Day Three-Parallel Sessions: Mount Meru Hall

This session started at 10.30-12.30 HRS and was chaired by Dr. Honest J. Kipasika (Institute of Adult Education). Five presenters included:

Gennes H. Shirima (School of Education - UDSM) & Glory Geophrey Mphuru (Institute of Adult Education). 'Exploring Participation, Motives, and Challenges in Adult Learning and Education (ALE): Adult Learners' experience under the SEQUIP-AE Programme.'

Baraka Kionywaki (Institute of Adult Education). Effectiveness of Alternative Education Pathways: A Case Study of SEQUIP-AEP Programme in Tanzania

Blandina Kannonyele & Anathe Kimaro (Institute of Adult Education). Managing Quality in Private Open School Centres: A Case of Non-Formal Secondary Education in Tanzania

Alfredina Fredinand (Institute of Adult Education). 'Contribution of Code Switching and Code Mixing in Teaching and Learning Process at the Institute of Adult Education at Mwanza Campus.'

1st Presentation: Exploring Participation, Motives, and Challenges in Adult Learning and Education (ALE): Adult Learners' experience under the SEQUIP-AEP Programme (Gennes H. Shirima & Glory Geophrey Mphuru)

The study intended to explore the motives and challenges behind adult learners' participation in the Secondary Education Quality Improvement Programme (SEQUIP), involving 15 purposively selected respondents from one Open School in Morogoro. A single-case study design was employed in this study. The findings revealed that adult learners participate in SEQUIP for varied motives such as career advancement, job security, income opportunities, and social recognition. The study recommends for comprehensive policies, government financial support, and improved learning resources to create a favourable learning environment. Further study could be directed towards analysing the long-term impact across different Open Schools to determine the sustainability of the SEQUIP in Tanzania.

2nd Presentation: Effectiveness of Alternative Education Pathways: A Case Study of SEQUIP-AEP Programme in Tanzania (Baraka Kionywaki)

This study assessed the programme's effectiveness in two key areas: (1) enrolment and retention of girls in alternative secondary education, and (2) transition rates of graduates into advanced secondary education and colleges. A mixed-methods approach was used, combining quantitative data on enrolment, retention, and transition with qualitative insights from Coordinators, Tutors, Students, Facilitators and Programme Supervisors. Findings of the study indicated that financial constraints, lack of career guidance, social and cultural factors, and limited family support were key barriers. The study recommends strengthening mentorship and post-secondary transition mechanisms to improve long-term educational outcomes.

3rd Presentation: Managing Quality in Private Open School Centres: A Case of Non-Formal Secondary Education in Tanzania (Blandina Kannonyele & Anathe Kimaro)

This study assessed the quality of non-formal secondary education provided by private open school centres in Dar es Salaam, Tanzania. The primary tools used in the study were questionnaires and interviews. The findings revealed that these private open school centres are not meeting the Ministry of Education and Sports (MoEST) standards for quality in non-formal secondary education. Additionally, students expressed negative perceptions regarding the secondary education they are receiving. Key challenges identified included a lack of learning space, insufficient learning

materials, and the use of part-time instructors, all of which hinder the provision of quality non-formal secondary education.

4th Presentation: Contribution of Code Switching and Code Mixing in Teaching and Learning Process at the Institute of Adult Education at Mwanza Campus (Alfredina Fredinand)

The study intended to assess the contribution of code switching and code mixing in the teaching and learning process in adult learning centres. Interviews and observation were used as data collection. The results of this study show that the most common situations for code switching and code mixing among respondents had to do with understanding, such as when translating certain words or phrases, when giving instructions or when teaching grammar.

CLOSING CEREMONY: 1300HRS-1600HRS

The Deputy Permanent Secretary in the President's Office, Regional Administration and Local Government, Hon. Atupele Mwambene expressed the readiness and willingness of the ministry on all the deliberations reached upon through the three-day conference on lifelong learning during the celebration of the 50th Anniversary of IAE. He also stressed on the importance of the conference as it complies with the Vision 2025-2050 and urged the IAE to intensify the use of technology in reaching out the diverse population, especially in rural areas.

In one hand, the IAE Rector, Prof. Phillipo Sanga, addressing the gathering on the closing ceremony, he made a statement before the Guest of honour on the four deliberations reached upon during the conference as follows:

i) The Government through the Ministry of Education, Science and Technology should prepare a petition that will serve as a direction on accommodating as well as governing the programme for youths who after completing their studies from both primary and secondary education fail to advance to the next level of education;

ii) To prepare a petition that requires each ward in the country to have community learning centres;

iii) There should be a guideline enhancing the availability of directors from the grassroots, and committee members with their clear roles; and

iv) Establishment of the department of Adult Education at all levels from the grassroots.

On the other hand, the Minister for Education, Science and Technology, Prof. Adolf Mkenda, representing the Deputy Prime Minister, Dr. Dotto Mashaka Biteko, expressed his gratitude on the 50th Anniversary of the IAE by calling for a reflection about the institute, tracing back its history from the post-independence years to where it is presently, and where it is heading.

Among other things, he appreciated all the deliberations presented by the IAE Rector. He promised his Ministry's support on any of the raised issues to enable the Institute become flexible and change accordingly in implementing her functions, especially the areas that are very unique to the Institute, such as non-formal education.

FULL PAPERS

From Observation to Participation in Adult Education Research: Building Land Literacy through Participatory Action Research

Michael Ng'umbi, Institute of Adult Education

Email: michael.ngumbi16@gmail.com

Abstract

This article, which was delivered as a conference keynote address, examines the evolution of adult education research from traditional observational approaches to participatory, community-engaged practices, with a focus on building land literacy in rural Tanzania. Drawing on a case study, it demonstrates how participatory action research (PAR), grounded in critical pedagogy, indigenous knowledge systems, and experiential learning, can enhance adult learners' legal, civic, ecological, and conflict-management capacities. The research highlights the methodological and ethical advantages of involving adult learners as co-researchers, fostering critical consciousness, collective problem-solving, and sustainable action. Findings from the preparatory phase illustrate the importance of co-created learning environments, dialogical engagement, and culturally relevant pedagogies in promoting equitable land governance. The paper argues that participatory adult education research not only produces knowledge but also strengthens community agency, resilience, and social transformation, providing a model for ethically grounded and transformative practice in other rural contexts.

Keywords: Adult education research, Participatory action research, Land literacy, Community engagement

Introduction

Adult education research has undergone a significant transformation, reflecting broader shifts in the epistemological foundations of knowledge production. It has evolved to adopt research approaches that are particularly relevant to the field, acknowledging the unique contexts, experiences, and goals of adult learners. Across the academic landscape, different disciplines have developed distinctive research traditions, shaped by the questions they ask, the types of knowledge they value, and the purposes they aim to serve. For example, doctrinal research in law focuses on interpreting statutes and precedents; medical research relies on clinical trials and laboratory experiments to validate treatments; psychology employs experimental designs and statistical models; and sociology uses case studies, surveys, and ethnographic methods to investigate social life. Each of these approaches embodies specific assumptions about what constitutes valid knowledge, as well as how knowledge should be generated, interpreted, and applied.

Education, too, possesses a rich and evolving research tradition. Early educational research was strongly influenced by the natural sciences, privileging controlled

experimentation and measurable outcomes (Thorndike, 1928). As the field matured, social science approaches broadened their scope, emphasising meaning-making, context, and the lived experiences of learners (Merriam & Bierema, 2014). Consequently, contemporary educational research encompasses diverse methodologies, ranging from large-scale assessments and policy analysis to narrative inquiry and practitioner-led action research (Merriam & Tisdell, 2016).

Despite this expansion, much of the research has historically centred on children and formal schooling. Adult education has often been treated as an extension of pedagogical models rather than a distinct field with unique epistemological and methodological demands (Knowles, 1980). This raises an important question: What do we mean by adult education research, and how might it be reimagined to address the lived realities, aspirations, and struggles of adults? This article responds by tracing the shift from traditional, observational, and externally driven approaches to more participatory and collaborative methodologies. It focuses specifically on the potential of participatory action research to foster "land literacy" - a form of critical understanding that positions land not merely as a productive resource but as a social, cultural, and political reality. In doing so, it argues that adult education research must move beyond detached observation to embrace inquiry that is dialogical, transformative, and grounded in learners' lived contexts (Hall, 2001).

The article aims to advance understanding of participatory adult education research and its transformative potential in community-based learning. Specifically, it seeks to: trace the evolution of adult education research from observational, top-down approaches to participatory, community-engaged practices; demonstrate a design for the practical application of PAR in building land literacy and promoting sustainable governance in a rural Tanzanian context; highlight the theoretical and methodological underpinnings of participatory adult education, including critical pedagogy, experiential learning, dialogical praxis, and indigenous knowledge systems; examine preliminary findings from the case study illustrating the impact of participatory learning on adult learners' knowledge, skills, and collective action; and discuss the broader implications for adult education research, including ethical engagement, empowerment, and the integration of local knowledge in addressing complex social and ecological challenges.

What is Adult Education Research?

Adult education research is the systematic study of the theories, practices, policies, and contexts of adult learning. It explores not only how adults acquire knowledge and skills but also how learning intersects with work, culture, identity, social change, and community life (Merriam & Bierema, 2014). It is not reducible to teaching adults, nor is it a simple transfer of methods from child education. Instead, it constitutes a distinct

field of inquiry that foregrounds the unique characteristics of adult learners and the contexts in which they live and learn (Knowles, 1980).

At its core, adult education research recognises adults as active agents in the learning process rather than passive recipients of information. It values the experiences, prior knowledge, and cultural backgrounds that adults bring into educational spaces, treating these as resources for learning rather than obstacles (Freire, 1970). In this sense, adult education research is situated within broader social, political, and economic realities, acknowledging that learning is shaped by power relations, structural inequalities, and opportunities for participation in society.

Adult education research is both intellectual and ethical. It examines the processes and conditions of learning while interrogating how learning reshapes lives, communities, and societies. In doing so, it aspires not only to generate knowledge about adult learning but also to inform practices that foster empowerment, critical consciousness, and social transformation.

The Early Development of Adult Education Research

Adult education research did not emerge as a fully independent discipline. In its formative years, it drew heavily on psychology, sociology, and education. This reliance was understandable, as adult education was still developing professional and academic legitimacy. Yet it also imposed limitations. Early studies often treated adults as deficient learners needing "correction" or "improvement," rather than respecting their knowledge, experience, and agency.

In the 1920s, Edward Thorndike applied behavioural experiments to adults as he had with children. His stimulus–response approach, though insightful in controlled environments, overlooked the rich life experiences and social contexts shaping adult learning (Thorndike, 1928). By the 1960s, Cyril Houle's typology of goal-, activity-, and learning-oriented adults shifted focus to motivation, though still rooted in psychological surveys (Houle, 1961). Malcolm Knowles' promotion of andragogy, stressing adults' self-direction and relevance of learning, further advanced the field, though structural, cultural, and economic contexts remained underexplored (Knowles, 1970, 1980). Overall, early research was expert-driven and top-down. Adults were objects of study, not partners in knowledge creation. It was research on adult education rather than research in or with it.

A major shift occurred in the 1960s and 1970s with the emergence of critical pedagogy and participatory traditions. Paulo Freire's *Pedagogy of the Oppressed* (1970) redefined adult learning as dialogical, with learners co-creating knowledge rather than passively receiving it. Rejecting the "banking model" of education, Freire emphasised critical consciousness and collective action for liberation and social transformation.

Parallel innovations in methodology included Orlando Fals-Borda's Participatory Action Research in Colombia, framing communities as co-researchers. Knowledge became a tool for democratic action and structural change (Fals Borda, 1987). Later contributions, such as *Human Inquiry* (Reason & Rowan, 1981) and *Participatory Action Research Approaches and Methods* (Kindon, Pain & Kesby, 2007), expanded methods to include mapping, participatory video, and cooperative inquiry.

In Tanzania, Julius Nyerere's *Education for Self-Reliance* (1967) provided a parallel African vision. Rooted in socialist ideals and rural development, Nyerere emphasised education as a community-based, culturally grounded practice for building self-sufficient, equitable societies (Nyerere, 1967).

In short, adult education research evolved from studying adult learners at a distance to working with learners and communities as partners. From Freire's critical pedagogy to Fals-Borda's participatory action research, and from Nyerere's self-reliance to contemporary decolonial approaches, the field has grown into a distinctive intellectual tradition. It now stands on foundations that are participatory, context-sensitive, and emancipatory, marking its recognition as an autonomous field of inquiry.

The Present and the Future of Adult Education Research

Today, participatory research continues to shape adult education as a catalyst for sustainable development. Rather than treating people as subjects of inquiry, participatory approaches engage them as co-creators of knowledge and action. This shift has enhanced local agency, accountability, and resilience, the key pillars of sustainability. Globally, Merriam and Ntseane (2008) demonstrated in Botswana how adult learning is shaped by spirituality and communal values, underscoring that learning is as much about ethical and cultural identity as it is about acquiring skills. In Canada, Smythe and Toohey (2009) worked with refugee women in literacy programmes, highlighting how language learning can support the reconstruction of selfhood and social belonging in new environments.

In Tanzania, the roots of participatory traditions run deep. Hall and Kidd (1978) documented how literacy initiatives became tools for community organisation around agriculture, health, and local leadership. Swantz's (1985) pioneering participatory research with women along the Tanzanian coast expanded global understandings of indigenous knowledge and women's agency in development. More recently, Madaha (2022) applied participatory action research in water governance, demonstrating how adult education can serve both diagnostic and democratic purposes. These studies confirm that adult education research in Tanzania has long blended learning with community empowerment.

Across these contexts, a consistent principle emerges: participatory research in adult learning is not merely a methodology; it is a political and ethical stance. It affirms that knowledge must be meaningful, situated, and socially transformative. In the context

of sustainable development, this approach strengthens both learning processes and the communities they aim to serve. Importantly, participatory research is not confined to adult education. It has become a vibrant tradition in other fields that conduct research with adults - development studies, sociology, health research, and environmental governance. In these fields, participatory methods are used to democratise knowledge, improve policy responsiveness, and bridge the gap between expert-driven solutions and the lived experiences of communities. This expansion demonstrates that participatory approaches are now mainstreamed across disciplines seeking to address complex social problems.

At present, the field of adult education research is marked by methodological richness and a deepening commitment to equity. Yet, it still contends with critiques from mainstream academia and funding institutions, particularly regarding generalisability, scalability, and policy influence. These critiques, however, often misunderstand the values that underpin participatory work. Its emphasis on context, ethics, and power relations is not a limitation, but a principled commitment to democratic knowledge production (Freire, 1970). Research in this field is not simply about what works, but about who decides, who benefits, and what kind of change is needed.

Looking ahead, the future of adult education research offers exciting possibilities. One key direction is combining participatory methods with digital tools, data analysis, and systems thinking (Cueva et al., 2015). These blended approaches can help researchers and communities work together more effectively and adapt to real-world challenges. For instance, digital storytelling, mobile surveys, or AI-assisted data analysis can support adult learners in sharing their experiences and shaping the research process. Another important focus is connecting adult education to global concerns such as climate change, food security, gender equality, and inclusive governance (UNESCO, 2016). This will require close partnerships with experts from different fields and the inclusion of local and indigenous knowledge to ensure learning remains relevant and sustainable.

Finally, adult education must continue to be recognised as a field in its own right, not merely focused on school-like instruction, but on lifelong and community-based learning that fosters critical thinking, resilience, and active citizenship. In a world facing growing uncertainty, adult education research needs to remain creative, responsive, and grounded in the values of justice, inclusion, and collective well-being.

Advancing Participatory Research

Participatory research, like any methodological approach, carries its own challenges. It can be time-consuming, resource-intensive, and susceptible to research errors if not carefully designed and implemented. Ethical dilemmas may arise around consent, power dynamics, and representation, while practical constraints, such as limited

funding, logistical barriers, or competing stakeholder priorities, can affect the quality and scope of engagement.

Despite these challenges, participatory research remains one of the most important contributions of adult education, capturing its transformative and empowering potential. While some contexts may call for alternative methods, these are exceptions rather than reasons to limit participatory approaches. For instance, formal adult education programmes, such as evening degrees or professional certifications, often focus on curriculum design, assessment outcomes, or credentialing, where positivist or interpretive methods may be more practical (Knowles, Holton, & Swanson, 2015). Similarly, workplace or vocational training tends to prioritise efficiency, performance, and productivity; participatory elements may appear but rarely shape the overall design (Merriam & Kim, 2012). Research in distance and online learning often examines access, digital tools, or instructional design, relying on surveys or usability studies (Blaschke, 2012). Large-scale national policy programmes frequently employ statistical analyses, though participatory insights can complement these efforts at local levels (Foley, 1999).

Even with these exceptions, there is no reason to avoid participatory research where feasible. Unless the goals or circumstances of a study specifically require another approach, adult education benefits most when research is conducted with people, fostering collaboration, critical reflection, and shared ownership. Participatory methods remain the most direct way to honour the ethical, emancipatory, and transformative traditions at the heart of adult education research.

Case Study: Building Land Literacy through Transformative Adult Education in Chalinze District, Tanzania

Adult education research has historically evolved from observing learners to actively engaging them in the co-creation of knowledge. This case study illustrates the transition through the ongoing project *Building Land Literacy through Transformative Adult Education*, situated in a rural village in Chalinze District, Tanzania. In this community, land is far more than a productive resource; it embodies cultural identity, spiritual meaning, and the promise of intergenerational survival.

However, as in many rural Tanzanian contexts, residents face multiple and intersecting land-related challenges, including soil erosion, deforestation, declining agricultural yields, and recurrent conflict between farmers and pastoralists. These challenges are compounded by insecure land tenure, weak institutional coordination, and demographic pressures. At the centre of these difficulties lies a deficit in land literacy: many adults lack the legal, civic, ecological, and conflict-resolution knowledge necessary to participate meaningfully in land governance or act as responsible stewards of the environment.

The central research question guiding this study is: *How can adult education enhance land literacy and promote sustainable governance practices?* The overarching objective is to explore how adult education can mobilise community members to build land literacy and strengthen participatory land governance. Four specific objectives frame this inquiry: to assess current land management practices and their associated environmental, social, and cultural challenges; to examine gaps in legal, civic, conflict, and ecological literacy among adult community members; to design and implement a dialogical, participatory adult education intervention that draws on local knowledge and fosters critical consciousness; and to evaluate the impact of the intervention on land literacy, collective engagement, and sustainable land-use practices.

The study adopts a Participatory Action Research framework, grounded in adult education traditions that value engagement, reflection, and social transformation. Its theoretical foundations draw on Freire's critical pedagogy (1970), Nyerere's *Education for Self-Reliance* (1967), and African indigenous epistemologies, ensuring that learning is culturally grounded, contextually relevant, and socially transformative. The programme is guided by five interrelated principles: fostering critical consciousness, validating lived experience as legitimate knowledge, promoting transformation in mindsets and behaviours, privileging horizontal dialogue and collective problem-solving, and integrating indigenous knowledge systems, including customary land tenure, ecological wisdom, and traditional conflict-resolution mechanisms.

The adult education intervention consists of facilitated workshops, discussion and reflection circles, and community action cycles, all co-designed with local participants to ensure relevance and inclusivity. Sessions are conducted in Kiswahili and local languages (where necessary) and incorporate oral traditions such as storytelling and proverbs. Experiential methods, including role plays and simulations, create active learning environments. Each session follows a problem-posing, cyclical pedagogy, whereby participants identify challenges, analyse root causes, envision alternatives, plan collective actions, and reflect on outcomes. This cyclical approach embodies the shift from research conducted *on* participants to research conducted *with* participants, ensuring that learners are active co-creators of knowledge.

A key methodological component of the programme is the use of pre- and post-intervention surveys to assess change in participants' knowledge, skills, and attitudes regarding land rights, civic responsibilities, ecological practices, and conflict management. These surveys provide baseline and follow-up data to evaluate the effectiveness of workshops and reflection circles in fostering land literacy and participatory governance.

At this stage, the programme is in the early implementation phase. Baseline survey data and discussion circles provide insights into current understandings of land governance and ecological stewardship, which inform the design of workshops and reflection dialogues. Although results are not yet conclusive, the programme demonstrates a

principled, participatory approach that positions adult learners as co-researchers and co-creators of knowledge. By integrating adult education principles with PAR processes - workshops, reflection circles, and structured surveys - the programme establishes a foundation for equitable, culturally grounded, and sustainable community-based land governance in Tanzania, emphasising collaboration, critical reflection, and transformative action. The following is a summary of the initial findings regarding the current status of land literacy among the community members.

Preliminary Findings

The preliminary findings of this case study reveal that land governance challenges are deeply intertwined with literacies of law, civic responsibility, conflict management, and practical resource use. These literacies not only shape community members' capacity to respond to conflict but also reflect structural inequalities, cultural norms, and knowledge gaps that can be addressed through adult education.

The gaps in legal literacy highlight the tension between customary land inheritance systems and the absence of formalised land documentation. While the observed family-based tenure ensures continuity across generations, it marginalises women, youth, and landless households, and leaves most villagers without secure documentation. As participants observed, "We inherit land from our parents, but we have no papers… without documents, we are not safe." This finding aligns with other studies in Tanzania that identify land registration as both a pathway to security and a source of conflict when poorly implemented. Adult education interventions could help communities understand land rights, interpret bureaucratic processes, and strengthen advocacy for equitable access, particularly for vulnerable groups.

The study also found limited civic engagement and collective responsibility, especially in responding to farm invasions or ecological degradation. As one participant lamented, "When cows destroy my neighbour's farm, nobody helps. Everyone waits for it to be their turn." This reflects weak enforcement of communal norms, mistrust in local institutions, and passive citizenship. Research on civic literacy in rural contexts suggests that without participatory structures and accountability, communities struggle to mobilise collective action. Adult education that integrates civic literacy could foster a stronger sense of duty, encouraging villagers to see sustainable land governance as a shared responsibility rather than an individual struggle.

Farmer–pastoralist tensions exemplify the community's limited conflict literacy. Farmers frame roaming livestock as the central driver of destruction - "Now there are too many animals, too much destruction" - while pastoralists contest this narrative, attributing environmental decline to deforestation and climate change: "It is not the cows that bring drought. People are cutting trees every day." These divergent perspectives illustrate how competing narratives fuel mistrust and hinder cooperation. Literature on participatory conflict resolution highlights that building conflict literacy

requires dialogue, recognition of multiple truths, and facilitation of joint problem-solving. Adult education interventions can therefore provide structured spaces for critical dialogue, where farmers and pastoralists not only exchange grievances but also co-create strategies for coexistence.

The findings further point to gaps in practical literacy regarding sustainable land use and environmental stewardship. Practices such as farming along riverbanks, tree felling for charcoal, and abandoning degraded farms perpetuate ecological decline. One participant described, "People give up after cows destroy the crops or after the drought. Then the land becomes pasture again, and the problem continues." These practices highlight a disconnect between immediate livelihood needs and long-term sustainability. Adult education approaches can bridge this gap by introducing locally adapted innovations such as rainwater harvesting - already identified by participants as a promising option - while integrating indigenous ecological knowledge. In this sense, practical literacy becomes a foundation for resilience, equipping communities with knowledge and skills to adapt to climate variability.

Taken together, these literacies illustrate how land conflicts are not only material but also educational challenges. Adult education offers a pathway to bridge legal awareness, civic responsibility, conflict resolution, and practical skills into a coherent framework of land literacy. This supports the argument advanced by Freire (1970) that literacy is more than decoding words; it is about reading and transforming the world. Strengthening multiple literacies through participatory adult learning could empower communities to secure land rights, strengthen governance, negotiate conflicts, and steward resources sustainably.

Implications for Adult Education

The case study and broader discussion presented in this article have several implications for the field of adult education. First, they illustrate that participatory adult education research can move beyond conventional knowledge transfer to become a tool for social transformation, allowing learners to engage actively in shaping their communities. By integrating critical pedagogy, experiential learning, dialogical praxis, and indigenous knowledge systems, adult education can foster both cognitive and civic competencies, empowering learners to address local challenges while building collective action.

Second, the practical application of Participatory Action Research in building land literacy demonstrates that adult education can bridge the gap between theoretical knowledge and actionable skills. Adult learners acquire not only an understanding of legal, civic, and ecological dimensions of land governance but also develop the capacity for collaborative problem-solving, reflection, and decision-making. This underscores the potential of adult education to contribute to sustainable development goals by linking learning with tangible social and ecological outcomes.

Third, the preliminary findings highlight the ethical and methodological value of co-creating knowledge with communities. Participatory approaches validate local experiences, amplify marginalised voices, particularly women and youth, and foster inclusive learning environments where decision-making is shared. This positions adult education research as inherently political and ethical, concerned not only with what is learned but with who participates, who benefits, and how social inequalities are addressed.

Finally, these insights suggest that adult education research must remain flexible, context-sensitive, and responsive to complex social and environmental realities. By embracing participatory methodologies, adult education can contribute to lifelong learning that is transformative, inclusive, and rooted in the lived realities of adult learners.

Conclusion and Recommendations

This article demonstrates that participatory adult education research provides a transformative approach to knowledge generation and community development. Moving beyond top-down, observational models, participatory methods foreground learners' needs, lived experiences, and local knowledge, fostering critical reflection, co-creation of knowledge, and collective action. The case study illustrates how Participatory Action Research, grounded in critical pedagogy, experiential learning, and indigenous knowledge, can build land literacy, promote sustainable governance, and enhance civic and collective responsibility.

Findings show that participatory learning strengthens adult learners' knowledge, skills, and collaboration, addressing challenges of land use, environmental management, and social conflict. Legal, civic, conflict, and practical literacies are interdependent, providing a comprehensive framework for equitable land governance. The study's novelty lies in integrating participatory adult education with socio-ecological problem-solving, demonstrating a practical model for community-driven learning and action.

Based on these insights, adult education interventions ought to prioritise participatory methodologies, engaging learners as co-creators through co-learning cycles, reflection circles, and community-led action plans. Strengthening land literacy, including legal, civic, conflict, and practical competencies, is critical for equitable resource access, informed decision-making, and ecological and social resilience. Civic responsibility and collective action should be fostered through experiential activities that illustrate the consequences of unsustainable practices and the benefits of collaboration.

Programmes could consider integrating indigenous knowledge and local contexts to ensure cultural relevance, trust, and effective engagement. Policy engagement and scaling are essential to institutionalise community-generated insights, promote equitable access to land and resources, and extend the impact of participatory adult education, particularly for women, youth, and marginalised groups.

Finally, future research could examine the long-term effects of participatory adult education on community resilience, land governance, and environmental sustainability, including innovative combinations with digital tools and system-level analysis. This study confirms that participatory adult education is both ethically compelling and practically effective, offering a replicable model for sustainable, community-centred development beyond the Chalinze context.

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Advancing Non-Formal Education in Tanzania: The Role of the IPOSA Programme in Empowering Out-of-School Adolescents

Mwajuma Mohamed, Institute of Adult Education

Email: *Mwajuma.abdallah@iae.ac.tz*

Abstract

This paper explores the advancement of adult and non-formal education in Tanzania, with a focus on the Integrated Programme for Out-of-School Adolescents (IPOSA) as a key initiative targeting out-of-school youth. IPOSA addresses the growing need for inclusive, relevant and accessible education by providing life skills, literacy, and vocational training and entrepreneurship to adolescents who have missed formal schooling due to various socio-economic challenges. Life skills becomes central to the programme, equipping learners with essential competencies such as effective communication, decision-making, and self-awareness. These skills are vital for helping young people navigate daily life challenges, improve their well-being and become responsible members of their communities. While IPOSA demonstrates significant promise in promoting youth empowerment and lifelong learning, it faces several challenges that hinder its broader effectiveness. These include, limited funding, inadequate learning infrastructure, a shortage of trained and motivated facilitators, and low societal recognition of non-formal education. Reaching vulnerable youth, particularly girls and rural youths, remains a persistent difficulty. Nevertheless, IPOSA presents an opportunity to bridge educational gaps through a learner-centred and community-driven approach. The paper highlights the program's contribution to lifelong learning and youth empowerment, urging improved policies, collaboration across sectors, and greater investment to enhance its reach and effectiveness.

Key words: Non-formal education, Out-of-school adolescents, Youth empowerment, Integrated Programme for Out-of-School Adolescents, Lifelong learning.

Introduction

Education has long been recognised globally not only as a fundamental human right but also as a cornerstone for sustainable development, poverty reduction, and social transformation. The Universal Declaration of Human Rights (1948) enshrines education as a basic right, while subsequent frameworks such as the Education for All (EFA) initiative (1990-2015) and the Sustainable Development Goals (SDGs, 2015-2030) further stress its centrality to human development. In particular, SDG 4 calls for inclusive, equitable, and quality education for all, alongside the promotion of lifelong learning opportunities (United Nations, 2015). The UNESCO Institute for Lifelong Learning (UIL) consistently highlights that 773 million adults still lack basic literacy skills, with women comprising nearly two-thirds of this population, thereby

undermining their ability to participate fully in social, economic, and civic life (UIL, 2022). In response, non-formal education programs emerged as flexible, context-responsive means of addressing this deficit by integrating literacy, numeracy, pre-vocational training, life skills, and entrepreneurship into community-based learning structures.

Within this global framework, Adult and Non-Formal Education (ANFE) has emerged as a critical strategy to address the learning needs of those who are excluded from formal schooling, marginalised communities, and individuals requiring second-chance opportunities to learn. Across Africa, Asia, and Latin America, governments and civil societies have introduced innovative community-based models to address the learning needs of out-of-school children and youth. The post-independence period in the 1960s and 1970s witnessed large-scale adult literacy campaigns, often tied to nationalist and socialist ideologies. For instance, Tanzania, Ethiopia, and Mozambique prioritised literacy campaigns as a means of consolidating national identity and promoting the development agenda (Mushi, 2009). Ethiopia's Alternative Basic Education Centres (ABECs), Uganda's Integrated Community Learning for Wealth Creation (ICOLEW), and Tanzania's ICBAE (Integrated Community Based Adult Education) are all examples of tailored initiatives that align non-formal education with socio-economic realities. These models affirm that education systems must extend beyond school walls, offering second-chance, remedial, and alternative pathways to ensure that "no one is left behind." Bhola (2006) argues that non-formal education must be viewed not as a second-rate substitute for formal education, but as a complementary pathway that can empower individuals and communities through participatory learning approaches.

Tanzania has historically been a pioneer of ANFE, dating back to the Arusha Declaration of 1967 and the policies of education and Self-Reliance, which elevated adult literacy and non-formal education as central pillars of national development. Massive literacy campaigns of the 1970s and 1980s contributed to significant reductions in illiteracy, but challenges of retention, functional literacy, and sustainability persisted (Mushi, 2009; Bhalalusesa, 2020).

In the 21st century, these challenges remain pressing. Tanzania continues to grapple with high numbers of out-of-school adolescents, young people aged 10-19 who have either dropped out of school or never enrolled. According to MoEST (2015), it is estimated that 3.5 million school-aged children were out of school, with 23% being of primary school age and 41% of secondary school level. Causes range from poverty, early marriage, teenage pregnancy, child labour, disability, and socio-cultural barriers. While the 2014 Education and Training Policy (ETP) and its 2023 revision emphasised

equitable access to education, implementation gaps have persisted, especially for vulnerable youth populations in rural areas and marginalised settings. These gaps reaffirmed the need for strong non-formal pathways. Complementary frameworks such as the National Adult and Non-Formal Education Framework (NEAF) and the Education Sector Development Plan (ESDP) also sought to integrate ANFE within broader educational reforms. Yet, as several scholars observe, implementation has often lagged behind policy intent, with weak coordination and underfunding persisting as major barriers (Bhalalusesa, 2020; DVV International, 2023).

In response to these persistent challenges, Tanzania has adopted several integrated non-formal education programs, including Integrated Community-Based Adult Education (ICBAE), the Integrated Post-Primary Education Programme (IPPE), and the Complementary Basic Education in Tanzania (COBET), often in collaboration with international development partners such as DVV International, UNICEF, KOICA, and UNESCO. One of the most notable of these initiatives is the Integrated Programme for Out-of-School Adolescents (IPOSA), designed to address the urgent need for flexible, relevant, and learner-centred education pathways for adolescents excluded from the formal system.

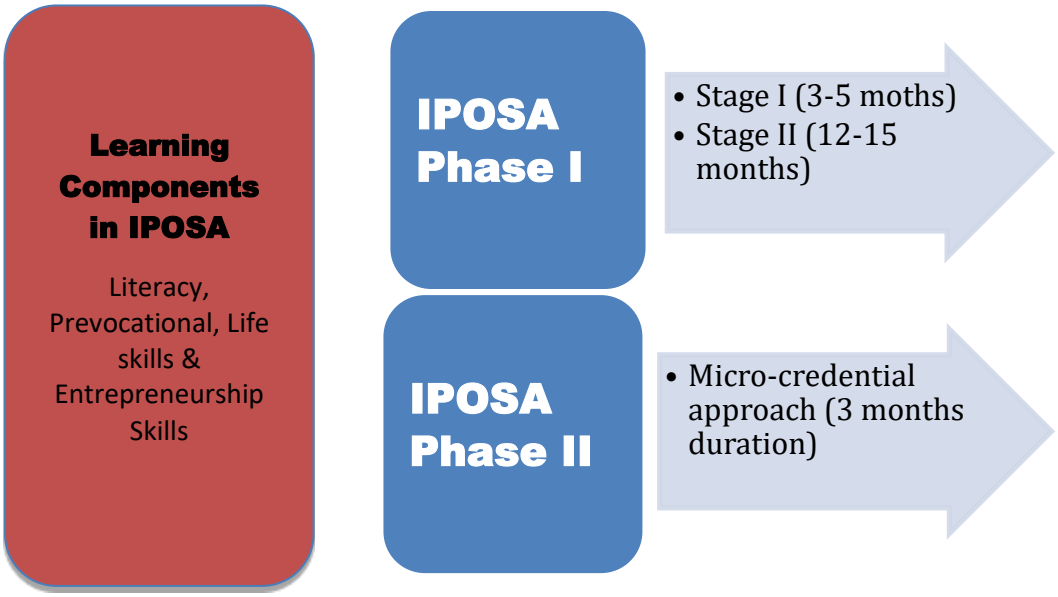
The Integrated Programme for Out-of-School Adolescents (IPOSA) adopts a holistic, learner-centred framework that integrates four interrelated components. First, basic literacy skills provide foundations in reading, writing, and numeracy prerequisites for participation in learning and livelihoods (UIL, 2022); Second, life skills-including communication, decision-making, conflict resolution, health awareness, and self-confidence equip adolescents to navigate social and developmental challenges and make informed choices (UNICEF, 2019; Bhola, 2006). Third, pre-vocational skills orient learners toward employability through practical competencies and exposure to local trades, aligning learning with livelihoods, productivity, and economic empowerment. Fourth, entrepreneurship aligns learning with livelihoods by enabling learners to identify opportunities, initiate micro-enterprises, and manage sustainable income-generating activities (Siafu, 2021; Rogers, 2004).

The programme emphasises a learner-centred pedagogy, often delivered in proximity to schools through Post-Primary Technical Centres (PPTC), and facilitated by either full-time or short-term training reflecting the mixed capacity typical of community-based ALE systems (Bhalalusesa, 2003; ADEA, 2021). Its focus is not on conventional, examination-oriented instruction; rather, it prioritises practical skills for self-reliance, employability, and local value creation (Siafu & Ng'umbi, 2024). At the end of the cycle, learners are encouraged to establish IPOSA Empowerment Clubs

(IECs) to foster peer learning, savings/enterprise groups, community linkages and mutual support.

Originally, IPOSA followed a two-stage annual cycle (≈12–15 months): Stage 1 centred on literacy/numeracy, and Stage 2 on pre-vocational training. In response to learner feedback about time burdens and in line with international trends toward modularisation and recognition of short learning programs, IPOSA is shifting to a micro-credential model with three-month learning cycles. In this model, learners can stack micro-credentials toward a full credential based on need and pace, improving flexibility, relevance, and retention (ADEA, 2021; UIL, 2022). This aligns with system-building guidance that endorses flexible pathways, recognition of short courses, and articulation within national frameworks (ADEA, 2018, 2021).

Modes of Programme Delivery and their duration



Although IPOSA is operational in several districts, peer-reviewed documentation remains limited; most available evidence to date is in the form of project reports, government briefs, or advocacy documents. This study, therefore, contributes to the academic and policy discourse by systematically analysing the role of IPOSA in advancing adult and non-formal education in Tanzania. In doing so, it pays particular attention to the programme's relevance to out-of-school adolescents, especially marginalised youth, its contribution to youth empowerment and lifelong learning, and the systemic challenges and opportunities that affect its scale-up and sustainability. Ultimately, the study aims to generate recommendations for strengthening IPOSA in line with SDG 4 commitments and Tanzania's broader national education priorities,

while drawing on system-building lessons from ALESBA and global ALE literature (ADEA, 2021; UIL, 2022).

Methodology

This study employed a qualitative research design rooted in the interpretive paradigm of educational research. Qualitative approaches are particularly useful in exploring complex social phenomena where meaning, perception, and lived experiences are central. Since the Integrated Programme for Out-of-School Adolescents (IPOSA) is a relatively evolving initiative, qualitative inquiry allows for an in-depth understanding of its objectives, processes, challenges, and potential without the constraints of predetermined variables and quantitative measurement (Cohen, Manion, & Morrison, 2007). Accordingly, the study was designed as a document-based desk review, focusing on policy documents, program reports, and existing literature on adult and non-formal education (ANFE). This approach was justified because most available evidence on IPOSA exists in secondary form, particularly government reports, donor evaluations, and institutional publications, because secondary data analysis allows synthesis of diverse perspectives, highlights trends, and identifies gaps in knowledge that future empirical research might address.

Data were drawn from three main categories. The first category consisted of government documents and policies, including the Education and Training Policy (2014, revised 2023), the Education Sector Development Plan (ESDP), and the National Adult and Non-Formal Education Framework (NEAF), which collectively provide the official policy environment for IPOSA. The second category consisted of institutional and program reports generated by agencies such as DVV International, UNICEF, and the Institute of Adult Education (IAE). For instance, DVV International (2023) produced a report on Community Learning Centres in Tanzania within ICBAE, while earlier studies highlighted Uganda's ICOLEW model (DVV International, 2020). The third category of sources included scholarly literature such as peer-reviewed journal articles, books, and working papers on ANFE, lifelong learning, youth empowerment, and life skills. Authors such as Mushi (2009) and Bhalalusesa (2020) provide insights into Tanzania's adult education history, Kileo (2021), Sempeho (2024), Sempeho & Ng'umbi (2024), and Kisusi (2025) provide valuable insights specific to IPOSA, while ADEA (2018, 2021) contextualises system-building approaches at the continental level. This triangulation of these categories allowed for a more comprehensive and balanced analysis, enhancing the credibility of findings.

The process of data collection unfolded in four stages. The first stage involved the identification of relevant sources through electronic databases, organisational websites, and government portals, using keywords such as ***IPOSA (Integrated Program for Out of School Adolescents)***, ***non-formal education***, ***out-of-school adolescents***, ***lifelong learning***, and Youth empowerment. The second stage involved screening and selection of documents based on relevance, credibility, and decency, with priority given to publications produced between 2014 and 2025. However, older foundational works such as Mushi (2009) and Bhola (2006) were also retained to provide historical and theoretical context. The third stage involved systematic extraction of information on the objectives, design, implementation, successes, and challenges of IPOSA, as well as comparative insights from Uganda and Ethiopia. Finally, the extracted data were organised thematically into categories such as life skills, youth empowerment, accessibility, infrastructure, facilitator capacity, and policy integration.

The study employed thematic analysis as the principal analytic approach. Thematic analysis is a flexible method for identifying, analysing, and reporting patterns within qualitative data. Following Braun and Clarke's (2006, p. 79) six-step framework, the analysis began with familiarisation through repeated reading of documents. This was followed by generating initial codes such as ***youth empowerment***, ***gender barriers***, and ***funding challenges***. The codes were then collated into broader themes such as ***barriers to inclusivity*** and ***policy gaps***. The next step involved reviewing themes to ensure that they were consistent with the dataset, followed by defining and naming themes to clarify what each captured and how it related to the research questions. Finally, the findings were synthesised into a coherent narrative. Thematic analysis was considered appropriate because it is not tied to any particular theoretical framework and thus provides flexibility in analysing complex, policy-oriented issues such as non-formal education. Several strategies were used to enhance validity and reliability. Triangulation of sources ensured that conclusions were not based on a single report or perspective, while attention was given to the credibility and authority of sources, with priority placed on government and internationally recognised publications. Reflexivity was maintained by acknowledging potential biases in documents produced by implementing agencies or donors, which may emphasise successes while downplaying challenges. Although qualitative document analysis does not yield statistical generalisations, these measures enhanced the trustworthiness of the findings.

Ethical considerations in this study were minimal because all data were mainly drawn from secondary sources that are publicly accessible, with limited references from learners and facilitators. Nonetheless, all data were cited in accordance with academic

standards and interpretations were made cautiously to avoid misrepresenting the intention of the original authors. The methodology has acknowledged limitations. Most notable was the dependence on secondary data, which restricted the ability to capture the lived experiences of learners, facilitators, and communities directly. The availability of literature specific to IPOSA was also limited, requiring reliance on broader ANFE and Learning Centre frameworks for analysis. Furthermore, since IPOSA is still evolving, its impacts are ongoing rather than conclusive, meaning that findings reflect early-stage rather than long-term outcomes. Another limitation relates to potential bias in institutional reports, as documents produced by implementing agencies may emphasise positive outcomes for advocacy or donor appeal while underreporting systemic weaknesses.

Despite these limitations, the chosen methodology was appropriate for the exploratory nature of the study. Desk reviews are valuable for mapping policy environments, identifying knowledge gaps, and synthesising fragmented evidence (Bhola, 2006). Moreover, as Cohen et al. (2007) argue, small-scale qualitative studies can provide useful insights into the nature of phenomena, even when large-scale empirical data is lacking. The approach thus provided a solid basis for understanding IPOSA's place within Tanzania's ANFE system and identifying areas for further research and policy action.

Findings and Discussion

The findings and discussion in this section are structured around four main themes: the objectives and design of IPOSA, Life skills education, its contribution to youth empowerment, and the challenges and limitations. It also involves comparative insights from other African contexts

The objectives and design of IPOSA

The study revealed that IPOSA has a unique design, which distinguishes it from earlier remedial literacy programs. This is because it integrates literacy and numeracy with pre- vocational training, life skills, and entrepreneurship rather than focusing on 3Rs alone. Its designing aligned with global thinking that literacy on its own does not guarantee empowerment, and that non-formal education must be relevant to learners' socio-economic contexts if it is to have a meaningful impact (Bhola, 2006). In Tanzania, this is particularly important because many out-of-school adolescents require immediate skills for survival and livelihoods rather than abstract competencies detached from their realities. The program's delivery through Post Primary Technical Centres (PPTCs) reinforces this orientation by embedding learning within communities, and engagement of local stakeholders, from village committees to

district education officers, plays an active role in governance and support. Historically, PPTCs were established in Tanzania to expand access to post-primary opportunities for adolescents who did not transition into formal secondary education, and they evolved into hubs for vocational and life skills training (Mushi, 2009). By integrating literacy with pre-vocational and life skills training components, PPTCs provide community-based platforms that link education with livelihoods and local development priorities (Mushi, 2009; Wedgwood, 2007).

Moreover, scholars argue that situating adult and youth learning opportunities in PPTCs enhances ownership and sustainability, since these centres are closer to communities than centralised institutions and allow for stronger engagement of parents, local leaders, and education officers in decision-making (Bhalalusesa, 2003; Nyerere, 2014). This localised model also aligns with international calls for the decentralisation of non-formal education delivery, which emphasise the role of technical and vocational centres in bridging the gap between schooling and work, particularly in rural areas (Torres, 2001; UNESCO, 2016).

The program's growing recognition has attracted significant donor investment, thereby enhancing its potential for scalability. Notably, in addition to UNICEF, the Korea International Cooperation Agency (KOICA) has committed support toward the establishment of 30 IPOSA Centres. These centres are designed to serve the same purpose of empowering young people through the creation of IPOSA Empowerment Clubs (IECs), which serve as entry points for accessing opportunities from both governmental and non-governmental actors. By engaging in these platforms, youth are positioned to initiate small-scale enterprises and secure sustainable livelihoods. Within this framework, Post-Primary Training Centres (PPTCs) emerge as critical nodes in strengthening both the human resource base and institutional infrastructure of programmes such as IPOSA. Importantly, they help ensure that governance structures and service delivery mechanisms are embedded within community realities rather than being driven solely by external frameworks.

Life skills education and IPOSA

The study revealed that IPOSA positions life skills as the foundation of the learning experience. These include self-awareness, communication, decision-making, problem-solving, reproductive health, and conflict resolution. Evidence from program reports and UNICEF frameworks highlights that such skills are critical in equipping adolescents to navigate the complex realities of their lives, including peer pressure, gender expectations, poverty, and health-related risks (UNICEF, 2019).

In practice, life skills education enables learners to build confidence, negotiate roles within their families, and make informed decisions regarding their futures. For girls in particular, reproductive health education is especially important in reducing vulnerability to early pregnancies and child marriage, two of the leading causes of school dropout in Tanzania. By embedding such content, IPOSA ensures that learning is not only academic but also directly connected to personal development and well-being, thus the centrality of life skills education as the centrepiece of learning, recognising that literacy alone is insufficient for genuine empowerment (UNICEF, 2019). Furthermore, life skills instruction promotes self-awareness, critical thinking, and responsible citizenship, thereby equipping young people to participate actively in community development (Kristeen et al., 2024). The voices of learners themselves illustrate the transformative impact of this approach. As one participant explained:

> I lost hope after I became pregnant. I thank my aunt who introduced me to the programme. Currently, I am more confident and have joined hands with my siblings and friends. I now have my own sewing machine, which gives me hope to raise my child, since I could not manage to continue with school.

Contribution of IPOSA to youth empowerment

Empowerment in this context can be understood in personal, social, and economic domains. At the personal level, learners reported increased confidence, self-esteem, and motivation to pursue new opportunities. Social empowerment was reflected in their greater participation in community activities, leadership roles in youth groups, and willingness to contribute to decision-making processes at the village level. IPOSA's contribution to youth empowerment can be seen across three dimensions: personal (confidence, self-esteem), social (community participation), and economic (livelihoods) (Sempeho, 2024). For girls in particular, IPOSA provides safe learning spaces that counteract patriarchal constraints (Bhalalusesa, 2020).

These outcomes demonstrate that IPOSA strengthens adolescents' agency and voice in both private and public spheres (Sempeho, 2024). For girls in particular, the programme's safe and inclusive learning spaces serve as important counterbalances to patriarchal constraints that often limit their participation (Bhalalusesa, 2020). The transformative impact is evident in learners' own reflections. One participant explained:

> IPOSA has given me self-confidence, especially after joining the IPOSA Empowerment Club (IEC). I can now strongly share my opinion on the progress of our group, something I could not do before. I can also manage my own finances and plan through the small-scale business I established with support from the Club. I feel trusted by my colleagues and have been given leadership roles. Before, this was a nightmare.

Economic empowerment is perhaps the most tangible outcome. Vocational training in areas such as tailoring, carpentry, agriculture, and small business management provides adolescents with opportunities to generate income and reduce dependence on families or exploitative labour. This aspect of empowerment reflects the broader philosophy of lifelong learning, which aims not only to transmit knowledge but also to expand individuals' capabilities to lead fulfilling lives and contribute to society (UIL, 2022). As one learner acknowledged that;

> Through IPOSA, I had the opportunity to showcase our products at different platforms, including the Nanenane Festival and Literacy Week. Our sanitary pads became known through these events, enabling us to secure tenders. Recently, during the 50th Anniversary of the Institute of Adult Education at Julius Nyerere International Convention Centre in Dar es Salaam, I gained more customers who were eager to buy and even requested our phone contacts.

Taken together, these outcomes illustrate that IPOSA's multidimensional approach to empowerment, personal, social, and economic, aligns directly with the Sustainable Development Goals. By providing inclusive and equitable learning opportunities, IPOSA advances SDG 4 (Quality Education), particularly its emphasis on lifelong learning and skills for employability. Simultaneously, through its focus on safe spaces for girls, reproductive health education, and economic self-reliance, IPOSA makes a vital contribution to SDG 5 (Gender Equality) by challenging patriarchal norms and expanding opportunities for young women. In this way, the programme not only addresses local educational exclusion but also positions itself as a catalyst for achieving global development priorities. Ultimately, the programme equips adolescents with the tools to build resilience, establish sustainable livelihoods, and participate actively in their communities.

Challenges of IPOSA

The study findings revealed that IPOSA faces considerable challenges that limit its reach and long-term effectiveness. The most critical of these is inadequate and unstable funding. Non-formal education in Tanzania historically receives a fraction of the resources allocated to formal education, and IPOSA is no exception (ADEA, 2021). Kisusi (2025) similarly observes that financing for community-based education has been notably weak due to underfunding. The allocation of funds for adult education programs has been less than 3%, as recommended by Global Campaign for Education (2005), Mushi (2021), and DVV International (2022). Adult Education programs. Much of its support comes from international donors such as UNICEF and KOICA, which raises concerns about sustainability once donor projects come to an end. Without dedicated government budget lines and comprehensive budget policies, IPOSA Centres struggle to maintain infrastructure and procure learning materials.

This underfunding perpetuates a cycle in which non-formal education is perceived as inferior to formal schooling, further undermining its societal recognition. This is also due lack of political will, over reliance of donors and absence of a comprehensive financing policy (Mbughi, 2025). The concerns are echoed by facilitators on the ground. As one facilitator expressed:

> I am worried because we might find ourselves in a dilemma after donor funding comes to an end. Regardless of the many responsibilities I have, I am happy to serve this group of youth who have truly felt the burdens of life. I always pray that our leaders will increase their political will to ensure these programs are given priority, just like any other formal programme.

Infrastructure constraints also emerged as a significant barrier. Many IPOSA operate in dilapidated or repurposed buildings that lack adequate classrooms, sanitation, and access to electricity or digital resources. In rural areas, long distances to centres discourage participation, particularly for girls whose mobility may already be restricted by cultural norms. The absence of safe learning spaces exposes learners, especially young women, to risks of harassment and gender-based violence, further reducing attendance and retention. Investment in infrastructure is therefore crucial for scaling IPOSA in ways that guarantee dignity, safety, and quality (Siafu, 2024; DVV International, 2023).

Another challenge is the shortage of qualified and motivated facilitators. As Mahai (2021) observes, poorly trained personnel and insufficient teaching and learning resources constitute a nationwide challenge for community-based adult education programmes; this is not an exception in IPOSA. Facilitators are central to the success of IPOSA because they deliver not only literacy instruction but also life skills and Pre-vocational training. Yet, many lacks formal pedagogical training and rely on minimal orientation workshops. Low remuneration discourages long-term commitment, leading to high turnover rates. As Bhalalusesa (2020) notes, adult education in Tanzania has long suffered from weak professionalisation, and facilitators often lack recognition within the broader education workforce. Without substantial investment in capacity building and professional development, the quality of IPOSA delivery is compromised, limiting its ability to achieve intended outcomes.

The issue of recognition also extends to certification. Learners who complete IPOSA often find that their certificates are not formally accepted either for progression into formal education or for access to formal employment. This low recognition undermines the incentive to participate and reinforces perceptions of non-formal education as a "second-class" option. In contrast, Kenya's Alternative Provision of Basic Education and Training (APBET) recognizes non-formal certificates within the national qualifications' framework, thereby enabling learners' smoother transitions

into formal pathways (ADEA, 2018). Tanzania's absence of clear operational frameworks, despite the recent development of a National Qualifications Framework represents a missed opportunity to fully integrate IPOSA into the national education system and to provide adolescents with genuine second-chance opportunities.

Gender disparities also remain a persistent challenge in the implementation of IPOSA. Although the programme is designed to be inclusive, girls continue to face disproportionate barriers to participation. Cultural expectations around domestic work, early marriage, and child-rearing limit their availability for learning. In some contexts, parents are reluctant to allow girls to attend mixed-gender classes, while the absence of childcare facilities prevents young mothers from enrolling. Such challenges are consistent with broader evidence that gender is a determinant of exclusion in education systems across Sub-Saharan Africa (UNICEF, 2019). Unless IPOSA adopts stronger gender-responsive approaches, including flexible schedules, safe spaces, and targeted outreach, girls will remain at a risk of being left behind.

Despite these obstacles, IPOSA demonstrates significant potential when compared with regional experiences within a broader field of Adult and Non-Formal Education (ANFE). programmes. Uganda's Integrated Community Learning for Wealth Creation (ICOLEW) offers valuable lessons in integrating literacy with income-generating projects supported by both local governments and communities. Evaluations suggest that ICOLEW has succeeded because it aligns closely with national economic development goals and its multi sectoral approaches, including agriculture and microfinance (DVV International, 2020). Similarly, Ethiopia's Alternative Basic Education Centres (ABECs) illustrate the importance of contextual flexibility, by adopting schedules to the seasonal routines of pastoralist and agrarian communities, ABECs ensure that learners can combine education with livelihood responsibilities.

IPOSA's focus on strengthening both hard and soft employability skills is fully aligned with the direction of the 2023 Education and Training Policy and the revised national curriculum. While it is possible that the introduction of the new curriculum in formal schools may reduce the number of Form IV leavers seeking IPOSA courses, the programme will remain highly relevant for adolescents who have never attended formal school or who dropped out before completion.

Significant investment is required in the Integrated Programme for Out-of-School Adolescents (IPOSA), particularly in the area of manpower development. In several cases, learners expressed dissatisfaction with the technical competence of instructors in delivering lessons. However, some learners acknowledged that these challenges were not necessarily the teachers' fault but rather the result of an acute shortage of qualified personnel. Given the high demand for the programme, many teachers were

compelled to teach with only the limited knowledge and training they had acquired through short, often insufficient, courses.

This challenge is not unique to Tanzania; it reflects broader global patterns in non-formal education. Studies from across Africa and beyond indicates that inadequate teacher preparation, coupled with reliance on facilitators who receive minimal pedagogical training, often undermines programme quality and learner satisfaction (Bhalalusesa, 2003; Mushi, 2009; Rogers, 2004). Similar concerns were raised in Latin America, where insufficient investment in teacher capacity constrained the effectiveness of non-formal and lifelong learning initiatives (Torres, 2001). Bhola (2006) further emphasizes that sustainable system-building in adult and non-formal education requires continuous professional development, mentoring, and participatory monitoring to ensure that facilitators are not only technically competent but also able to support learner empowerment. In this sense, the IPOSA experience highlights a critical policy lesson: manpower development must be prioritized if non-formal programmes are to achieve their transformative potential. Beyond teacher training, this also requires embedding flexibility, promoting local ownership, and fostering multi-sectoral partnerships at the core of programme design and implementation. The IPOSA experience therefore underscores a critical policy lesson: manpower development must be prioritized if non-formal programmes are to realize their transformative potential. Beyond teacher training, this also requires embedding flexibility, promoting local ownership, and fostering multi-sectoral partnerships at the core of programme design and implementation.

At the policy level, IPOSA aligns with both national and international commitments. Internationally, it contributes directly to Tanzania's implementation of SDG 4, which emphasises inclusive and equitable quality education as well as lifelong learning opportunities for all. Nationally, it operationalises key provisions of the Education and Training Policy (2014; 2023), which call for expanded educational opportunities for out-of-school children and adolescents. It also reflects the principles of the National Adult and Non-Formal Education Framework (NEAF), which emphasises integration, coordination, and community participation in non-formal education.

By promoting literacy, life skills, and livelihoods, IPOSA embodies the lifelong learning agenda articulated in Tanzania Vision 2050. The Vision places strong emphasis on human capabilities, inclusive education, and lifelong learning as foundational pillars of national development. It calls for an education and training system that is inclusive, high-quality, and capable of producing skilled graduates who can compete in a dynamic global economy (United Republic of Tanzania, 2024, p. 14). As Vision 2050 underscores,

> by adopting quality education and training and a lifelong learning approach, Tanzania's education and training systems would cultivate a resilient, versatile workforce that will in turn drive socio-economic development and sustainable growth (United Republic of Tanzania, 2024, p. 14).

It further envisions "an inclusive education system … a learning society that embraces a lifelong learning culture where adaptability and continuous growth are the hallmarks of every citizen" (United Republic of Tanzania, 2024, p. 15).

In support of this direction, government statements affirm that:

> The Vision underscores the importance of skills, life competencies, freedom of choice, decision-making, and utilization of opportunities to enable every citizen to live a decent life. Therefore, all adult and non-formal education programmes must be tailored to support this direction (Daily News, 2025, para. 4).

Accordingly, these frameworks situate IPOSA not as an isolated intervention but as a strategic vehicle for advancing Tanzania's long-term development agenda, bridging the gap between policy aspirations and the lived realities of marginalized adolescents.

Another important finding is that IPOSA contributes to community development beyond the individual learner. The establishment of IPOSA Centres has generated wider benefits such as improved social cohesion, increased participation in civic processes, and reduced vulnerability among youth. Parents often become more engaged in their children's education and, in the process, adopt new practices related to health, agriculture, or entrepreneurship. Local committees tasked with managing the centres also gain experience in leadership, planning, and accountability. These community-level outcomes echo earlier findings from Tanzania's literacy campaigns, where collective mobilization around education produced wider social benefits for communities (Mushi, 2009). Thus, IPOSA not only transforms individual lives but also strengthens community resilience and social capital.

At the same time, the comparative analysis highlights that scaling up IPOSA requires systemic reforms. ADEA's (2021) Toolkit for a System-Building Approach to ALE emphasizes that isolated projects cannot achieve long-term impact unless they are integrated into broader governance and financing systems. IPOSA currently functions more as a pilot initiative in selected districts than as a national programme. Without stronger institutionalization within the Ministry of Education and PO-RALG structures, its sustainability is questionable. For example, while Uganda's ICOLEW is embedded within local government structures, IPOSA relies heavily on external project funding. Addressing this governance gap will be essential if Tanzania is to transform IPOSA from a promising intervention into a sustainable national solution.

The findings and discussion reveal that IPOSA is an innovative programme that has made significant progress in addressing the needs of out-of-school adolescents in Tanzania. Its strong emphasis on life skills, pre-vocational training, and entrepreneurship distinguishes it from traditional literacy campaigns and situates it within contemporary approaches to lifelong learning. Learners benefit in terms of personal development, social inclusion, and economic empowerment, while communities experience broader gains in social cohesion and participation.

However, these achievements are constrained by systemic challenges, including inadequate funding, poor infrastructure, limited facilitator capacity, weak recognition of certification, persistent gender disparities, and insufficient institutionalisation. Comparative experiences from Uganda's ICOLEW and Ethiopia's ABECs demonstrate that overcoming these challenges requires adopting a system-building approach. Such an approach would embed IPOSA more firmly within national education frameworks, ensure sustainable financing, and recognise non-formal education as an equal partner alongside formal education within Tanzania's broader education system.

Conclusion and Recommendations

In conclusion, IPOSA is a promising innovation that reflects Tanzania's evolving approach to adult and non-formal education. By addressing the educational needs of out-of-school adolescents through literacy, life skills, entrepreneurship and vocational training, it offers a pathway for empowerment and lifelong learning. Yet, without stronger policy support, sustainable financing, professionalised facilitation, recognition of qualifications, and gender-responsive strategies, its potential will remain underutilised. Tanzania has an important opportunity to draw lessons from regional experiences and to position IPOSA as a flagship initiative for inclusive education and youth empowerment. Achieving this will require political will, institutional commitment, and a renewed recognition that non-formal education is not peripheral but central to building an inclusive, equitable, and knowledge-driven society.

From findings and conclusions, several key recommendations emerge for strengthening IPOSA and securing its sustainability. At the policy level, the government should establish dedicated budget lines for IPOSA and non-formal education more broadly within both the Ministry of Education and PO-RALG. Such measures would ensure long-term sustainability and reduce dependence on donor funding. Equally important is the development of a comprehensive framework for recognition and equivalency of non-formal education certificates. In particular, adopting and embedding a Recognition of Prior Learning (RPL) mechanism within

government systems would allow IPOSA graduates to access further learning opportunities and formal employment. Institutionalising IPOSA within the national education system would also elevate its status and legitimacy, positioning it as a permanent component of Tanzania's lifelong learning architecture.

At the programmatic level, significant investment is required in facilitator training and motivation. Facilitators should be supported with continuous professional development, fair remuneration, and full professional recognition within the education workforce. Without such measures, the quality and consistency of programme delivery will remain compromised. Additionally, infrastructure investment is essential. IPOSA Centres should be renovated and adequately equipped with classrooms, sanitation facilities, and digital tools. These improvements would not only enhance the quality of the learning environment but also increase participation, particularly for rural adolescents and young women who face greater barriers to access.

Gender equity must be at the heart of IPOSA's next phase. This requires targeted outreach to girls, provision of childcare facilities, and creation of safe learning spaces that encourage female participation. Gender-sensitive pedagogies and curricula should be mainstreamed, ensuring that girls not only enrol but also succeed in the programme. In addition, communities should be mobilized to challenge cultural norms that restrict girls' education, building on Tanzania's strong tradition of community participation in education.

Strengthening partnerships is also vital. Government ministries must work closely with NGOs, civil society organisations, and the private sector to expand vocational training opportunities and employment linkages. Local businesses can provide apprenticeships and market connections, while NGOs can support gender programming, life skills training, and community mobilisation. International organisations can continue to provide technical expertise and financing, but this should be situated within a framework that prioritises national ownership and sustainability, reducing over-reliance on external funding.

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Motivational Challenges Faced by Returning Adult Learners in the Morogoro Region

By Ferdinand Byenobi Fidelis and Honest Kipasika, Institute of Adult Education

Emails: fbyenobi@gmail.com and kipasikah@gmail.com

Abstract

Adult learners returning to education via open and distance learning (ODL) face a complex interplay of motivational challenges. This quantitative study investigates internal, external, and programme-related challenges among ODL students in five districts of Morogoro Region in Tanzania. A survey (N = 126) measured learners' agreement with statements about time management, family/work balance, learning motivation, technological skills, support systems, and institutional factors. Descriptive statistics and comparative analyses were used to examine differences across Morogoro Municipal, Gairo, Mvomero, Kilombero, and Kilosa districts. Results indicate that internal challenges, especially managing time and balancing education with work and family commitments, are prevalent, with significant variability between districts ($p < .05$). External challenges, such as insufficient employer support and schedule conflicts also varied by locale ($p < .01$), whereas programme-related issues (e.g. feelings of isolation, inadequate materials) were more uniformly experienced. Despite these obstacles, respondents generally reported strong personal motivation (few agreed that they lacked interest or commitment). The Discussion situates these findings in the context of adult learning theory and regional ODL literature, noting consistency with prior studies in Africa that highlight work–study tensions, the digital divide, and the importance of institutional support. Policy implications include strengthening support services (time management training, employer engagement, family support initiatives) and enhancing programme flexibility and resources. This paper contributes to understanding how motivational challenges manifest in ODL contexts and offers recommendations to improve adult learner persistence in Tanzania and similar settings.

Keywords: Motivation, motivational challenge, internal challenge, external challenge

Introduction

Open and distance learning (ODL) is a vital avenue for adults in Tanzania to pursue further education while managing work and family responsibilities. Tanzanian education policy clearly promotes fair access to education, recognizing ODL as a strategy to reach marginalized groups and lifelong learners. The Education and Training Policy (ETP) of 2014, for instance, highlights equal opportunities for all

learners, aligning with the global Sustainable Development Goal 4 on inclusive, quality education. ODL programmes, such as those provided by the Open University of Tanzania and the Institutes of Adult Education, allow working adults and individuals in remote areas to continue their education without attending traditional full-time classes. Despite its potential, ODL also faces unique challenges that can hinder adult learners' motivation and persistence. Balancing studies with work and household duties, overcoming gaps in academic readiness, and dealing with limited technological infrastructure are common issues in many developing countries' ODL environments.

Adult learning theories emphasise that mature students differ from younger learners in their motivations and constraints. Andragogy, or adult learning theory, suggests that adults are self-directed and goal-oriented, bringing extensive life experience to their studies (Knowles, 1996). However, adult learners often juggle multiple roles such as employees, parents, and spouses, which influence their engagement in education. They frequently return to school after a long break, which can impact their study habits and academic confidence. As Kara *et al.* (2019) note in a thorough literature review, the challenges faced by adult distance learners can be categorised into internal, external, and programme-related factors. *Internal challenges* arise from learners' own characteristics and circumstances, like difficulties with time management, low confidence, or rusty study skills. *External challenges* originate outside the learner, such as work overload, family responsibilities, and financial limitations. *Programme-related challenges* involve the educational environment or system, including limited interaction with instructors, feelings of isolation, or insufficient course materials. These categories are interconnected and often reinforce each other. For instance, an adult student with poor time management (internal) may become overwhelmed by job duties (external), leading to falling behind in coursework and feeling unsupported by the institution (programme-related). Understanding these motivational challenges within the Tanzanian ODL context is vital, as it can help institutions and employers develop targeted strategies to improve adult learner retention and success.

Motivational challenges in ODL have been documented in various settings. A literature review by Kara *et al.* (2019) found that balancing work and study is one of the most frequently cited difficulties for adult distance learners. Many adult students struggle to allocate sufficient time for study due to job demands and family obligations. Women in particular often bear a heavier load of domestic responsibilities, which can significantly interfere with their studies. Selwyn (2011) observed that female distance learners with children had trouble dedicating time to coursework, a trend also noted in African contexts. In Tanzania, Mbunda (2022) conducted a qualitative study focusing on female ODL students and reported mixed perceptions of ODL:

participants lauded the flexibility to study around household duties, but they also highlighted negatives like *inadequate learning materials* and an *isolation* inherent in distance learning. Feelings of isolation and low peer interaction are well-known detractors of motivation in distance education. Lacking a sense of community or timely feedback from instructors can cause adult learners to feel unsupported and disengaged.

Another significant set of challenges centres around technology and infrastructure, especially as ODL increasingly depends on online platforms. Many African ODL programmes continue to face a digital divide. A systematic review by Ndibalema (2022) showed that during the COVID-19 shift to online learning, students in developing countries struggled with unreliable internet, limited digital devices, and low digital literacy among both students and instructors. These external barriers often lead to motivational issues; for example, when logging into class or accessing materials becomes a constant obstacle, learners can become frustrated or discouraged. Even before the pandemic, inadequate ICT infrastructure and technophobia hampered e-learning adoption in East Africa. In Tanzania's ODL setting, such problems appear as *technical challenges* (such as difficulty communicating online or poor computer skills), which Kara *et al.* (2019) categorise as internal challenges because they relate to learners' ability to manage technology. Without enough support or training in ICT, older adult learners, in particular, may find online aspects of ODL overwhelming.

External motivational challenges often include work–study conflict and financial strain. Adult ODL students are frequently employed full-time and may enrol specifically to enhance their career prospects. Ironically, full-time jobs can hinder their studies: long hours, changing schedules, and peak workloads leave little time for studying. In Ghana, Biney and Salifu (2024) found that *poor time management* and work-related pressures were among the main factors limiting adult learners in a distance programme. Financial difficulties also contribute; adults often finance their own education, and tuition or material costs can cause stress that distracts from academics. Biney and Salifu (2024) note that poverty and the high cost of education are major barriers for Ghanaian distance learners, and they recommend more flexible fee payment options to reduce this burden. Employers can either help or worsen these issues. Supportive employers (for example, those offering study leave or flexible hours) can boost morale and persistence, while unsupportive work environments add pressure. Sadly, lack of organizational support is a common complaint in ODL literature. Studies have linked limited employer support to higher dropout rates in distance programmes. On the positive side, some organizations recognize the importance of employee education; policies accommodating study schedules or providing financial aid can motivate adult learners to stay committed. This study will

explore whether such external support (or its absence) is perceived differently across the five districts.

Programme-related factors such as course design, student support services, and tutor engagement also affect motivation. Adults need relevant, practical content and flexible course requirements to stay motivated. If the curriculum seems irrelevant or too difficult given their background, they may lose interest. Willging and Johnson (2009) found that a mismatch between programme demands and adult learners' lives can cause withdrawals. In Tanzania's ODL programmes, common challenges include inadequate study materials, delays in feedback, and limited face-to-face contact with instructors. Mbunda (2022) mentioned complaints about outdated or insufficient learning materials in the Institute of Adult Education's distance courses, which reduced some learners' engagement. The feeling of isolation is another key programme-related issue: adult learners often miss the camaraderie and immediate support typically found on campuses. During the pandemic, many students worldwide experienced increased isolation and anxiety in remote learning settings. This highlights the importance of establishing strong support structures (e.g., active discussion forums, regular tutor check-ins, peer study groups) in ODL programmes to help maintain learners' motivation.

Overall, the existing literature, especially recent African studies and reviews, highlights that adult ODL learners face various motivational challenges. These range from internal factors (such as time management, self-confidence, and academic readiness) to external factors (including workload, family support, and finances) and programme-related issues (like interactivity, materials, and institutional support). Many of these challenges have been observed in Tanzania and neighbouring contexts, but quantitative data on their prevalence and variation across different locations are still limited. This study aims to fill that gap by examining motivational challenges among adult ODL students in five districts of Tanzania. By analysing survey data on specific challenges, we seek to answer: *Which motivational challenges are the most common? How do these challenges vary (if at all) across districts?* The findings will improve understanding of adult learner needs in ODL and help develop strategies from policy to practice to better support this growing student population.

Methodology

This study used a cross-sectional survey design to quantitatively examine motivational challenges among adult ODL learners. The target population included students enrolled in open and distance learning programmes in Morogoro Region, Tanzania, specifically from five districts: Morogoro Municipal, Gairo, Mvomero, Kilombero, and

Kilosa. These districts host ODL study centres operated by the Institute of Adult Education. A total of N = 126 ODL learners participated, with sample sizes per district ranging from 21 to 30 (Morogoro n=26; Gairo n=21; Mvomero n=24; Kilombero n=30; Kilosa n=25). The sample was relatively gender-balanced (52.4% female, 47.6% male). Participants' ages ranged from their mid-twenties to their fifties, reflecting the typical adult learner profile; most were in their thirties (approximately 39% aged 30–35 and 21% aged 35–40), with about 29% aged 45 or older. Most respondents (85.7%) were enrolled in diploma-level ODL programmes, with a few in certificate courses (4.0%) and the rest in bachelor's degree programmes (10.3%). This distribution partly reflects the structure of ODL offerings in the region; diploma programmes are more common at the study centres, while bachelor's programmes are primarily available through the Morogoro centre.

Data were collected using a structured questionnaire developed by the researchers to capture various motivational challenges identified from the literature. The questionnaire was divided into three main sections matching the challenge dimensions: Internal, External, and Programme-Related. Each section contained specific items (statements) representing subcategories of challenges, as summarized in Table 1. Respondents were asked to rate how well each statement reflected their experience using a 5-point Likert scale: *1 = Strongly Agree*, *2 = Agree*, *3 = Neutral*, *4 = Disagree*, *5 = Strongly Disagree*. Therefore, lower scores indicate stronger agreement that the issue is a challenge for the learner. The questionnaire was originally drafted in English and reviewed by two education experts for content validity and clarity. It was then pilot-tested with a small group of ODL students (n=10) from a neighbouring region to ensure the items were understandable and relevant. Minor wording adjustments were made based on the pilot feedback, such as clarifying "technical/family issues" as "technical **or** family issues."

Researchers coordinated with regional ODL centre coordinators to administer the questionnaires during face-to-face sessions. Participation was voluntary and anonymous; informed consent was obtained from each participant. Respondents completed paper questionnaires on-site and submitted them back to the researcher. Of the 150 questionnaires distributed, 130 were returned. After data cleaning (removing four responses with significant missing data), 126 valid responses remained for analysis (resulting in an effective response rate of 84%. The data were analysed using SPSS (Version 25), employing both descriptive and inferential statistics. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were computed for each questionnaire item to examine the prevalence of challenges and the average intensity of agreement by district. Cross-tabulations with

Chi-square tests and one-way ANOVA tests were conducted to compare responses across the five districts. Chi-square tests assessed associations between district and response, with a p-value of less than 0.05 indicating statistical significance. Due to low counts in some categories, ANOVA was also performed on the mean Likert scores. Aggregate scale scores for the three main dimensions (internal, external, and programme-related) were calculated by averaging relevant items. Reliability analysis showed acceptable internal consistency: Cronbach's alpha values of 0.70 (internal), 0.65 (external), and 0.72 (programme-related). These moderate reliability scores reflect the varied nature of the challenges. All tests were evaluated at $\alpha = 0.05$, with effect sizes calculated for significant results. The findings are organized by the three motivational challenge dimensions, with tables comparing the districts.

Results and Discussion

Internal Challenges

Internal challenges refer to those arising from learners' personal circumstances, skills, and attitudes. Table 1 presents the descriptive statistics for internal challenge items across the five districts, including the mean agreement score (1 = strongly agree that it is a challenge, 5 = strongly disagree) and standard deviation for each district, as well as the overall mean. For ease of interpretation, items are grouped into Management, Learning, and Technical sub-categories.

Table 1: Internal Motivational Challenges by District

Internal Challenge Item	Morogoro (n=26)	Gairo (n=21)	Mvomero (n=24)	Kilombero (n=30)	Kilosa (n=25)	Total (N=126)
Management Challenges:						
– Difficulty balancing education and work commitments	2.12 ± 0.59	2.29 ± 0.78	2.00 ± 0.98	2.50 ± 1.01	2.52 ± 0.96	2.29 ± 0.90
– Difficulty balancing education and family/social life	2.27 ± 0.83	2.19 ± 0.81	2.25 ± 1.22	2.43 ± 1.17	3.00 ± 0.96	2.44 ± 1.05
– Challenges in effectively managing time	2.58 ± 1.10	2.57 ± 0.81	2.17 ± 0.87	2.50 ± 1.04	3.04 ± 0.79	2.57 ± 0.97
Learning Challenges:						
– Low commitment to	3.35 ± 1.26	3.52 ± 1.03	2.96 ± 1.20	3.33 ± 0.99	3.36 ± 1.04	3.30 ± 1.10

learning (less motivated to study)									
– Lack of interest in programme or materials	3.35 ± 1.09	3.52 1.21	±	3.46 ± 1.28	3.13 ± 1.14	3.28 0.89	±	3.33 1.12	±
– Difficulty understanding course materials	3.19 ± 1.20	3.00 1.05	±	3.54 ± 1.06	3.17 ± 0.95	3.28 0.98	±	3.24 1.05	±
– Lack of prerequisite knowledge for courses	3.50 ± 0.99	3.00 0.84	±	3.58 ± 0.97	3.40 ± 1.13	3.44 1.00	±	3.40 1.00	±
– Low concentration during study sessions	3.62 ± 0.94	3.57 0.87	±	3.46 ± 1.22	3.63 ± 0.89	3.52 1.08	±	3.56 0.99	±
– Low self-confidence in academic abilities	3.42 ± 1.14	3.57 1.21	±	3.67 ± 0.97	3.47 ± 1.04	3.48 0.88	±	3.52 1.05	±
Technical Challenges:									
– Difficulty communicating through the Internet	2.73 ± 1.17	2.67 1.03	±	2.92 ± 1.12	2.80 ± 1.11	2.84 1.05	±	2.80 1.08	±
– Lack of proficiency in computing/IT skills	2.81 ± 1.07	2.81 0.98	±	2.92 ± 1.07	2.70 ± 1.11	2.76 0.96	±	2.80 1.04	±
– Difficulty accessing reliable information (online/offline)	2.77 ± 0.94	2.90 1.00	±	2.83 ± 1.10	2.63 ± 0.95	2.72 0.90	±	2.77 0.97	±

Key: 1 = Strongly Agree, 5 = Strongly Disagree

This study revealed significant motivational challenges faced by adult learners in Tanzanian ODL programmes, particularly in managing time, balancing multiple roles, and dealing with external pressures. Overall, learners reported substantial difficulty balancing work, family, and study, with mean scores for these challenges ranging from 2.3 to 2.6, indicating strong agreement that these were major issues. The item "balancing education and work commitments" had a mean of 2.29, while "balancing education with family/social life" had a mean of 2.44, both highlighting that these issues are widespread.

District-level differences revealed that learners in Kilosa reported less difficulty balancing family and study, with a significantly higher mean (3.00) compared to Morogoro (2.27) and Kilombero (2.43), a difference confirmed by ANOVA ($p = .041$). Similarly, Kilosa learners reported less difficulty with time management, with a mean of 3.04, compared to Mvomero (2.17) and Morogoro (2.6), where challenges were more significant ($p = .034$). These variations suggest that local factors, such as family support or work flexibility, may affect learners' experiences. However, no significant district differences were found regarding the work-education balance item ($p = .145$), with agreement across all districts that work commitments were a major challenge, confirming the universal nature of this issue.

Regarding learning challenges, most learners did not report low motivation or disinterest in the programme, with mean scores for "lack of commitment" and "lack of interest" both above 3.3, indicating general disagreement with these statements. This suggests that despite external and management challenges, many learners remain motivated. However, approximately 28% of learners reported lower commitment, signalling that some learners may struggle to maintain motivation under pressure.

District differences in learning challenges were minimal, with no significant variation across the five districts. The "difficulty concentrating on study" item showed a marginally significant difference ($p = .045$), with Mvomero learners exhibiting more polarized responses, but this should be interpreted cautiously due to small sample sizes.

For technical challenges, learners generally reported moderate agreement that technology posed difficulties, with means around 2.8 for items like "difficulty communicating through the Internet" and "lack of proficiency in computing skills." While Kilombero reported slightly better results in computing skills (mean 2.70), no significant district differences were observed ($p = .473$), indicating that technical challenges are common across districts, likely due to similar infrastructure constraints.

In general, time management and role conflict were significant internal challenges, while intrinsic motivation remained high for most learners. Notable district differences appeared in family/social life balance and time management, with Kilosa reporting fewer difficulties than other districts. These findings highlight the importance of contextual factors and the need for tailored interventions to address both universal and district-specific challenges in adult ODL programmes. The most common internal challenges, like time management and role conflict, matched adult learning theory. Learners struggled to balance work, family, and education, a challenge reported worldwide in studies such as Kara et al. (2019). These challenges fit with Bean and Metzner's (1985) model of non-traditional student dropout, where external

commitments affect dropout decisions. Despite these difficulties, learners did not report low personal motivation, indicating that intrinsic motivation remains strong, but external factors block success. This suggests that interventions can target removing barriers, such as offering time management support and flexible schedules.

External Challenges

External challenges encompass work-related and domestic factors that can influence a learner's motivation. Table 2 displays the results for the **external challenge** items, broken down by district. The items are split into **Job-Related** challenges and **Domestic** challenges.

Table 2: External Motivational Challenges by District

External Challenge Item	Morogoro (n=26)	Gairo (n=21)	Mvomero (n=24)	Kilombero (n=30)	Kilosa (n=25)	Total (N=126)
Job-Related Challenges:						
– Often overwhelmed with work (work overload)	2.46 ± 0.76	2.33 ± 0.73	2.42 ± 0.83	2.30 ± 0.84	2.16 ± 0.75	2.34 ± 0.78
– Lack of support from employer/organization	2.69 ± 0.93	2.29 ± 0.85	2.50 ± 0.88	2.33 ± 0.85	2.44 ± 0.81	2.47 ± 0.87
– Conflicts in managing work schedules and study schedules	2.81 ± 0.83	2.48 ± 1.21	2.33 ± 0.82	2.50 ± 0.88	2.24 ± 0.77	2.47 ± 0.90
– Facing financial difficulties (fees, materials, etc.)	2.58 ± 1.07	2.29 ± 1.09	2.42 ± 0.79	2.30 ± 1.03	2.56 ± 0.76	2.43 ± 0.95
– Having limited time to study due to job	2.65 ± 0.93	2.62 ± 0.86	2.38 ± 1.07	2.53 ± 1.05	2.60 ± 0.92	2.56 ± 0.96
Domestic Challenges:						
– Experiencing technical or family issues at home	2.65 ± 0.97	2.90 ± 1.10	2.38 ± 0.82	2.40 ± 1.03	2.32 ± 0.75	2.52 ± 0.94
– Limited study environment at home (no quiet space, etc.)	2.88 ± 1.07	2.67 ± 0.97	2.63 ± 1.02	2.40 ± 1.12	2.60 ± 0.76	2.64 ± 0.98
– Lack of family support for studying	3.00 ± 0.87	2.95 ± 0.74	2.96 ± 1.07	2.83 ± 0.91	2.88 ± 0.92	2.92 ± 0.90

Key: 1 = Strongly Agree, 5 = Strongly Disagree

The analysis of external challenges faced by adult learners in ODL programmes highlights significant issues, particularly around work, schedule conflicts, and financial difficulties. Most learners reported feeling overwhelmed by work, with a mean score of 2.34–2.47 for work overload and schedule conflicts, confirming that balancing work

and study remains a major hurdle. The item "I have limited time to study due to job demands" had a mean of 2.56, with no significant district variation ($p = 0.759$), showing that this challenge is universally felt.

Significant district differences appeared in job-related challenges. For the statement "I lack support from my organization," Gairo had the lowest average (2.29), with 71% agreeing they lacked employer support, which was significantly higher than other districts ($p = 0.006$). Conversely, Morogoro reported better support, with 15% of respondents disagreeing. Likewise, notable district differences were seen for schedule conflicts ($p = 0.003$), with Kilosa reporting fewer issues, possibly due to more flexible work arrangements.

Financial difficulties were also a concern, with 43% of learners indicating financial strain (mean 2.43), although no district differences were observed ($p = 0.182$). This highlights the economic barriers adult learners face, as many struggles with tuition fees, materials, and travel costs, even though ODL is less expensive than traditional programmes.

Domestic challenges, such as family and technical issues at home, were less pronounced but still notable. The mean score for "technical or family issues at home" was 2.52, indicating that some learners faced disruptions like household chores and childcare. There were no significant district effects ($p = 0.111$). Similarly, "limited environment to study" had a mean of 2.64, with no significant district variation ($p = 0.361$), although rural areas might experience more space constraints.

Finally, family support was not a significant challenge, with a mean score of 2.92, suggesting that most learners felt supported. There was no difference across districts ($p = 0.842$), but about 25% of learners reported lacking family support, which could be due to domestic tensions or cultural expectations.

Overall, external challenges, especially related to work, are widely experienced. Significant differences were observed in employer support and schedule conflicts between districts, likely due to local employment sectors and practices. While family support was generally positive, study environments and financial issues remain ongoing challenges. These results indicate that interventions should focus on balancing work and study, improving employer support, and providing better financial and academic resources. This finding aligns with Park and Choi (2009), who discovered that external support greatly influences persistence in online courses. Engaging employers and providing study leave could help ease the work-study conflict. Financial difficulties were also common, highlighting the need for financial support options such as scholarships or flexible payment plans. Despite this, family support

was strong, indicating that cultural factors positively influence motivation. For those without family support, strategies like family inclusion could be helpful.

Programme-Related Challenges

Programme-related challenges involve aspects of the ODL programme and learning environment provided by the institution, including interactions with instructors and peers, course design, and institutional support/resources. Table 3 presents comparisons for **programme-related challenge** items across districts, grouped into **Tutor/Learner Interaction** and **Institutional** challenges.

Table 3. Programme-Related Motivational Challenges by District

Programme-Related Challenge Item	Morogoro (n=26)	Gairo (n=21)	Mvomero (n=24)	Kilombero (n=30)	Kilosa (n=25)	Total (N=126)
Tutor/Learner Interaction Challenges:						
– Limited/low interaction with tutors	2.54 ± 0.93	2.62 ± 0.95	2.33 ± 0.88	2.43 ± 0.91	2.40 ± 0.83	2.47 ± 0.90
– Limited/low interaction with fellow learners	2.65 ± 1.01	2.76 ± 0.94	2.46 ± 1.12	2.57 ± 1.03	2.48 ± 0.90	2.59 ± 1.00
– Feeling a sense of isolation in studies	2.46 ± 1.02	2.43 ± 1.01	2.17 ± 0.92	2.40 ± 0.89	2.12 ± 0.76	2.32 ± 0.93
– Course requirements are inappropriate or too demanding	2.62 ± 1.04	2.76 ± 0.83	2.33 ± 1.01	2.37 ± 1.11	2.20 ± 0.82	2.45 ± 0.98
Institutional Challenges:						
– Inadequate or unsuitable learning materials provided	2.69 ± 0.88	2.71 ± 0.90	2.71 ± 1.07	2.57 ± 0.96	2.64 ± 0.76	2.66 ± 0.91
– Programme is too difficult or demanding	2.58 ± 0.88	2.67 ± 0.97	2.58 ± 1.04	2.37 ± 0.89	2.52 ± 0.71	2.54 ± 0.90
– Lack of support from the institution (e.g., guidance)	2.42 ± 0.96	2.43 ± 0.87	2.58 ± 1.06	2.57 ± 0.97	2.32 ± 0.75	2.47 ± 0.93

Key: 1 = Strongly Agree, 5 = Strongly Disagree

This study highlights key challenges in ODL related to tutor and peer interaction, course demands, and institutional support. Learners reported limited interaction, with averages of 2.47 and 2.59 for "limited interaction with tutors" and "limited interaction with other learners," respectively, indicating mild to moderate agreement with these concerns. Nearly 50% of learners felt disconnected from tutors, and 45% felt isolated from peers. The sense of isolation was notably higher in Kilosa (mean 2.12) and Mvomero (2.17), although ANOVA did not show a significant difference ($p = 0.077$). The trend suggests that these districts might have fewer in-person sessions or be more geographically dispersed, affecting learner engagement. In contrast, Gairo and Morogoro had slightly higher averages (~2.43–2.46), indicating better support or connectivity.

Course requirements posed another challenge, with an overall mean of 2.45. Mvomero and Kilosa showed lower means (~2.3 and 2.2), indicating that learners in these areas felt the programme demands were too high. ANOVA results were nearly significant ($p = 0.093$), while a Chi-square test showed significant differences ($p = 0.006$). Learners in Kilosa and Mvomero may have less academic preparedness, making the course more difficult, whereas Gairo's students seemed to find it more manageable. A substantial portion (about 50%) of learners across all districts agreed that the course requirements were too demanding, pointing to potential issues with the programme's design.

Institutional support was identified as another key area of concern, with an average score of 2.66 indicating inadequate learning materials. About 40% of respondents agreed that the provided resources were insufficient. There was little difference across districts ($p = 0.834$), likely due to centralized material development. Similarly, 35–40% of learners felt the programme was too demanding (average 2.54), with no significant differences between districts ($p = 0.345$). This suggests that balancing academic work with other life responsibilities remains a common challenge.

Regarding support services, 48% of respondents felt they lacked adequate institutional support (mean 2.47), with no significant district differences ($p = 0.548$). This feeling was common, even in Morogoro, where learners might expect more support because of proximity to the main campus. This indicates that issues like insufficient staffing or communication breakdowns are affecting learners across all districts.

In general, the study highlights common challenges across districts, especially related to isolation, course demands, and institutional support. Kilosa and Mvomero learners reported feeling more isolated and having difficulty with course requirements, while Gairo's learners seemed to have more manageable experiences. The Chi-square test showed significant differences in both isolation ($p = 0.048$) and course requirements

($p = 0.045$) across districts, indicating that regional factors like community support and expectations may influence these issues.

The main point is that a lack of interaction and support are major obstacles in the ODL experience. These results match studies in other settings, like Ghana, where adult learners highlighted the need for more regular tutor feedback and engagement. ODL providers in Tanzania should improve communication and support systems by using technology (e.g., WhatsApp, Zoom) or face-to-face sessions to tackle these issues and boost learner participation.

The ODL programmes themselves also contribute to motivational challenges. High transactional distance, characterized by limited tutor and peer interaction, leads to feelings of isolation. This aligns with Moore's Theory of Transactional Distance, which emphasizes the need for more interaction to reduce isolation. Institutions should improve communication, for example, through regular tutor check-ins or peer study groups. Additionally, the lack of sufficient learning materials and the perception of overly demanding programmes call for updates to course content and more flexible learning options, such as remedial sessions or a self-paced progression.

Conclusion and Recommendations

Motivational challenges in adult ODL are substantial but manageable. This study across five Tanzanian districts identified internal factors (such as time management and role balancing), external factors (such as work, finances, and support systems), and programme-related barriers (including interaction and institutional support). Despite these obstacles, many learners remain motivated, demonstrating strong personal agency. Key recommendations include designing flexible ODL programmes with asynchronous learning, extended deadlines, and part-time options. Employers should support employees' study commitments, and peer networks should be encouraged to reduce isolation. Institutions must show commitment through dedicated support officers, improved responsiveness, and high-quality, relevant learning materials. Technology, like learning analytics, can provide personalized support. Lastly, context matters; tailored interventions for diverse learner groups are essential. By addressing these challenges, ODL providers can boost retention and success, helping adult learners reach their potential and contribute to their communities.

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The Role of Community Learning Centres in Enhancing Adult Learning and Education in Dodoma and Coast Regions in Tanzania

Mugabe Mtani, Institute of Adult Education

Email: *Mugabe.mtani@iae.ac.tz and mtanimgabe@yahoo.co.uk*

Abstract

Community Learning Centres (CLCs) play a vital role in Adult Learning and Education (ALE) by providing inclusive spaces for literacy, skills development, and lifelong learning. They support both adults and youth, particularly marginalised groups, in improving livelihoods and fostering community empowerment. This study examines the role of CLCs in promoting adult education in Tanzania and highlights the challenges that affect their effectiveness in meeting the evolving needs of learners in a rapidly changing educational landscape. The research was conducted in Dodoma and Coast Regions using a case study design and mixed-methods approach. Data were collected from 60 respondents through interviews and questionnaires. Findings reveal that while the centres provide a wide range of programmes, the limited application of the REFLECT approach constrains adult learners' engagement in literacy and community-driven learning. Nonetheless, both CLCs demonstrate progress in reducing illiteracy and improving functional literacy. Key challenges include inadequate resources, low learner motivation, insufficient facilitator capacity, poor market access, and weak post-training support. Despite these constraints, CLCs remain essential platforms for lifelong learning, self-reliance, and community transformation, with significant potential if supported through stronger institutional frameworks and investment.

Keywords: Community Learning centres, adult Learning and education, lifelong learning, Literacy, adult learners, skills development

Introduction

Nelson Mandela's assertion that "education is the most powerful weapon which you can use to change the world" reflects the transformative potential of learning across generations. However, as Knowles (1980) emphasised, adult education must go beyond the transmission of facts; it should be learner-centred, practical, and rooted in lived experiences. Similarly, Vedarthan (2022) cautions that knowledge only becomes power when it is applied, whereas unused knowledge risks becoming irrelevant. Within the field of adult learning, therefore, knowledge that does not contribute to improving livelihoods, enhancing decision-making or strengthening community wellbeing fails to realise its transformative promise.

Globally, policy frameworks such as the Belém Framework for Action (2009), the UNESCO Global Report on Adult Learning and Education (2016), and the

Sustainable Development Goals, particularly SDG 4, underscore the importance of Adult Learning and Education (ALE). These initiatives recognise ALE as a driver of lifelong learning, employability, social inclusion, and the reduction of inequalities. Scholars likewise emphasise that ALE is most impactful when it is context-sensitive, empowering, and practically oriented (Desjardins & Rubenson, 2013; Rogers, 2014).

In Africa, these global commitments have taken on particular urgency, as Adult Learning and Education (ALE) plays a crucial role in addressing persistent literacy gaps, high unemployment, and civic disengagement. Over the past two decades, many African countries have implemented Community Learning Centres (CLCs) in various forms and under different labels, including resource centres, community development centres, telecentres, libraries, multipurpose community telecentres, and distance learning support centres (DVV International,2022). Despite the diversity of these models, their shared goal has been to expand access to inclusive, community-driven learning opportunities. Among these initiatives, CLCs have emerged as one of the most widely adopted strategies, providing literacy, vocational training, and life skills programmes that are locally relevant and responsive to community needs (UNESCO, 2016; Aitchison & Alidou, 2009). Nevertheless, the effectiveness of CLCs varies across countries, often constrained by limited resources, inadequate infrastructure, underqualified facilitators, and low levels of community participation (Omolewa, 2014; Yamada, 2015).

Tanzania's embrace of the CLC model was inspired by exchange visits to Uganda and Ethiopia, where the approach has been successfully scaled nationwide. Building on these experiences, Tanzania inaugurated its first CLC in 2022 and a second in early 2023, marking the beginning of a promising journey. This momentum is reinforced by strong policy backing, as CLCs are anchored within the Education and Training Policy (2014) and the National Adult and Non-Formal Education Strategy (2021–2026). Within this framework, their primary aim is to expand opportunities for out-of-school youth and adults, particularly women, rural populations, and marginalised groups, through a wide range of programmes that include literacy and numeracy, vocational training, entrepreneurship, life skills, and civic education (Barton & Hamilton, 2005; TIE, 2020). DVV International has been pivotal in advancing this agenda by facilitating cross-country knowledge exchange, peer learning, and capacity building. Together, these initiatives are laying the groundwork for the sustainable institutionalisation of CLCs and positioning them as vital hubs for education, skills development, and community empowerment (DVV International, 2025).

While Community Learning Centres (CLCs) are increasingly recognised as key platforms for adult education in Tanzania, little is known about how they function in

specific regional contexts. Existing studies provide limited insight into how socio-economic conditions in regions such as Dodoma and Pwani influence the design, delivery, and outcomes of CLC programmes (Sempeho & Mtani, 2022). This gap restricts understanding of their actual contribution to literacy improvement, livelihood enhancement, and sustainable community development. This study, therefore, investigates the role of CLCs in enhancing adult learning and education (ALE) in Tanzania, with Dodoma and Pwani serving as pilot cases. Specifically, it seeks to: (i) explore the types of educational and skill-development programmes offered by CLCs; (ii) assess the extent to which CLCs have improved literacy and skills development among adults; and (iii) identify the challenges faced in implementing ALE programmes. In doing so, the study highlights the adaptability of the CLC model and its potential to align localised education initiatives with broader national priorities that promote inclusive growth, lifelong learning, and sustainable transformation.

Theoretical Framework

In order to understand how Community Learning Centres (CLCs) enhance adult learning within the Tanzanian context, Andragogy Theory (Knowles, 1980) and the Empowerment Framework (Kabeer, 1999; Rowlands, 1997) guided this study. Together, these frameworks provide a comprehensive lens through which to examine both the processes and outcomes of adult education. They address not only *how* adults learn, but also *why* and *to what end* learning should be pursued in CLCs.

Andragogy Theory offers a pedagogical foundation for designing and evaluating adult learning programmes. Knowles (1980) posits that adult learners are self-directed, bring prior experiences to the learning process, are motivated by internal factors, and prefer learning that is problem-centred and relevant to their daily lives. The theory identifies six core principles, including need to know, self-concept, prior experience, readiness to learn, orientation to learning, and motivation, that serve as a guide for developing effective adult learning initiatives. In the context of CLCs, these principles imply that programmes must be participatory, flexible, and directly connected to learners' livelihoods and social realities.

The Empowerment Framework complements this by situating adult learning within the broader socio-economic transformation agenda. According to Kabeer (1999), empowerment is a process whereby individuals gain the resources, agency, and achievements necessary to exercise control over their lives. Rowlands (1997) further elabourates that empowerment has personal, relational, and collective dimensions, all of which can be fostered through inclusive and transformative education. Applied to CLCs, this means that the success of adult learning should not only be measured by

skill acquisition, but also by whether learners gain confidence, critical awareness, and the capacity to participate actively in community and economic life.

The integration of these two frameworks is particularly appropriate for this study. Andragogy addresses the *pedagogical dimension* of CLCs, ensuring that learning is aligned with the needs and characteristics of adult learners, while the Empowerment Framework addresses the *transformational dimension*, focusing on how acquired skills and knowledge translate into enhanced agency and improved livelihoods. By combining these perspectives, the study can more effectively evaluate whether CLCs in Tanzania are not only delivering knowledge but also enabling learners to apply that knowledge in ways that bring about personal and community development.

Methodology

This study was conducted in Dodoma and Coast Regions, specifically in Kongwa District (Hogoro CLC) and Kibaha District (Ruvu JKT CLC) in Tanzania. The two regions were purposively selected because they fall within the pilot area of the Community Learning Centres (CLCs). The study adopted a case study design, employing both qualitative and quantitative approaches. According to Yin (2017), a case study provides an in-depth and detailed examination of a particular case within a real-world context. The use of this design in the present study enabled the researcher to capture the lived realities and contextual experiences of participants in relation to the functioning of CLCs. A combination of purposive and random sampling techniques was applied. Purposive sampling was used to select two regions, two districts, and eight key informants, namely: two district adult education officers, two ward education officers, two centre coordinators, and two committee chairpersons. Random sampling was employed to select 12 facilitators and 40 learners from the two CLCs. The selected sample was deemed adequate for statistical analysis, as recommended by Bailey (1998).

Data were collected through both primary and secondary sources. Primary data collection instruments included questionnaires, semi-structured interviews, and focus group discussions (FGDs). The questionnaire was pilot-tested on 10 randomly selected respondents from the CLCs to ensure its validity (Msabila et al., 2013; Bujang et al., 2018). Four FGDs were also conducted with learners and facilitators to obtain deeper insights into their experiences. In addition, semi-structured interviews were held with key informants to gather context-specific information. Secondary data were obtained through a desk review of relevant literature, including national policies, programmes, and peer-reviewed journal articles on adult education and the implementation of CLCs in Tanzania. Data analysis involved both qualitative and

quantitative techniques. Qualitative data were analysed using content analysis, where the responses were coded, summarised, and categorised into themes and sub-themes in line with the study objectives. Quantitative data, on the other hand, were analysed using the Statistical Package for Social Sciences (SPSS) version 20. Both descriptive and inferential statistical methods were applied to address the study objectives and assess the role of CLCs in enhancing adult learning and education.

Results and Discussion

This section presents the study's findings in line with the three objectives that guided the investigation. First, it identifies the types of educational and skill-development programmes currently offered by Community Learning Centres (CLCs). Second, it assesses the extent to which these programmes contribute to enhancing adult literacy and skills development. Third, it examines the key challenges that limit the effective implementation of CLC initiatives. Together, these findings provide a holistic view of how CLCs function as platforms for adult learning and community empowerment, while also highlighting the constraints that must be addressed to improve their effectiveness and sustainability.

Types of educational and skill development programmes offered by CLCs

This section explores the educational and skill-development programmes offered by Community Learning Centres (CLCs), focusing on their types, structure, and delivery methods. It also considers the use of participatory, problem-centred approaches and how these programmes support both livelihood improvement and broader social participation, highlighting their relevance and impact for adult learners.

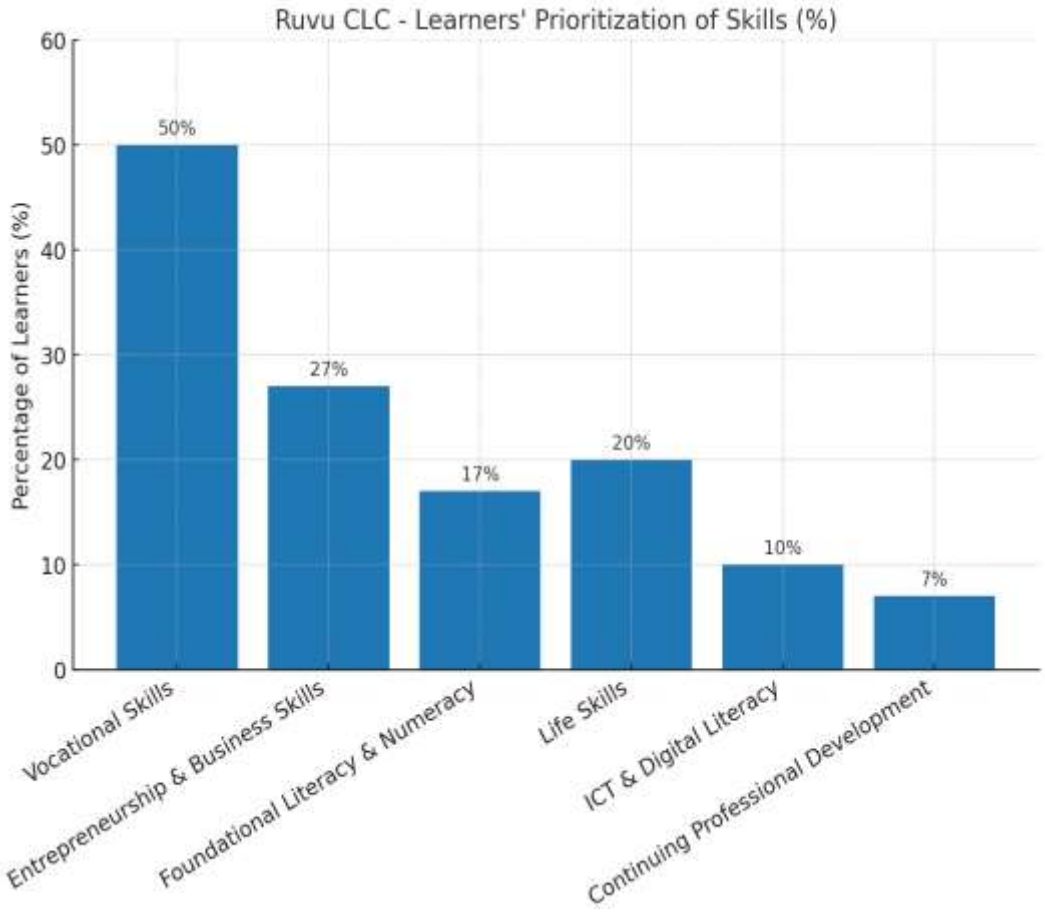
Categories of programmes currently offered in CLCs: The researcher sought to identify the categories of adult education programmes offered in Community Learning Centres (CLCs). To achieve this objective, CLC Coordinators were requested to outline the types of programmes implemented in their centres. The findings indicate that two surveyed CLCs provide a well-rounded mix of vocational, life skills, and recreational programmes, consistent with the broader objectives of the ICBAE programme, which aims to enhance adult learners' skills for self-reliance and community development. The most commonly offered programmes include vegetable Gardening, Recreational Activities, and the "Other" category highlights a strong emphasis on both livelihood-oriented and socio-cultural learning. These services equip adult learners with practical skills for economic self-sufficiency, food security, and active community participation.

Less frequently offered, though still significant, were vocational and technical skills such as Tailoring, Carpentry, Welding, Electricity Installation, and Fish Farming. These programmes demonstrate that CLCs also cater to specialised skill needs within the community, although on a smaller scale. The "Other" category further illustrates CLCs' commitment to life and soft skills, encompassing entrepreneurship, health education, gender sensitisation, and citizenship awareness. Such offerings are crucial for empowering learners to engage effectively in societal and economic development.

These findings indicate that the two CLCs surveyed effectively align with the ICBAE programme's objectives by providing a balanced portfolio of vocational, livelihood, and socio-cultural programmes. The universal provision of vegetable gardening, recreational activities, and other life-skill initiatives underscores their role in promoting food security, income generation, and community cohesion. Although vocational and technical programmes such as tailoring, carpentry, and welding are offered on a smaller scale, they nonetheless address specific skill demands within the communities. Overall, the CLCs function as not only centres for literacy and skills acquisition but also as platforms for empowerment, fostering both self-reliance and active participation in socio-economic development.

Programme Priorities at Ruvu CLC

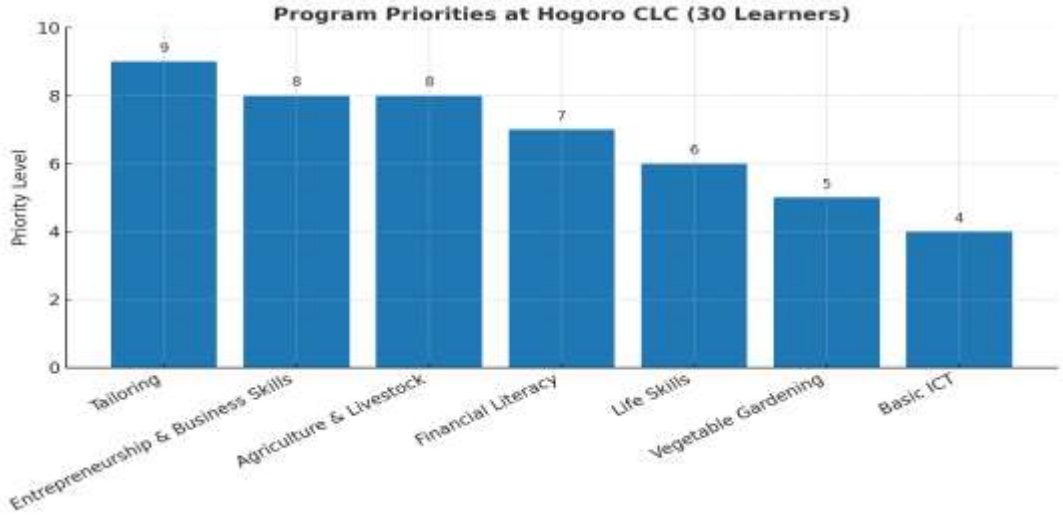
The researcher was also interested in analysing the programme priorities at Ruvu Community Learning Centre (CLC) to understand which categories of learning and development opportunities are most valued by learners and community members. This analysis focused on examining the relative importance placed on different types of programmes. Responses are shown in Figure 1.



Data in Figure 1 shows that, out of 30 surveyed learners at Ruvu CLC, the strongest preference was for vocational skills, where 15 learners (50%) rated them as *"very important"*. This reflects a strong community demand for hands-on, practical skills such as tailoring, carpentry, and vegetable gardening that directly contribute to livelihood improvement and household income security. Entrepreneurship and business skills were the second most prioritised area, with 8 learners (27%) rating them as very important. This shows that beyond acquiring technical skills, community members value opportunities for self-reliance and income generation through small-scale businesses and entrepreneurship. Foundational skills like basic literacy and numeracy were also recognised, with 5 learners (17%) rating them as very important. While lower than vocational and entrepreneurship skills, this highlights the continuing need for literacy as a gateway skill enabling adults to engage effectively with training that is more advanced and livelihood opportunities.

For life skills (health, hygiene, parenting, socio-cultural knowledge), the percentage was not specified in the dataset, but the narrative suggests that they were also highly valued, pointing to the role of CLCs in promoting personal well-being, family stability,

and community participation beyond just economic outcomes. By contrast, ICT/digital literacy and continuing professional development were ranked lower and considered less critical. This suggests that while these areas are emerging priorities, they are not yet central to the community's immediate learning needs, possibly due to limited access to technology and employment structures in the local context.



At Hogoro CLC, the programme priorities reflect both immediate livelihoods need and long-term sustainability. The highest priority is tailoring, which has been identified as a flagship skill among the 30 learners. Tailoring is already a strength in the community and provides quick opportunities for income generation through making school uniforms, repairing clothes, and producing simple garments. Alongside this, entrepreneurship and business skills, together with agriculture and livestock, rank just below tailoring but are equally important. Entrepreneurship acts as a crosscutting skill, enabling learners to manage and grow any trade profitably, while agriculture and livestock ensure reliable food security and steady income given the rural context of Hogoro. Moderate priorities include financial literacy and life skills. Financial literacy is crucial because it helps learners manage earnings from tailoring and farming, ensuring that income translates into savings and long-term stability. Life skills, on the other hand, strengthen employability by improving communication, customer relations, and problem-solving abilities, which are essential for sustaining trust and success in markets and group activities.

The lower-ranked priorities are vegetable gardening and basic ICT. Vegetable gardening still plays a role in nutrition and provides quick, small-scale income from surplus produce, but it is not emphasised as strongly as tailoring or livestock farming. Basic ICT is considered the lowest priority, but it remains relevant for modern

business practices such as record-keeping, mobile money transactions, and marketing products via digital platforms. Although not yet central to all learners, ICT introduces valuable skills for future opportunities.

Programme Structure and Delivery in CLCs

The researcher was also eager to analyse the ICBAE programme structure to assess the extent to which it remains relevant, effective, inclusive, and sustainable, and to identify areas for improvement that can strengthen CLCs as vehicles for adult learning and community development.

Table 1: Programme structure and Delivery

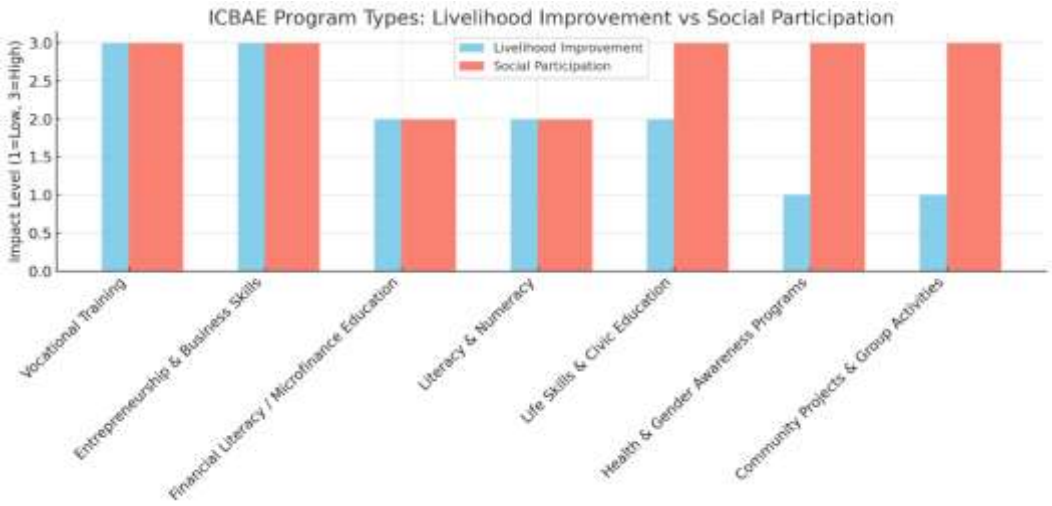
Dimension	Ruvu CLC	Hogoro CLC
Needs-Based Curriculum Design	Vocational skills such as vegetable gardening are strongly prioritised, reflecting the community's focus on livelihoods and self-reliance. .	Places more weight on foundational literacy and numeracy alongside life skills, catering to adults with limited educational background vocational skills (tailoring, vegetable gardening), entrepreneurship, life skills, literacy and numeracy
Programme Delivery and Flexibility	Programme delivery is structured around modular learning sessions complemented by exhibitions and practical demonstrations. Classes are often held in the evenings or at weekends to accommodate learners' work and family commitments.	Maintains a simpler structure—regular literacy classes scheduled in ways that accommodate farming seasons and domestic work, showing inclusivity and sensitivity to learners' daily realities.
Facilitation and Pedagogy	Facilitators often integrate entrepreneurial case studies and group projects, reinforcing peer learning.	Facilitation leans more toward traditional literacy teaching, with gradual integration of participatory approaches
Integration with Livelihoods	Strong link between literacy and visible small-scale enterprises	vocational skills emphasized first; Functional literacy gradually integrated
Governance & Community Ownership Both centres have CLC committees,	Strong partnerships with local government & NGOs, enhancing sustainability	Relies on local volunteers and community goodwill; inclusive but resource-limited
Outcome Orientation	Literacy is linked to income generation and community development	Literacy-first approach, building a foundation for future vocational engagement

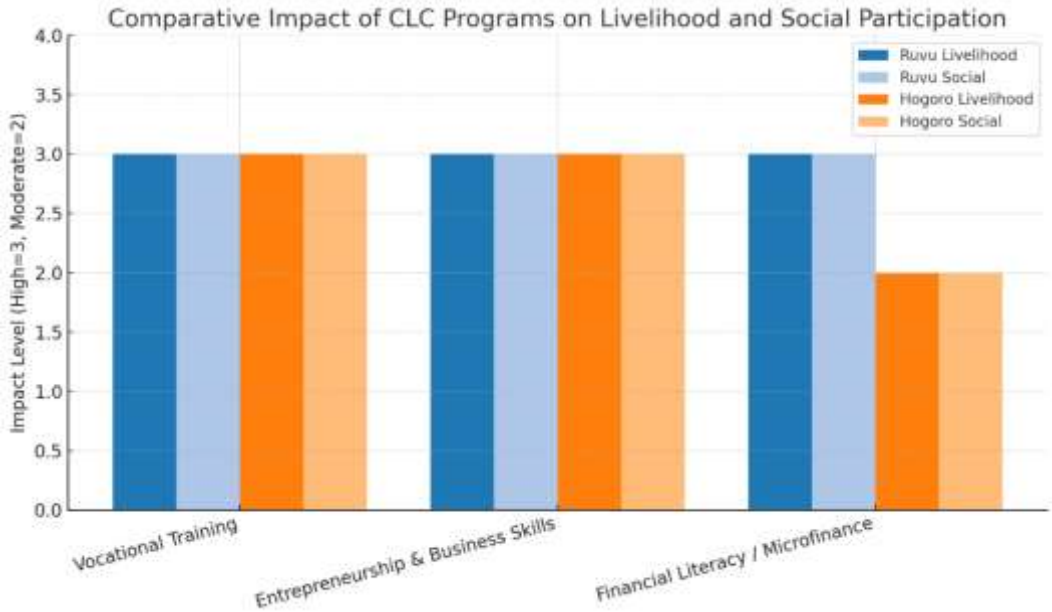
Data in table 1 reveal that while both centres operate under the ICBAE framework, their programme structures reflect different community priorities, resource bases, and stages of development, highlighting the model's flexibility and the need for tailored support.

Ruvu CLC demonstrates how ICBAE can evolve into a livelihood-oriented, entrepreneurial hub**,** where literacy learning is closely linked with visible community development outcomes such as food security initiatives, group projects, and income generation. In contrast, Hogoro CLC, while still grounded in the ICBAE model, reflects a literacy-first approach, gradually integrating vocational and livelihood elements such as tailoring and agriculture into its programming. Together, these two cases illustrate the adaptability of the ICBAE framework across different community contexts. One centre emphasizes economic empowerment through entrepreneurship and group enterprises, while the other focuses on strengthening foundational learning as a stepping-stone to vocational skills. Both models contribute meaningfully to sustainable community learning pathways, showing how ICBAE can be tailored to meet diverse learner needs and local realities

How does the programme address both livelihood improvement and broader social participation?

Community Learning Centres (CLCs) are designed not only to enhance individual skills but also to strengthen community development. This section examines how the educational and skill-development programmes offered by CLCs contribute simultaneously to improving livelihoods and promoting broader social participation. By exploring the alignment between programme content and the economic, social, and civic needs of learners, the study highlights how CLCs foster both personal empowerment and community engagement. Responses are shown in figure 3 & 4.





Data in figures 3 &4. Show that Vocational Training, Entrepreneurship & Business Skills are top contributors to livelihood improvement. These provide adults with practical skills to start or expand income-generating activities, like tailoring and small enterprises. Financial Literacy / Microfinance Education also ranks high, helping learners manage money, savings, and access small loans for business growth.

Literacy & Numeracy and Life Skills & Civic Education improve functional skills like reading, record keeping, problem solving, and decision-making, which indirectly strengthen livelihoods. Health & Gender Awareness Programmes also contribute

moderately, as better health and gender equity indirectly improve productivity and household welfare.

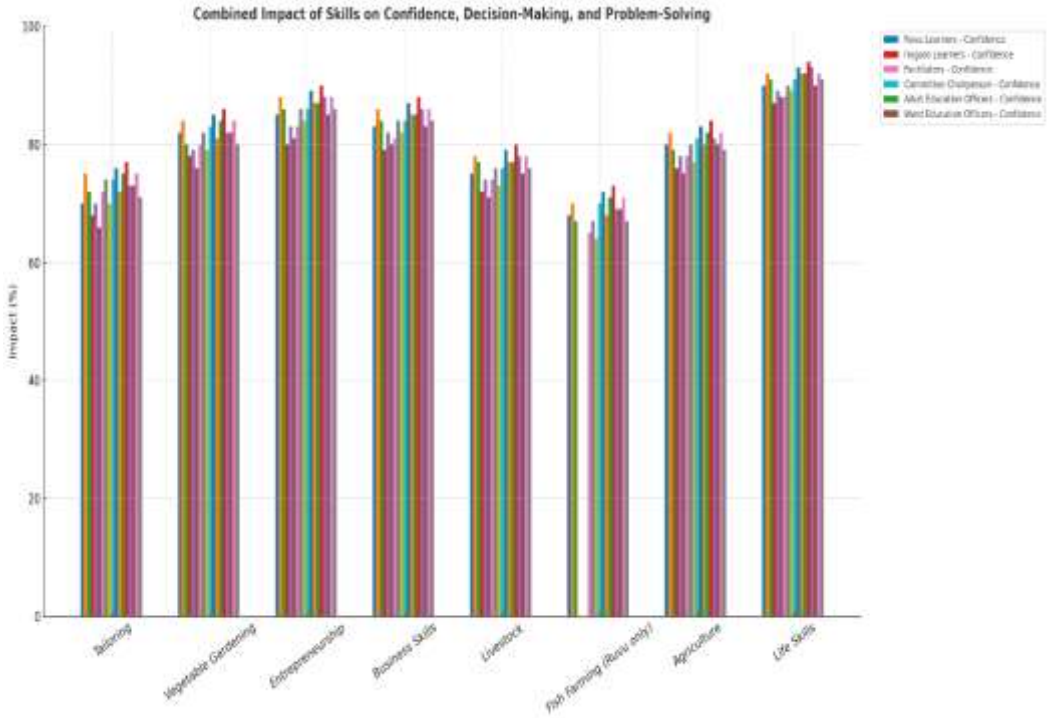
Community Projects & Group Activities rank low for direct income impact, as they focus more on collective participation and empowerment rather than individual earnings. Health & Gender Awareness Programmes, Community Projects & Group Activities score highest. They foster inclusion, equality, cooperation, and awareness, strengthening community ties. Vocational Training and Entrepreneurship & Business Skills also rank high, showing that when adults gain economic independence, they also engage more in community and group initiatives. Financial Literacy**,** Literacy & Numeracy**,** and Life Skills & Civic Education fall in the middle range. They support personal growth, confidence, and participation in decision-making, but their impact is not as visible as community-focused programmes.

The findings reveal that livelihood improvement is driven mainly by economic skills such as vocational, entrepreneurship, and financial literacy, while collective and awareness-building programmes such as health, gender, and community projects strengthen social participation. Importantly, the chart shows balance in ICBAE's dual purpose. It not only equips learners for better income but also enhances their ability to participate in social, civic, and community life.

Contribution of ALE in building self-confidence, Decision-Making, and problem-solving

Before enrolling in the programme, illiterate individuals often lacked self-confidence due to the fear of being ridiculed by other community members for not knowing how to read. Illiterate parents were also unable to monitor their children's academic progress, and most of them were excluded from decision-making processes. Moreover, effective problem-solving requires competence and exposure, which they did not have.

Data related to this question were obtained through document reviews, interviews, and FGDs conducted with learners, WEO, DAEO, and CMC chairpersons. The summarised responses are presented in Figure 7.



Data in Figure 7 show that vocational and life skills have an impact on confidence, decision-making, and problem-solving as reported by Ruvu and Hogoro learners, facilitators, committee chairpersons, adult education officers, and ward education officers. Life Skills show the highest overall impact**,** consistently scoring above 90% across respondents. This suggests that life skills training has been the most transformative, significantly boosting learners' self-confidence, their ability to make informed decisions, and their problem-solving capacity.

Entrepreneurship and Business Skills also scored highly (85–90%), highlighting their importance in fostering critical thinking and economic empowerment. Vegetable Gardening and Agriculture achieved strong ratings (around 80–85%), especially in confidence and decision-making, reflecting their role in improving food security and household income.

Tailoring and Livestock skills registered moderate but positive impacts (70–78%). Their influence was notable in building confidence, though slightly lower in problem-solving compared to entrepreneurship-related skills**.** Fish Farming (Ruvu only) recorded the lowest scores (65–70%), indicating that the programme is still in its early stages or has limited reach. The findings indicate that all skills had a positive influence across the three domains, with variations in magnitude. However, Ruvu learners consistently scored higher than Hogoro.

Application of New Skills in Hogoro and Ruvu

The gap between knowledge acquisition and application is a persistent challenge in adult education. Vedarthan (2022) proposes a knowledge–action matrix to conceptualise how adult learners' outcomes depend not only on what they know but also on their ability and opportunity to apply knowledge in real life. In the Tanzanian context, this calls for adult learning programmes that are practical, relevant, and responsive to socio-economic realities. The failure to translate learning into action risks perpetuating cycles of poverty and exclusion despite increased access to education.

The application of new skills in Hogoro and Ruvu CLCs demonstrates how adult learners translate knowledge into practical livelihood activities. By engaging in both vocational and community-oriented initiatives, learners not only enhance their economic well-being but also contribute to social development within their communities. The researcher wanted to know the ways used by learners to apply new skills in income-generating activities or community initiatives. Responses are shown in Table 3.

Table 2: Ways Learners Applied Their Skills

CLC Centre	Skills Applied	Key Activities / Outcomes
Hogoro	Tailoring	Started small tailoring businesses; increased income and confidence; contributed to the local economy
	Agriculture	Improved crop farming; higher yields, and strengthens food security
	Livestock Rearing	Poultry, goats, cattle for income; improved nutrition; household income increased
	Fish Farming	Managed ponds; higher fish yields; income and community benefit
Ruvu	Mushroom Cultivation	Small-scale mushroom projects; additional income; emerging micro-businesses
	Vegetable Gardening	Household/group gardens; food and income improved; fosters community collabouration
	Entrepreneurship & Business Skills	Kiosks, shops, cooperative businesses; economic empowerment; decision-making improved

Data in Table 3 shows that learners in Hogoro and Ruvu JKT have applied their newly acquired skills in diverse ways that strengthen both household income and community development. In Hogoro, many learners have established small tailoring and carpentry businesses, while others engage in agriculture and livestock rearing, leading to

increased yields and earnings. In Ruvu, learners have invested their skills in fish farming, mushroom cultivation, vegetable gardening, and entrepreneurship, which provide both food security and financial benefits. Beyond personal income, learners also use their knowledge in group projects and local initiatives, such as supporting community farming schemes and cooperative businesses. These applications not only improve livelihoods but also foster collaboration, problem-solving, and self-reliance within their communities.

To explore key challenges to effective implementation

Despite the positive contributions of Community Learning Centres (CLCs) in enhancing literacy, vocational training, and community development, several barriers continue to undermine their full potential. Perspectives from CLC facilitators, coordinators, adult education officers, Ward education officers and Centre Management Committee (CMC) chairpersons highlight recurring issues that affect both the quality and sustainability of these programmes in Tables 3 to 4.

Table 3: Challenges mentioned by CLC facilitators and coordinators

No.	Challenges	No. of Responses (18)
1.	Limited Training in Andragogy -Many facilitators lack specialised training in adult learning principles, making it difficult to apply approaches such as participatory and learner-centred methods.	8(44.44)
2.	Resource Constraints- Inadequate teaching materials, facilities, and financial support hinder the use of practical, problem-based approaches	12(66.66)
3.	Diverse Learner Backgrounds- Adult learners vary widely in literacy levels, prior experiences, and learning needs, making it hard to design inclusive programmes	10(55.55)
4.	Low Motivation and Irregular Attendance-Some learners face livelihood pressures (e.g., farming, caregiving), which affect commitment to learning.	13(72.22)
5.	Curriculum Limitations- Standardized or rigid curricula may not fully address local realities, livelihood opportunities, or learners' immediate needs.	7(38.88)
6.	Balancing Theory with Practical Skills- Facilitators struggle to integrate hands-on, livelihood-relevant skills within limited time and resources.	5(27.77)

Table 4: Challenges mentioned by Learners

No.	Challenges	N=(18)
	Time constraints	40(100)
	Low motivation and irregular attendance – caused by economic pressures and domestic responsibilities.	25 (62)
	Limited access to vocational equipment – challenges in practical skills training like tailoring or agriculture.	35 (87.5)
	Financial constraints – inability to contribute to CLC activities or invest in income-generating projects.	37 (92.5)
	Shortage of qualified facilitators – especially for specialized skills like fish farming or entrepreneurship	20 (50)
	Market linkages challenge – learners trained in business struggle to access markets for their products.	33 (82.5)
	Follow-up and mentorship gaps – limited post-training support to help learners apply new skills effectively.	35 (87.6)

Table: 5 Challenges mentioned by CMC chairpersons, DAEO and DAE

No.	Challenges	N=(6)
	Limited financial resources – lack of funds to support income-generating activities and vocational training.	6 (100)
	Low community participation – some community members are still reluctant to engage fully in CLC activities.	5(83.33)
	Unreliable market linkages – learners face challenges in finding reliable markets for their products.	6(100)
	Dependence on external support – sustainability of programmes is threatened without donor/government aid	6(100)
	Weak monitoring and follow-up – limited tracking of learner progress and post-training outcomes	3(50)

Data in tables 3 to 5 highlight a range of interconnected challenges that hinder the effective functioning of Community Learning Centres (CLCs). Facilitators and coordinators emphasised limited training in andragogy (44.4%) and resource constraints (66.7%) as key barriers, alongside diverse learner backgrounds (55.6%) and low learner motivation/irregular attendance (72.2%). These factors limit the application of participatory and problem-centred approaches. Learners similarly pointed to time constraints (100%), financial barriers (92.5%), limited vocational equipment (87.5%), and weak follow-up/mentorship (87.6%) as major obstacles, reflecting both livelihood pressures and structural weaknesses in programme delivery. Committee chairpersons, Ward Education Officers and district adult education officers (DAEs) reinforced these concerns, citing chronic financial limitations (100%), overdependence on external support (100%), and unreliable market linkages (100%) as systemic challenges affecting sustainability.

The findings suggest that while CLCs aim to deliver relevant and practical adult learning, their impact is constrained by inadequate resources, low learner engagement, insufficient facilitator capacity, and structural barriers such as poor market access and weak post-training support. Addressing these issues requires a holistic approach that combines enhanced facilitator training, improved resource allocation, stronger community participation, and sustainable livelihood linkages to ensure long-term effectiveness.

Conclusion and Recommendations

This study concludes that Community Learning Centres (CLCs) in Tanzania play a pivotal role in advancing adult education and community development. Guided by adult learning principles and empowerment goals, CLCs provide a balanced mix of vocational and livelihood programmes that equip learners with practical skills, promote food security, and foster socio-economic participation.

Despite challenges of limited resources, low motivation among learners, and inadequate facilitators, CLCs demonstrate significant potential as inclusive platforms for lifelong learning, self-reliance, and empowerment. Strengthening structural support, sustainable funding, and policy recognition is essential for maximising their impact on individuals and communities.

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Exploring the Strategies for Sustainability and Effectiveness of ODL Programmes at the Institute of Adult Education: Experience from Mpanda Centre-Katavi

Ezra Nathanael Ntazoya, Institute of Adult Education

Email: ezranaths@gmail.com; ezra.ntazoya@iae.ac.tz

ORCiD: https://orcid.org/0009-0004-5204-8046

Abstract

Training through Open and Distance Learning (ODL) at IAE should be provided sustainably and effectively to continue attracting new learners. The sustainability of programmes offered via the ODL mode will only be achieved if the recommended strategies for their enhancement are implemented. This paper offers theoretical insights to shed light on the challenges faced by tutors and students using the ODL mode of delivery. It is suitable for ODL students, lecturers, researchers, and scholars interested in ODL discourse and analysis. The study was guided by three main research questions: What strategies can be employed to ensure the sustainability of the ODL mode? How effective is the ODL mode at IAE? What lessons can IAE learn from other institutions implementing ODL? Data were collected through a systematic documentary review of documents related to the ODL mode. The researcher's experience was also considered during data collection. Data analysis involved thematic (deductive) and content (conceptual) analysis methods. The findings suggest that, unless the recommended strategies for implementing the ODL delivery mode are adopted, both tutors and students will continue to face challenges, leading to a lack of programme effectiveness. It is recommended that the IAE Council and Management promote additional intervention studies to address the challenges affecting education provision through the ODL mode across all Tanzanian regional centres.

Key words: ODL Programme, ODL sustainability, ODL effectiveness, emerging ODL technologies

Introduction

Training through Open and Distance Learning (ODL) at the Institute of Adult Education (IAE) should be delivered sustainably and efficiently to continue attracting new learners. The long-term viability of programmes offered via ODL will only be possible if the recommended strategies for their enhancement are adopted. As we celebrate 50 years of excellence in education for lifelong learning, it inspired the author to consider several key research questions that guided the study on the sustainability and effectiveness of programmes offered through the ODL mode of delivery. These questions were, (i) What strategies can be employed to ensure the sustainability of the ODL mode of delivery? (ii) How effective is the ODL mode of delivery at IAE? (iii)

What lessons can IAE take from other institutions implementing the ODL mode of delivery?

The questions on the sustainability of programmes offered through ODL mode of delivery, the effectiveness of ODL mode of delivery and the lessons learnt from other institutions implementing ODL mode of delivery have been answered in this paper. This makes the study significant as it addresses the pressing need to explore and establish sustainable strategies for Online and Distance Learning (ODL) within the Institute of Adult Education (IAE). With the growing demand for flexible and accessible education, understanding how to sustain ODL programmes effectively is critical for enhancing educational reach and inclusivity. By focusing on the IAE context, the study provides insights into the best ways to align resources, institutional support and technology infrastructures. It also provides insights on how to enhance stakeholder engagement to ensure the long-term viability of ODL initiatives for adult learners. This is particularly important to in-service adult learners who often face barriers in traditional learning environments.

Moreover, by evaluating the effectiveness of the current ODL delivery modes and drawing lessons from other institutions, the study contributes valuable comparative knowledge that informs future policy and practices. These findings will not only benefit the adult learners at IAE but also provide a useful reference for government agencies, educational planners, and development partners seeking to expand or improve ODL offerings across Tanzania and similar contexts. Ultimately, the study helps bridge the gap between theory, implementation, and sustainability in adult education through technology-enhanced learning.

Strategies and effectiveness of Online and Distance Learning (ODL)

Online and Distance Learning (ODL) has been adopted globally as an alternative strategy for increasing access to education, especially in contexts where conventional learning is limited by geography or infrastructure. Studies such as Ally (2024), Ntazoya (2024) indicate that, in Tanzania, institutions such as the Institute of Adult Education (IAE), the Open University of Tanzania (OUT), and Moshi University Cooperative and Business Studies (MUCOBS) have several ODL implementation strategies. These includes the development of online platforms, integration of mobile learning and establishment of regional learning centres to expand outreach. Other institutions include Tanzania Global Development Learning Centre (TGDLC) and Tanzania Global Learning Agency (TAGLA). Recently, institutions such as Kampala International University in Tanzania (KIUT), Dar es Salaam Institute of Technology (DIT), the University of Dodoma (UDOM), the University of Dar es Salaam (UDSM), Mzumbe University, Sokoine University of Agriculture (SUA) and State University of

Zanzibar (SUZA) have started offering some Non-Degree, Bachelor's Degree and Post-Graduate programmes. Despite these efforts, challenges remain, especially in ICT infrastructure and digital literacy among learners and instructors (Amos & Mhando, 2024; Vidya Planet, 2021; Qifu, 2013). A study by Mtebe and Raphael (2023) noted that although many students value ODL for its flexibility, technical difficulties, low bandwidth, and limited learner support hinder its effectiveness in Tanzania.

Studies such as Ally (2024), Hillesheim (1998) have indicated that, in developed countries, the implementation of ODL is often supported by robust digital ecosystems and institutional policies that foster innovation and learner-centred approaches. For instance, universities in the UK, Canada, and Australia have adopted blended learning models, learning analytics, and Artificial Intelligence to personalize learning experiences (Ally, 2024). According to Kintu et al. (2022), these strategies have led to improved learner engagement and outcomes, particularly when combined with timely feedback from the tutors, peer collabouration, and well-designed course materials. The COVID-19 pandemic accelerated investment in technology and underscored the need for pedagogical shifts, which have further strengthened the effectiveness of ODL in these countries.

Comparatively, empirical findings suggest that while developed countries demonstrate high levels of ODL effectiveness due to technological advancements and institutional support, countries like Tanzania must address systemic barriers to maximise ODL potential (Hongoke et al, 2004; Kapinga & Mtani, 2014; Kolimba, Kigadye & Reuben, 2014; Edward, 2019; Mgaiwa & Ishengoma, 2022). Studies such as Mgogo, Haule and Komba (2024; Mtebe & Raphael (2023) have recommended enhancing ICT infrastructure, training educators in digital pedagogy, and developing policies that encourage inclusive and responsive ODL systems, particularly in regional centres. For sustainable ODL implementation in Tanzania, emphasis must also be placed on stakeholder collabouration, local content development, and continuous learner support (Ndibalema, 2024; Mgaiwa & Ishengoma, 2022). Therefore, lessons from global best practices must be contextually adapted to ensure the sustainability and effectiveness of ODL in low-resource settings in the Tanzanian region, where ODL delivery mode is adopted in the provision of education.

Theoretical framework guiding the study

The study adopted Rogers' Diffusion of Innovations Theory (DOI) of 1962. This theory provides a strong framework for understanding the adoption and institutionalisation of Open and Distance Learning (ODL) in adult education (Chen, 2024). The theory is especially relevant to the Institute of Adult Education (IAE) and

similar institutions that are transitioning to or expanding digital and remote learning modalities. At its core, this theory examines how innovations such as digital platforms, virtual classrooms, and other distance learning technologies are communicated and adopted within a social system over time.

The application of Rogers' Diffusion of Innovations (DOI) Theory in contemporary educational research for ODL learning continues to be validated by recent empirical studies. Zaman (2024), Chen (2024) and Menzli et al. (2022) provide strong empirical evidence supporting the theory's core innovation attributes, namely, *relative advantage*, *compatibility*, *complexity*, *trialability*, and *observability* within educational settings. These findings reaffirm the theoretical robustness of DOI in explaining the adoption of digital and distance learning innovations in formal learning environments that will ensure the sustainability of the ODL delivered programmes at IAE.

Furthermore, the theory highlights the role of *communication channels, social systems, and the stages of innovation adoption* (knowledge, persuasion, decision, implementation, and confirmation), which are essential for analysing how facilitators, learners, and institutional stakeholders interact with and support the ODL approach. In this regard, Rogers' model offers a valuable lens for evaluating the conditions under which ODL can be successfully institutionalized and maintained within adult learning frameworks in developing countries like Tanzania.

Jin et al. (2024) further extend the utility of DOI by examining its applicability to emergent technologies, such as generative artificial intelligence (AI), across a range of institutional contexts worldwide. Their analysis highlights the significance of *communication channels* and *social systems* in influencing institutional decision-making, aligning with Rogers' emphasis on social dynamics in the diffusion process of the innovations being sought.

In contrast, the critique by Felix and Botes (2024) challenges the model's conceptual limitations. Their analysis underscores the theory's *oversimplification* of the adoption process, its *lack of sensitivity to context*, and its *failure to adequately consider organisational and systemic barriers*. These critical perspectives emphasise the need for more nuanced models that can account for the socio-political and structural complexities inherent in institutional innovation, such as the Institute of Adult Education (IAE).

Although Greenhalgh et al. (2004) noted that DOI is a foundational but older source, its relevance persists in contemporary scholarship. The authors' comprehensive systematic review remains widely cited for highlighting the theory's limited generalizability and its insufficient engagement with complex organizational change

processes. Collectively, these sources provide a balanced scholarly foundation for both applying and critiquing DOI in the context of ODL adoption and sustainability.

The Challenges experienced by students and tutors using the ODL Mode of learning in regional centres

Socio-economic challenges facing adult learners using the ODL learning mode

Adult learners enrolled in Online and Distance Learning (ODL) programmes at the Institute of Adult Education (IAE) in Tanzania just like how it is featured with other institutions offering similar programmes via ODL mode of delivery, they encounter a variety of socio-economic challenges that undermine their academic engagement and performance. A primary obstacle is the limited access to digital tools and affordable internet services (Amos & Mhando, 2024). Learners from rural and economically disadvantaged backgrounds often lack smartphones, laptops, or sufficient data bundles to participate effectively in online learning, which is becoming more common, geared to help learners in remote areas to complete the provided modules. Furthermore, infrastructural deficiencies such as unstable electricity supply and poor network coverage in many regions exacerbate these accessibility issues, impeding regular interaction with digital learning resources (Dhawan, 2020; Mgaiwa & Ishengoma, 2022; Mtebe & Raphael, 2023; Ntazoya, 2024).

Financial instability further constrains adult learners' ability to thrive in ODL settings. Studies such as Muilenburg & Berge (2001), Kapinga & Mtani (2014), Edward (2019), and Ntazoya (2024) have pointed out that many ODL learners are self-employed in the formal sector, striving to upgrade their qualifications for improved livelihood opportunities. Balancing economic responsibilities with academic demands is challenging, especially when learning involves additional costs such as printing, downloading resources, or acquiring digital devices (Rwehumbiza, 2023; Ntazoya, 2024). Economic pressures often compel learners to prioritise income-generating activities (to earn school fees) over education, resulting in irregular attendance during ODL face-to-face sessions and increased dropout rates (Bozkurt et al, 2022; Ndibalema, 2024).

Additionally, adult learners face time-related constraints due to overlapping responsibilities in their families, workplaces, and communities. Unlike conventional students, as noted by Charles (2021), they frequently study at night or during brief intervals in their work schedule, often without a conducive environment for learning (Komba & Mwandosya, 2015). These circumstances contribute to cognitive fatigue and diminished academic performance (Barbour et al, 2020). Compounding these issues are low levels of digital literacy, particularly among learners unfamiliar with e-

learning platforms, email systems, or basic computer operations. Without adequate training and language support, many ODL learners struggle to navigate digital systems effectively, leading to frustration and disengagement (Komba, 2023). Lack of peer interaction and minimal academic support further isolates learners in the ODL context, reducing motivation and, in some cases, leading to attrition (Nleya, 2022; Mgaiwa & Ishengoma, 2022; Ntazoya, 2024).

Despite the growing adoption of ODL at the Institute of Adult Education (IAE), there remains a limited understanding of how socio-economic constraints such as digital exclusion, financial instability, and low digital literacy impact the long-term sustainability and effectiveness of learning through the ODL delivery mode. Existing studies, such as Dabaji & Yetkin (2011), have not sufficiently explored how these barriers affect learner retention, engagement, and outcomes within the Tanzanian adult education context. Therefore, the essence and relevance of this paper in explaining the innovative strategies to make the ODL alive and more effective matter for various stakeholders involved in the process of making ODL implementation successes at IAE.

Socio-Economic Constraints Impacting ODL Tutor Performance at IAE

Studies in both Tanzania (Hongoke et al, 2004; Kolimba, Kigadye & Reuben, 2014; Ntazoya, 2024) and outside Tanzania (Muilenburg & Berge, 2001; Jung, 2019) have addressed the major challenges facing the ODL model of delivery, particularly for adult learners and their tutors. Tutors facilitating programmes via the Open and Distance Learning (ODL) mode in Tanzania encounter persistent socio-economic barriers that adversely influence both their professional effectiveness and motivation. A key issue is the lack of sufficient access to digital infrastructures and the low level of ICT literacy among many tutors. In regional centres under the Institute of Adult Education (IAE), it is common for facilitators to lack laptops, reliable internet, or stable electricity, particularly in areas without standby generators in the office to support teaching during power cuts. These limitations restrict their ability to effectively utilise learning management systems such as Moodle (Ndibalema & Ishengoma, 2024). Furthermore, comparative studies highlight that limited bandwidth, software challenges, and outdated ICT infrastructures significantly affect the quality of technology-based instruction in Tanzanian ODL settings (Gu & Warioba, 2016).

Equally pressing are the financial challenges faced by ODL facilitators. Tutors often bear the cost of internet access from their own resources and receive inadequate financial incentives for the extra tasks required in content preparation (module content), uploading materials, and learner management through digital platforms.

These conditions are exacerbated by the insecure and temporary nature of their employment. Many module facilitators at IAE work under part-time or contract-based arrangements, with limited access to benefits, professional development, or career progression opportunities. Such uncertainties undermine their long-term commitment and weaken their institutional integration.

Professional and social isolation further compounds the difficulties faced by ODL tutors. Because ODL delivery limits face-to-face interaction with learners and colleagues, tutors often work in isolation, with minimal opportunities for collabouration, mentorship, or capacity building. Combined with competing responsibilities from other teaching or income-generating duties, many facilitators experience stress and reduced motivation, which in turn affects the quality of learner support they are able to provide. Notably, facilitators based in regional centres often feel that their roles are underappreciated compared to those in conventional campus-based settings, preferably, Dar es Salaam campus. This perception of low status diminishes morale and limits the professional satisfaction of those engaged in ODL.

Although the Tanzanian government and higher education institutions implementing ODL have initiated efforts to mainstream digital education, including through the expansion of ODL centres and other ICT-based programmes, significant gaps remain. The persistence of a digital divide, inequitable resource distribution, and under-investment in tutor support mechanisms suggest that ODL delivery will remain constrained unless addressed through comprehensive and inclusive strategies for its sustainability at IAE.

Materials and Methods (Research Methodology)

This study employed a qualitative research design, utilizing a systematic documentary review approach as the primary method for data collection. The aim was to explore sustainability strategies, assess the effectiveness, and extract lessons learnt from the implementation of Online and Distance Learning (ODL) programmes. A total of forty (40) documents relevant to ODL delivery were retrieved from six credible academic databases: Google Scholar, Education Resource Information Centre (ERIC), Connected Papers, Semantic Scholar, Science Research, and ResearchGate. The search strategy involved key terms, which are: *ODL programme, ODL sustainability, and ODL effectiveness*. Out of the initial pool, twenty (20) peer-reviewed journal articles were purposively selected for detailed analysis based on their relevance, authenticity, and alignment with the study objectives.

To validate and enrich the findings from a systematic documentary review approach, semi-structured interviews were conducted with twelve ODL programme beneficiaries

at the Mpanda Centre in Katavi Region. Participants were selected purposively to ensure they had direct and substantial experience in learning certificates such as Technical Certificate in Adult and Continuing Education (TCACE) and Technical Certificate in Adult Education and Community Development (TCAECD), and Diplomas such as Ordinary Diploma in Adult and Continuing Education (ODACE) programmes using ODL mode of delivery. The collected data were analysed using both thematic analysis and content analysis techniques. Thematic analysis followed a deductive approach guided by the study objectives, enabling the identification of patterns and recurring themes of the study. Concurrently, conceptual content analysis was applied to extract underlying ideas and trends from both documents and interview narratives. This combination of methods ensured a robust interpretation of the findings by integrating literature-based evidence with contextual, field-based insights from the learners.

Results, Discussion and Implications

The results of this study are presented thematically based on the research questions presented in section 1.0, namely, what strategies can be employed to ensure the sustainability of the ODL mode of delivery? How effective is the ODL mode of delivery at IAE? What lessons can IAE take from other institutions implementing the ODL mode of delivery? The findings are drawn from the systematic documentary review and validated through interviews with ODL beneficiaries at Mpanda Centre in Katavi Region. The presentation highlights both literature-based evidence and field-based insights to provide a comprehensive understanding of the research problem.

Sustainability strategies for ODL programmes

The findings from the reviewed literature indicate that, for any programme offered through online and distance learning mode of delivery to be sustainable, it should have a clear vision and objectives, institutional support and leadership at the regional centres. The findings indicate that there should be capacity building for both staff and students. When interviewed, one of the second-year Diploma students reported that;

> "We really need more training on how to use the online systems effectively. Once we are confident with the technology, learning becomes much easier and more enjoyable."(Interviewee, No. 6-Second-year ODL Student).

This implies that the strengthening of ICT services at the learning Centre (Mpanda Centre) has a positive contribution towards making ODL more sustainable in the future. It also indicates that stakeholders such as DEO are largely engaged during the initial stages of finding the learners to enrol on the programme. Once they are enrolled in a certain ODL programme, the rate of engagement in various planning and decision-

making about the programme's sustainability and continuity is very minimal, as illustrated.

> During enrolment, many stakeholders were involved and encouraged us to join. But after that, we hardly see them or hear about any decisions they make about our learning. It feels like we have been forgotten (Interviewee, No. 7-Second-year ODL Student).

This statement, given by the learner, indicates dissatisfaction with some stakeholder involvement in ODL implementation at IAE. This calls for further strategic planning on how to strengthen consistent stakeholder involvement beyond enrolment, which could greatly enhance ownership and continuity of the ODL programmes at IAE. Results indicate further that there is a need for conducting monitoring, evaluation and further research aimed at documenting ODL sustainability plans. One ODL Learner stressed that,

> We need regular follow-ups and assessments to see what is working and what is not. Without proper evaluation and research, it's hard to improve or sustain the programme"(Interviewee, No. 4-First-year ODL Student).

This can be done by establishing a strong monitoring and research framework that will provide evidence-based decisions to sustain and improve ODL delivery at IAE. It was also revealed that curriculum flexibility and relevance are key for ODL sustainability. One of the first-year ODL learners commented that, *"the curriculum is very practical and flexible. It allows me to study at my own pace and still apply the knowledge to my work. That's what has made IAE continue to grow and be useful to us as in-service teachers."*(Interviewee, No. 2-First-year ODL Student). The best strategy in such a situation is to continue aligning the existing curriculum and the new ones with learners' real-life needs and local contexts is key to sustaining IAE's relevance and impact.

It was also noted that infrastructure and the use of digital platforms have made it easy not only for communication among various parts of the ODL implementation stakeholders. This prompted one of the ODL learners to argue that,

> The introduction of digital platforms has really helped us. Even though internet access is sometimes a challenge, I can now attend lessons and submit assignments without having to travel far (Interviewee, No. 1-First-year ODL Student).

Strategically, IAE can expand digital infrastructures and improve accessibility that will significantly strengthen IAE's capacity to deliver ODL effectively and sustainably.

For ODL programmes to continue being offered at the IAE, the existing policy and legal framework have to remain functional. What is included in the policy should also be known to the end users. No wonder, one of the ODL learners said,

> I have learned that the government now recognises ODL through its policies. This gives us hope and confidence that what we are doing is officially supported and will be accepted for promotion (Interviewee, No. 3-First-year ODL Student).

This implies that full implementation and awareness of ODL policies and the legal framework will solidify institutional legitimacy and support long-term sustainability of ODL for IAE. In addition, the findings reveal that community and learner motivation towards ODL learning is encouraged. When interviewed, one of the ODL learners indicated that,

> "When my community sees the benefits of what I'm learning, they encourage me a lot. That motivation from both family and neighbours keeps me going and shows that this programme should continue" (Interviewee No. 7-Second year ODL Student).

The quotation indicates that there is a need for more efforts to mobilise community support and to recognise learner motivation as a foundation for sustained learner engagement and programme growth.

The long-term sustainability of ODL programmes at the Institute of Adult Education (IAE) in Tanzania is hindered by fragmented stakeholder engagement, weak infrastructural support, and minimal investment in monitoring and evaluation systems. While stakeholder involvement is relatively high during the enrolment phase, there is a notable decline in their participation during implementation and strategic planning, weakening institutional accountability and shared ownership. This gap is reflective of broader governance challenges affecting many adult learning systems in Sub-Saharan Africa, where participatory structures are often underdeveloped (Munene & Otieno, 2024). Additionally, the limited integration of evaluation and feedback mechanisms restricts adaptive learning and innovation, key elements required for dynamic and relevant ODL programmes. Without deliberate investment in evidence-based planning and inclusive decision-making, ODL risks becoming disconnected from both learners' needs and national development goals.

Moving forward, IAE must capitalise on its proven curriculum flexibility by embedding a future-focused, inclusive strategy that integrates digital transformation, policy alignment, and community engagement. Strengthening digital infrastructure, paired with capacity-building in digital literacy for both learners and instructors, will be critical for bridging equity gaps and improving learner outcomes (Aboagye & Yidana, 2023). Moreover, the enactment and enforcement of ODL supportive policies must be accompanied by localised implementation frameworks that respond to the Tanzanian context. Importantly, sustained community involvement and motivational structures can reinforce learner commitment, while regular monitoring and research

ensure relevance and innovation. For IAE to thrive over the next 50 years, a paradigm shift toward collabourative governance, evidence-based practices, and digital inclusivity is essential.

The effectiveness of the ODL mode of delivery

The findings have indicated that the programmes offered through ODL delivery mode at IAE are effective despite the challenges that are faced by both the learners and the tutors who facilitate the ODL lessons in the regional centres. The findings from the reviewed literature that are supported with interview scripts from ODL learners from the Mpanda centre are presented in sub-themes indicated hereunder.

The essence of learners to achieve programme objectives and outcomes emerged as an important aspect for measuring the effectiveness of the ODL programme. One second-year ODL student noted that *we have access to education and opportunities for personal and professional growth despite existing challenges (*Interviewee *No. 7*- Second-year ODL Student). Further, it was noted that through ODL, the learners perform well and actively engage in the learning process. When interviewed, one of the ODL learners said,

> "Since I joined the ODL programme, I've become more active in my learning. The flexibility allows me to manage my time well, and I've noticed real improvement in my academic performance."(Interviewee, No. 8- Second year ODL Student).

The findings indicated that the IAE curriculum is relevant and thus makes it very useful after the completion of studies. In an interview session with a second-year ODL student, she stipulated that, "What I'm learning is directly related to my career. I can already apply some of the skills in my daily work, and I believe it will open more opportunities for me after graduation."(Interviewee, No. 9- Second-year ODL Student).

Face-to-Face facilitation increases morale among ODL learners. Another ODL Learner supported the idea by saying that,

> Whenever we meet with facilitators during face-to-face sessions, it motivates me to keep going. It feels more real and supportive compared to only learning online."(Interviewee, No. 10- Second year ODL Student). This suggests that integrating periodic face-to-face sessions into ODL delivery can enhance learner motivation, reduce dropout rates, and improve academic performance. It highlights the importance of maintaining a blended learning model to create a more engaging and emotionally supportive learning environment.

The effectiveness of ODL programmes at the IAE in Tanzania has been marked by notable strengths, particularly in curriculum flexibility, accessibility, and alignment with

adult learners' socio-economic realities. Learners report that the self-paced and modular nature of ODL allows them to balance education with work and family obligations, contributing to increased engagement and skill application in real-life settings (Kalinga & Nyandwi, 2023). Additionally, the incorporation of blended learning, especially face-to-face sessions, has enhanced learner morale and comprehension, fostering a sense of connection often missing in fully online environments (Chawinga, 2022). However, the full potential of ODL effectiveness is yet to be realised due to persistent gaps in tutor support, technological reliability, and learner feedback systems. Strengthening digital infrastructures, improving pedagogical design, and institutionalising regular learner assessments are crucial next steps for maximising outcomes. With targeted investment and adaptive policies, IAE's ODL model can continue to serve as a critical avenue for inclusive and lifelong learning in Tanzania's adult education landscape.

The lessons learnt from other institutions implementing the ODL mode of delivery

It was noted that, since IAE is an institution offering ODL programmes that ought to remain sustainable and relevant, there is a need to learn from other institutions that offer various programmes through the ODL mode of delivery. In Tanzania, for example, there are the University of Dar es Salaam, the Open University of Tanzania, the Tanzania Global Development Learning Centre, and the Tanzania Global Learning Agency. Worldwide, some institutions are significantly providing the lessons that IAE can learn.

The findings indicated that both local and internationally recognised universities and institutions provide lessons to IAE in the provision of its programmes through ODL. Studies such as Ally (2024) have indicated that in Tanzania for example, there are universities and institutions such as the Open University of Tanzania (OUT), Moshi University of Cooperatives and Business Studies (MUCOBS), Tanzania Global Development Learning Centre (TGDLC), Tanzania Global Learning Agency (TAGLA), Kampala University in Tanzania (KIUT), Dar es Salaam Institute of Technology (DIT), the University of Dodoma (UDOM), the University of Dar es Salaam (UDSM), Mzumbe University and Sokoine University of Agriculture (SUA) in their non-degree, degree and post-graduate programmes.

The key issues emphasised from studies such as Kapaya (2024), Mgogo, Haule & Komba (2024), and Ntazoya (2024) indicated that institutional support structures, ICT information and access, training and capacity building to both the facilitators for ODL and students can enhance both digital literacy and continuous professional

development, which are key to the sustainability of the ODL programmes offered at IAE. When asked what IAE can learn from other institutions implementing this programme, I said,

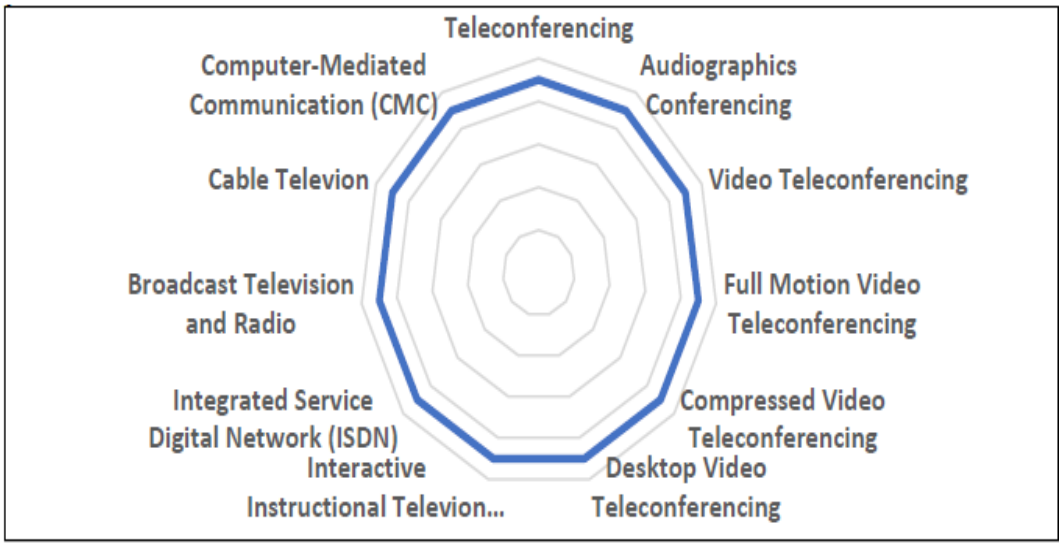
> "When I heard how other universities have 24/7 online helpdesks and digital libraries, I realised how much support we are missing here. We also need such systems to make learning easier."(Interviewee, No. 11- Second year ODL Student).

Another student commented that,

> I saw that in some countries, ODL students form online study groups and communities. We need something like that to stay connected and motivated."(Interviewee, No. 01- First-year ODL Student).

The given quotation shows the importance of having a well-defined framework for ODL learners. This will help them get the support services they require at their own convenience. Technologically, the adoption of the model (See Figure 1) can help learning of ODL learners by being facilitated by remote facilitators using interactive media technology.

Figure 1: Emerging Technological Trends Useful for ODL Learners



Source: Ntazoya (2024, page 225).

Other lessons that IAE have learned from the named institutions include learner engagement and flexibility, content delivery, language usage, frequent monitoring and evaluation of the offered programmes, partnership and feedback to stakeholders about the programmes. When interview pointed out that, *some institutions check in with their students regularly to track progress and challenges. If IAE did the same, many of us wouldn't feel left alone in our studies."(*Interviewee, No. 12- Second year ODL Student).

A study by Ally (2024) indicates that in Africa, universities such as the Zambian Open University (Zambia), Egerton University (Kenya), Triumphant College (Namibia), National Open University of Nigeria (NOUN), University of South Sudan, University of Malawi and the University of South Africa (UNISA) provide a significant platform for learning through ODL which is relevant to IAE ODL programmes. These universities have made a step forward in using the existing challenges and barriers as successes and enablers by addressing what worked for a programme. This is what IAE ought to learn for its ODL programme sustainability and continuity in the next 50 years.

Internationally, QRNW. (2025) has documented several universities described as best in offering ODL programmes across the world. These universities include the Open University of UK, Indira Gandhi National Open University (IGNOU), Athabasca University (Canada), University of People (USA), Open Polytechnic of New Zealand, the Open University of Malaysia (OUM), Open University of Catalonia (UOC) (Spain), Fern Universitat in Hagen (Germany) and University Terbuka (Indonesia). Other universities include Colorado State University (USA), Walden University (USA), Southern New Hampshire University (USA) and the Open Learning-Australia. However, these universities have a different geographical, technological, and economical background from the one described in Africa; they have been recorded for their outstanding international recognition in the provision of ODL programmes. They are credited for their flexibility, technologically enhanced learning, scalability and students support during learning, of which IAE can learn and enhance the provision of various non-degree and degree programmes through ODL.

Conclusions and Recommendations for Action

Based on the study findings, it can be concluded that the implementation of Open and Distance Learning (ODL) in Tanzania, particularly for adult learners at IAE faces significant structural and operational challenges. The gaps identified in programme objectives, institutional support systems, tutor capacity, curriculum relevance, stakeholder involvement, and infrastructural readiness reflect the need for a more integrated and context-specific approach. Without clearly defined and adaptable programme goals, aligned with the real-life needs of adult learners learning through ODL delivery mode, the effectiveness of ODL delivery mode remains limited.

In the Tanzanian context, addressing these challenges requires a collaborative effort between educational institutions like the Institute of Adult Education, government agencies, institutions and community stakeholders. Enhancing the capacity of facilitators, investing in appropriate infrastructure and ICT, and developing a learner-

centred, flexible curriculum are critical steps toward achieving sustainable and impactful ODL. Moreover, stakeholder engagement must be strengthened to ensure shared ownership and support for adult learning programmes. Ultimately, the success of ODL in Tanzania depends on how well these interconnected gaps are addressed through inclusive, strategic, and well-resourced interventions.

The findings of the study expose significant gaps in the design and implementation of ODL programmes, particularly concerning programme objectives, institutional support, and curriculum relevance. To tackle these issues in the Tanzanian context, it is crucial to review and realign ODL objectives to align with adult learners' needs and national development goals. Organizations such as the Institute of Adult Education (IAE) should strengthen learner support by establishing well-resourced regional centres and offering ongoing professional development for tutors in digital and adult learning pedagogy. Furthermore, the curriculum should become more flexible and pertinent through modular, practical, and competency-based learning methods that mirror the socio-economic realities of the adult learners.

To ensure long-term sustainability and effectiveness, greater stakeholder engagement is needed, involving local governments, employers, and NGOs practitioners in the design and support of ODL initiatives. Infrastructures should also be improved through investment in hybrid delivery methods such as printed materials, mobile learning, and community access points, particularly for rural learners. Equipping regional centres with ICT tools and providing accessible content in formats that are simple and friendly when used across digital devices. Finally, strong monitoring and evaluation mechanisms should be instituted to track learner progress, inform policy decisions, and continuously improve ODL programme quality and relevance.

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Learning and Education System Building Approach in Improving the Provision of Adult and Non-Formal Education (ANFE) Programmes in Tanzania

Mwajuma Mohamed, Institute of Adult Education

Email: mwajuma.abdallah@iae.ac.tz

Abstract

Strengthening Adult and Non-Formal Education (ANFE) systems in Tanzania is critical due to persistent challenges like limited access, low coordination, and fragmented services. The Adult Learning and Education System Building Approach (ALESBA) has emerged as a strategic framework to address these systemic weaknesses. This study examines ALESBA's relevance in enhancing ANFE's governance, delivery, and sustainability, with a specific focus on the Integrated Community-Based Adult Education (ICBAE) programme in Tanzania. Employing a qualitative research design, the study used a purposive sampling technique to select fourteen stakeholders from the ICBAE programme, including two policymakers, four programme coordinators, three facilitators, and five adult learners. Data was gathered through in-depth document analysis, policy reviews, and stakeholder interviews, followed by thematic analysis of the findings. The research demonstrated how ALESBA's structured, participatory process strengthens adult education systems. Emphasising multi-stakeholder engagement and iterative learning improves coordination and ownership. The study also explored ALESBA's alignment with national reforms promoting inclusive and equitable lifelong learning for marginalised communities. Findings are expected to enhance system coherence while enabling localised, context-relevant learning.

Keywords: Adult Learning and Education System Building Approach, Adult and Non-Formal Education, Lifelong Learning, Integrated Community-Based Adult Education

Introduction

In Tanzania, Adult and Non-Formal Education (ANFE) has long been recognised as a critical pathway for advancing literacy, skills development, and community empowerment. It has played an integral role in nation-building and continues to address the country's educational and socio-economic challenges (Mushi, 2009; UNESCO, 2018). The roots of ANFE in Tanzania can be traced back to the post-independence period, when President Julius K. Nyerere spearheaded nationwide literacy campaigns under the Education for Self-Reliance (ESR) philosophy. The literacy campaigns of the 1970s positioned adult education not only as a tool for literacy, but also as a foundation for political participation, social cohesion, and

economic self-reliance (Mushi, 2009). It was seen as an integral part of the national development through engagement of extension officers (Ng'umbi, 2025)

While Tanzania made substantial progress in reducing illiteracy during this period, recent surveys still reveal that a significant proportion of adults particularly women and rural populations remain functionally illiterate (MoEST, 2021). To address this, programmes such as the Integrated Community-Based Adult Education (ICBAE) were established, providing functional literacy aligned with community needs and enabling adults to apply reading, writing, and numeracy skills in their daily lives (IAE, 2018). Complementing ICBAE, Community Learning Centres (CLCs), supported by DVV International and national partners, now offer non-formal training, vocational skills, and livelihood opportunities, ranging from tailoring and agriculture to digital literacy (DVV International, 2023). Beyond learning, these centres also function as hubs for community mobilisation, civic engagement, and local development, thereby strengthening both individual empowerment and collective progress.

ANFE remains central to Tanzania's development agenda, equipping individuals with practical skills that improve household incomes, foster self-reliance, and directly support national poverty reduction strategies (URT, 2021). Many initiatives intentionally target women and other marginalised groups, enabling them to access literacy opportunities, join economic associations, and participate more actively in household and community decision-making processes (UNESCO, 2018). At the policy level, the Education and Training Policy (2014, revised 2023) explicitly integrate adult education into the broader education sector reforms, while the National Adult Learning and Education Monitoring and Evaluation Reporting System (NALMERS) provides a structured mechanism for monitoring progress and ensuring accountability (MoEST & PO-RALG, 2023).

Despite these advances, systemic challenges persist. Limited access to learning opportunities, weak coordination mechanisms, uneven service delivery, and inadequate institutional capacity continue to undermine the effectiveness of ANFE (UNESCO, 2022). These weaknesses disproportionately affect marginalised groups such as women, rural residents, and low-income households, who rely heavily on flexible, community-based learning opportunities. The Government of Tanzania has made credible efforts to address these challenges through frameworks such as the Education Sector Development Plan (2016/17–2020/21) and the revised Education and Training Policy (2023) (URT, 2016; MoEST, 2023). However, translating policy commitments into coherent, sustainable systems of adult education has remained difficult, as many interventions operate in isolation without adequate systemic integration.

Against this background, the Adult Learning and Education System-Building Approach (ALESBA) has emerged as a transformative framework for strengthening ANFE. Developed and promoted by the Association for the Development of Education in Africa (ADEA), ALESBA offers a structured, participatory process for diagnosing system weaknesses, designing interventions, and fostering multi-stakeholder collabouration (ADEA, 2018). The framework has been piloted in Ethiopia, where its improved governance and institutional coherence, and in Uganda, where the Integrated Community Learning for Wealth Creation (ICOLEW) programme demonstrated its potential to enhance adult education through a systems approach (ADEA, 2021).

In Tanzania, ALESBA has been applied within the ICBAE programme, which seeks to provide literacy, numeracy, and livelihood skills in community learning centres. ICBAE is particularly significant as it serves adults outside the formal education system, linking literacy directly to community development. By embedding ALESBA into ICBAE, the government and its partners aim to ensure programme relevance, sustainability, and alignment with both national education reforms and Sustainable Development Goal 4 (SDG 4) on inclusive and equitable lifelong learning (Torres, 2011; UNESCO, 2022). This study, therefore, examines the relevance of ALESBA in strengthening ANFE systems in Tanzania, with a particular focus on ICBAE within Kongwa district. It explores how the framework contributes to governance, coordination, facilitation, and learner experiences. Guided by a qualitative approach, the research draws on stakeholder interviews, policy reviews, and document analysis to provide evidence of ALESBA's transformative potential. By capturing perspectives from supervisors, coordinators, facilitators, and learners, the study offers a multi-level analysis of how ALESBA is reshaping adult education in Tanzania.

Methodology

This study employed a qualitative research design to assess the relevance of the Adult Learning and Education System-Building Approach (ALESBA) in the implementation of the Integrated Community-Based Adult Education (ICBAE) programme. The focus was on exploring how the ALESBA framework could help minimize, or potentially eliminate, persistent challenges in governance, delivery, and sustainability of ICBAE within Kongwa District, Tanzania. The study was deliberately small-scale, reflecting the fact that ALESBA has only been piloted in two regions, Dodoma and Pwani**.** Kongwa District, located in Dodoma, was purposively selected because Dodoma continues to register alarming high illiteracy rates among the five most with similar challenge compared to other regions (census report, 2022). Moreover, DVV International has played a central role in strengthening Adult Learning and Education

(ALE) systems in this region, making it a strategic site for examining how system-building can influence ICBAE implementation. Small-scale, exploratory studies such as this are widely recognized as valuable for generating insights into complex social phenomena (Cohen, Manion, & Morrison, 2007).

Data were gathered primarily through in-depth document analysis of key policy and programme texts. These included ALESBA documents, ICBAE guidelines, the Education and Training Policy (2014, revised 2023), the National Adult Literacy and Mass Education Rolling Strategy (NALMERS 2020/21–2024/25), and the Education Sector Development Plan (2016/17–2020/21). Reports from UNESCO Institute for Lifelong Learning (UIL), along with studies by scholars and practitioners in the adult education field, were also reviewed to capture broader perspectives on adult and non-formal education (ANFE) and system-building approaches.

In addition, the study employed purposive sampling to identify respondents with relevant knowledge and experience. Participants included two policymakers, four programme coordinators, three facilitators, and five adult learners. Semi-structured interviews were conducted with district-level supervisors and coordinators to obtain insights into supervision, governance, and system-level challenges, while facilitators contributed perspectives from day-to-day teaching practice within ICBAE centres that are currently applying the Community Learning Centre (CLC) model. Furthermore, a focus group discussion (FGD) was organised with adult learners. This provided a platform for learners to share their experiences of participating in ICBAE, including perceived strengths and weaknesses in literacy acquisition and livelihood training. The FGD format allowed for deeper exploration of group dynamics, learner motivation, and community-level impacts.

To enhance the validity and reliability of findings, data were triangulated by cross-verifying insights from documents, interviews, and the FGD. This methodological choice was particularly useful for identifying convergences and discrepancies between policy intentions, programmatic delivery, and learner experiences (Patton, 2015).

The data were analysed using thematic analysis, a process well-suited to qualitative inquiry (Braun & Clarke, 2006). The analysis began with careful transcription of interview and FGD recordings, followed by multiple rounds of reading and re-reading to achieve immersion in the data. Initial codes were developed to capture recurring issues related to coordination, quality, and accessibility in ICBAE implementation. These codes were progressively refined and grouped into broader categories. Through iterative comparison and merging of closely related categories, the analysis yielded four main themes that collectively reflect the challenges and opportunities for embedding ALESBA within ICBAE system strengthening.

Findings and Discussion

In the course of determining the relevance of the ALESBA in improving the provision of ANFE programmes in Tanzania, ICBAE in particular, the findings of this study reaffirm the transformative potential of the ALESBA in addressing systemic challenges that have historically undermined the effectiveness of ANFE in Tanzania. By analysing perspectives from supervisors, coordinators, facilitators, and learners, four themes emerged: governance and policy alignment, system coordination and stakeholder engagement, teaching and facilitation, and learner experience and impact. These themes illustrate how ALESBA would facilitate the improved system in running the programme and realising ongoing challenges in implementing ANFE within the ICBAE programme. In this discussion, the findings are interpreted against the existing literature, with particular attention to ALESBA's contributions and implications for marginalised communities and lifelong learning.

Governance and Policy Alignment

The study revealed that programme supervisors highlighted persistent governance challenges in ANFE, including limited funding, weak monitoring systems, and uneven service delivery across districts. Despite these constraints, they observed that the Adult Learning and Education System-Building Approach (ALESBA) aligns strongly with national education reforms and the broader agenda for inclusive and equitable lifelong learning. Supervisors emphasized that policy plays a critical role in legitimizing ANFE within Tanzania's education system, cautioning that without strong frameworks and political will, adult education risks being sidelined in favour of formal schooling. This concern resonates with Bhalalusesa (2020) assertion that:

> Today, adult education is still needed and has the potential to transform the country's economy because adults are the key immediate producers and have a significant role to play in building a strong, self-reliant economy.

Findings further indicated that ALESBA has been instrumental in creating clearer structures of accountability and embedding ANFE within policy frameworks such as the Education Sector Development Plan (2016/17–2020/21) *and the* Education and Training Policy (2014, revised in2023). Supervisors acknowledged that, historically, ANFE has often operated at the margins of the education system, characterised by limited budget allocations and weak institutional visibility, an experience consistent with Torres' (2011) observation that adult education is frequently treated as an add-on rather than a central component of lifelong learning. However, the introduction of ALESBA provided a structured diagnostic framework that enables governments to assess systemic weaknesses, strengthen governance, and align ANFE with national priorities. In this regard, supervisors recognised that ALESBA facilitated the

integration of ICBAE within the current Tanzania's Education Sector Development Plan (2025/26–2030/31) *and the* Education and Training Policy (2014, revised in 2023)*, t*hereby ensuring that adult learning is not detached from broader education reforms. This aligns with UNESCO's (2022) emphasis that:

> Adult learning and education must be embedded within national development strategies if countries are to achieve SDG 4 and advance social, economic, and environmental sustainability.

Moreover, ALESBA's participatory design was praised for enabling dialogue between national, regional, and local stakeholders. This participatory governance approach is particularly relevant in Tanzania, where decentralisation under PO-RALG grants local government authorities a central role in education delivery. Such an approach echoes earlier calls by ADEA (2018), which stressed that:

> Systemic, multi-stakeholder approaches are critical to ensure the sustainability and impact of adult education systems.

Consequently, ALESBA is gradually shifting ANFE in Tanzania from a fragmented and under-resourced subsystem toward one that is policy-driven, accountable, and sustainable**.**

System Coordination and stakeholder engagement

Programme coordinators reported that ALESBA significantly improved multi-stakeholder engagement within the ANFE system. Previously, coordination between government offices, facilitators, and community leaders was minimal, leading to duplication of efforts and inconsistent service delivery. Under ALESBA, however, a more coherent structure has emerged, fostering collaboration across ministries, local governments, civil society organisations (CSOs), and communities. One facilitator acknowledged that:

> I can see the significance of the programme since there is a great engagement of extension officers in running ICBAE activities. This was hardly seen in previous days.

The participatory approach of ALESBA was highlighted as a key driver of system ownership. Coordinators observed that when stakeholders are involved in both the diagnostic and design stages, they are more committed to implementation. The framework has also encouraged iterative learning, where lessons from programme implementation feed back into policy and practice. This process has not only strengthened coordination but also built institutional capacity for managing adult education programmes in a dynamic environment. As one coordinator revealed that;

> The engagement of stakeholders had made us check on the implementation through different activities, including reviewing what we are doing and making

> some adjustments where necessary, after getting feedback from the learners. Doing this several times has made an impact on our programme.

The study highlighted the positive impact of ALESBA on coordination and stakeholder engagement**.** Coordinators reported that previously, ICBAE suffered from duplication of efforts, poor communication, and disjointed responsibilities among key stakeholders, NGOs, and communities. Similar challenges have been noted in other African contexts, where fragmented governance structures have hindered the effectiveness of adult education programmes (ADEA, 2021). Through ALESBA, coordination has gradually improved by creating structured processes that promote stakeholder participation in diagnosis, design, and implementation. This finding is consistent with literature emphasizing that adult education systems require inter-sectoral collaboration to succeed (UNESCO Institute for Lifelong Learning, 2016). For example, when agricultural extension officers, health practitioners, and community development workers participate in ICBAE, learners receive knowledge that is directly applicable to their livelihoods.

The Tanzanian findings mirror experiences in Uganda, where the application of ALESBA under the Integrated Community Learning for Wealth Creation (ICOLEW) programme fostered stronger collaboration between the Ministry of Gender, Labour and Social Development, local governments, and civil society actors. As one Ugandan district officer remarked;

> Before ICOLEW, each department was doing its own thing. Now, through ALESBA, we plan together, monitor together, and the community can see government working as one system.

This multi-stakeholder approach enhanced system ownership and coherence, while also improving monitoring and evaluation processes through structured system assessments and peer reviews. Documented outcomes from Uganda included better alignment of adult education with livelihood and skills development initiatives, strengthened capacity of district-level structures to support Community Learning Centres, and increased community participation in planning and decision-making (DVV International, 2020; ADEA, 2021). In Ethiopia, ALESBA supported stronger linkages between literacy and livelihoods by integrating functional literacy programmes with local economic activities.

These comparative insights suggest that the participatory, system-oriented nature of ALESBA is adaptable across diverse contexts, with stakeholder engagement serving as a cornerstone of its success. Importantly, coordinators emphasised the role of iterative learning, a principle at the heart of ALESBA. By reflecting on implementation experiences and adjusting approaches accordingly, institutions are able to avoid rigid top-down models and instead adopt more responsive, context-driven systems. This

resonates with adult learning theories that stress reflection, adaptability, and contextualization as essential to building effective and sustainable education systems.

Teaching, Curriculum, and Facilitation

Facilitators underscored that ALESBA has transformed the way they deliver content and engage with learners. By emphasising localised, context-relevant approaches, the framework has empowered facilitators to adapt curricula to learners' socio-economic realities, such as agriculture, small business, and health. This has made learning more practical and directly applicable to daily life.

Coordination with programme coordinators and other stakeholders has also enhanced facilitators' effectiveness, with improved support systems such as training opportunities and peer learning that have boosted both confidence and teaching quality. Nevertheless, challenges remain, particularly the shortage of teaching materials and the continuing need for capacity building**.** As one facilitator affirmed:

> Capacity development remains an important component in our facilitation, since there are different approaches to teaching adults that emerged. It is through training that I came to learn of the REFLECT approach, which indeed allows learners to determine challenges around them and look for better ways to address them.

Feedback from learners further indicated that facilitators have become more responsive, creating inclusive learning environments where diverse voices are heard. Facilitators attributed this responsiveness to the participatory principles embedded in ALESBA, which have encouraged them to adapt teaching methods to learners' realities. This aligns with the critique in the literature that traditional adult education programmes are often overly standardised and disconnected from learners' daily lives (Torres, 2011). By embedding contextualised approaches, ALESBA makes adult learning more practical, linking literacy and numeracy with agriculture, entrepreneurship, health, and community development. This finding resonates with UNESCO's (2022) call for adult education to be holistic and learner-centred**,** addressing not only cognitive but also socio-economic and civic dimensions of learning. In Tanzania, facilitators described how participatory teaching has improved learner engagement, with learners increasingly viewing education as a form of empowerment rather than an obligation.

However, challenges persist. Facilitators noted limited access to teaching materials, inadequate remuneration, and insufficient opportunities for continuous professional development. These concerns are consistent with UIL's (2016) findings that undertrained and unsupported facilitators remain a key barrier to quality ANFE across Africa. Without adequate investment in human resources, the benefits of ALESBA

risk being undermined. Thus, while ALESBA provides a strong framework for improving facilitation, its long-term success will depend on sustained investment in facilitator training and support.

Learner Experience and Impact

Adult learners provided compelling evidence of the positive impact of ICBAE under ALESBA. While many joined the programme to improve literacy and numeracy, they also emphasised broader motivations such as enhancing livelihoods, participating in community decision-making, and supporting their children's education. Learners highlighted that the programme had improved their daily lives, particularly through skills relevant to farming, small enterprises, and household management. Importantly, they perceived the content as relevant and responsive to community needs. However, barriers to access remained, including long distances to learning centres, competing household responsibilities, and the lack of materials or reliable markets for their products. One adult learner explained that;

> I would wish to be staying nearby the CLC; however, that is not possible because where I live is far from here, and I have other roles, including taking care of my grandchildren, whose mother has gone to town looking for a job. This forces me to stay home on some days.

Despite these challenges, learners consistently described the learning environment as inclusive and participatory. They felt their voices were valued, which increased motivation and retention. For marginalised groups, especially women, participation in ICBAE was described as transformative, enhancing confidence, agency, and social inclusion. Learner perspectives revealed that ICBAE under ALESBA had a tangible impact on their daily lives—citing improvements in literacy, numeracy, livelihoods, and confidence. These findings demonstrate that adult education contributes to both individual empowerment and community development, aligning with the global discourse that adult education should not only address literacy but also foster social inclusion, civic participation, and economic resilience (UNESCO, 2022).

The study also highlighted persistent barriers such as distance to learning centres, competing responsibilities, and resource limitations. These reflect broader structural inequalities that disproportionately affect marginalised groups, particularly women. Yet, learners reinforced that ALESBA's participatory ethos extends into the classroom, ensuring that their voices are heard. This reflects what Torres (2011) described as the democratisation of education, where learners are seen as active agents rather than passive recipients. Comparatively, evidence from Ethiopia mirrors these learner-centred benefits. Linking literacy to practical activities such as farming and small business not only improved functional literacy but also enhanced household

incomes (ADEA, 2021). This suggests that ALESBA's system-building approach produces benefits that extend beyond literacy, directly addressing learners' socio-economic realities.

ALESBA's Contribution to Lifelong Learning in Tanzania

The Adult Learning and Education System Building Approach (ALESBA) has emerged as a transformative framework for strengthening Adult Non-Formal Education (ANFE) within Tanzania's broader lifelong learning agenda. Unlike fragmented project-based interventions that often lack sustainability, ALESBA provides a holistic, systemic pathway to embed adult education within national structures. By focusing on governance, coordination, facilitator empowerment, and learner experiences, ALESBA has been instrumental in demonstrating how adult education can meaningfully contribute to inclusive and equitable education systems (Rogers, 2014; Torres, 2013; UNESCO, 2022).

One of the most significant contributions of ALESBA lies in its ability to strengthen governance and institutional frameworks for adult learning. Through building partnerships between government, civil society, and local communities, the approach would enhance coordination mechanisms. This has allowed adult education to move beyond the margins and begin to occupy a strategic place in education planning and policy. Such integration is vital in ensuring that ANFE is recognised not only as a remedial service for illiteracy but as a core component of lifelong learning (Mushi, 2009; Ouane & Preece, 2010).

At the programmatic level, ALESBA has also enhanced the capacity of facilitators who are at the heart of adult learning delivery. Through structured training, mentoring, and resource provision, facilitators have gained the confidence and skills necessary to provide learning that is relevant to the daily realities of Tanzanian communities. This professionalisation of adult educators is essential in maintaining both the quality and sustainability of adult learning initiatives. Moreover, learners have reported transformative experiences ranging from improved literacy and numeracy to greater confidence, agency, and participation in community decision-making. These outcomes resonate with the notion of adult education as a practice of freedom and empowerment (Freire, 1970; UNESCO UIL, 2022).

The Tanzanian case also demonstrates that system-building approaches such as ALESBA are more effective than isolated projects. Its holistic design ensures that adult education programmes are responsive to societal needs by linking literacy and numeracy with livelihoods, health, and civic participation. While challenges remain, the evidence suggests that scaling up ALESBA could significantly strengthen ANFE

across the country, making it a vital component of Tanzania's broader education reforms. By embedding ANFE into coherent systems, ALESBA prevents the fragmentation that has historically undermined the sector (Bhola, 2006; Walters, 2012). Evidence strongly suggests that scaling up ALESBA could significantly strengthen ANFE across the country. If fully institutionalised, the approach has the potential to transform Tanzania's adult learning landscape, positioning it as a cornerstone of lifelong learning. Ultimately, ALESBA represents a practical pathway toward the realisation of Sustainable Development Goal 4, ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all (Tikly, 2020; UNESCO, 2022).

Conclusion and Recommendations

This study has demonstrated that the ALESBA offers a transformative pathway for strengthening ANFE in Tanzania. Drawing on perspectives from supervisors, coordinators, facilitators, and learners in the ICBAE programme, the findings show that ALESBA addresses long-standing weaknesses in governance, coordination, facilitation, and learner engagement. It aligns ANFE more closely with national education reforms and the Sustainable Development Goals (SDGs), strengthens multi-stakeholder collaboration, empowers facilitators with context-relevant pedagogies, and enhances learner experiences. Importantly, marginalised groups—particularly women and rural communities—benefit from the participatory and localised approaches embedded in the framework.

Despite these strengths, challenges persist. Limited resources, inadequate facilitator capacity, and barriers to access continue to constrain the reach and sustainability of adult education. Addressing these gaps requires deliberate institutionalisation of ALESBA within government structures, particularly the Ministry of Education, Science and Technology (MoEST) and the President's Office – Regional Administration and Local Government (PO-RALG). Anchoring ALESBA in official systems would strengthen accountability, improve budgetary support, and secure greater policy visibility, ensuring that ANFE is treated as an integral part of Tanzania's lifelong learning framework rather than as a supplementary initiative.

Strengthening multi-sectoral partnerships is also critical. Collaboration between education, health, agriculture, and community development sectors can ensure that adult education addresses both literacy and practical skills for livelihoods and civic participation. Development partners and NGOs remain important contributors, but their support should be embedded in long-term strategies to avoid fragmentation. Equally important is investment in facilitator capacity. Facilitators are frontline actors,

yet they often operate with minimal training, materials, and support. Establishing regular professional development programmes, mentorship systems, and access to digital tools will help them sustain inclusive and adaptive learning environments.

Targeted support for marginalised learners is essential. Barriers such as distance to learning centres, household responsibilities, and socio-economic constraints prevent many women and rural populations from participating. Expanding community-based centres, providing childcare support, and offering flexible schedules could significantly increase access and equity. Finally, embedding robust monitoring and evaluation (M&E) systems within ALESBA is necessary to track progress, identify gaps, and inform adaptive strategies. M&E should go beyond donor compliance to become part of Tanzania's education management information systems, ensuring that adult education remains evidence-based and responsive.

The study recommends stronger institutional commitment, broader cross-sectoral partnerships, enhanced facilitator capacity, targeted inclusion measures, and systematic M&E. Taken together, these actions would consolidate the gains of ALESBA and enable ANFE to evolve into a responsive, inclusive, and sustainable component of Tanzania's education system, contributing directly to literacy, social inclusion, community empowerment, and national development.

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Stakeholders' Perspectives on Social-Emotional Support to SEQUIP Learners: The Case of Kashato T.R.C.-Mpanda Municipality

Ezra Nathanael Ntazoya, Institute of Adult Education

Email: ezranaths@gmail.com; ezra.ntazoya@iae.ac.tz

ORCiD: https://orcid.org/0009-0004-5204-8046

Abstract

The study sought to underscore the stakeholders' perspectives on social-emotional support to SEQUIP learners. It was conducted at Kashato T.R.C. in Mpanda Municipality, Katavi region. The study aimed to achieve the following objectives: to examine the role of continued social-emotional support for SEQUIP learners; to explore the importance of sustainable guidance and counselling for SEQUIP learners' life skills education; and to investigate strategies for sustainable project financial support to enhance SEQUIP learners' successful transitions. Jack Mezirow (1978) employed Transformative Learning Theory. Data were collected from 35 (NGOs Practitioner, SEQUIP Coordinator, SEQUIP Facilitator, Parents, Education Officers, Students, head of schools and investors/school owners) participants who were conveniently and purposively sampled. Data gathered through interviews, focus group discussions, and observations were analysed qualitatively using thematic analysis, while data obtained from documentary reviews were analysed using content analysis. The findings indicated that parents and other stakeholders play a crucial role in creating an enabling environment that supports SEQUIP learners socially and emotionally. It was also found that establishing sustainable guidance and counselling services is important for social awareness among the learners. Additionally, the study revealed that learners face social-emotional challenges that impede their social welfare. Furthermore, the results indicated that it is important to involve various stakeholders in the financial support of SEQUIP learners. It is recommended that stakeholders' input in implementing the SEQUIP project be considered from the planning stage.

Key words: SEQUIP Learners, Educational Stakeholders, Learners' Social-Emotional Support.

Introduction

Over the past decade, Tanzania has made significant progress in expanding access to education at both primary and secondary levels through policies such as fee-free basic education. However, these achievements have revealed gaps in the quality of secondary education, including large class sizes, shortages of qualified teachers, limited resources, and high dropout rates. About 30% of students do not complete secondary school each year, and learning outcomes in key subjects like mathematics and science continue to be low. In response, the Tanzanian government, in collabouration with

the World Bank, launched the $500 million Secondary Education Quality Improvement Project (SEQUIP) in 2020. This paper explores the implementation of SEQUIP in Mpanda municipality (Katavi region), focusing on stakeholders' perspectives regarding social-emotional support for SEQUIP learners at Kashato TRC.

Countries around the world, concerned with their future economic development, are committed to providing education to their populations. This is achieved by ensuring that no one is left behind in accessing educational services. Studies have indicated that nations such as the USA (Person et al, 2020), Germany (Popovic, 2021), France (UNESCO, 2022), Belgium (EAEA, 2018) and the UK have developed strategies for community education through various formal and informal methods, enabling them to educate a broader segment of their communities. Similarly, some African countries like Kenya (Maina & Orodho, 2016), Gambia (Keita & Lee, 2022), and Nigeria (Odo, 2021) have established adult learning programmes aimed at improving both literacy levels and productivity.

In Tanzania, the government recognised the severe issue of learners, particularly girls, dropping out of school for various reasons (JMT, 2022; URT, 2024). In 2020, the government launched the SEQUIP project (jointly implemented by two ministries, MOEST and PORALG) to address the concerning rate of mass dropouts among girls and boys, as well as barriers to education such as long distances to secondary schools and limited access to learning materials. For the Katavi region, the SEQUIP project has had documented success with about 250 girls successfully funded by the project for the past five years (2020-2025). However, it is only a few percent of the enrolled students who successfully completed stage two (Form Four) of their studies. This makes the presence of gaps in the provision of education in this learning centre (URT, 2024).

However, despite the successful stories of this project for the past five years of its implementation, there have been gaps that have been noted. These gaps include a lack of clear documentation on the extent to which the parents offer social-emotional support to the learners in this SEQUIP centre. Studies such as Izengo & Rupia (2022) have indicated that SEQUIP learners lack emotional support from not only their parents but also community members due to their previous experiences and the causes of their dropout from public secondary schools where they were previously enrolled. Some parents see them as emotionally disturbed learners who cannot cope with the current situation. The parents also have not been providing the information and support necessary for learners' advice and guidance in their studies. Furthermore, the

learners lack esteem support from their parents and thus have no sense of confidence in their learning process, as they feel rejected in the formal education system.

The second gap identified is on lack of clear guidance and counselling guidelines used to mentor the girls and boys studying in this SEQUIP learning centre and all the IAE regions' centres of Tanzania. Despite the government's efforts to issue guidelines for returning back to school by the girls, the guideline still misses key aspects of social-emotional support, guidance and counselling services that are very important for these learners (JMT, 2024). The third gap identified is a lack of a clear financial scheme to support SEQUIP learners after the completion of the project in 2026.

Therefore, to support the ongoing discussion on the importance of lifelong education for sustainable development and as stipulated in the 20230 sustainable development goals no 4 that aims to *Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all* (EAEA, 2018) it was very imperative to researcher to investigate the nature of these gaps and how can the involved stakeholders' perspectives about such gaps be used to leverage the situation by coming up with inclusive action plans that are shared with IAE management, SEQUIP Coordinators and POLARG administrators for improving SEQUIP project implementation in the future.

Purpose of the Study

The purpose of this study is to investigate the extent to which stakeholders perceive social-emotional support given to SEQUIP learners. Specifically, the study aimed to (i) examine the role of continued social-emotional support for SEQUIP learners; (ii) explore the importance of sustainable guidance and counselling for SEQUIP learners' life skills education; and (iii) investigate strategies for sustainable project financial support to enhance SEQUIP learners' successful transitions.

Theoretical Review

This study was guided by Jack Mezirow's (1978) Transformative Learning Theory (TLT). This theory of adult learning involves a process of effecting change in one's frame of reference through critical reflection and rational discourse. A central component of this theory is the *disorienting dilemma* that constitutes a life experience or event that disrupts an individual's existing beliefs or assumptions, prompting deep introspection and eventual transformation of perspective (Mezirow, 1991; Taylor, 2009). Learning, therefore, is not merely about acquiring new information but reinterpreting previous experiences through a new lens (Colman, 2024).

Core mechanisms of transformative learning include critical reflection, dialogic engagement, and a reorientation of worldview. These elements enable adult learners to challenge established assumptions, consider alternative viewpoints, and integrate new insights into their personal and professional lives (Cranton & Taylor, 2012). The theory foregrounds learners' agency, with transformation largely occurring through internal cognitive and emotional processes that are shaped by social interactions and contextual influences.

In the context of adult education in SEQUIP learning centres, Transformative Learning Theory is especially relevant due to adults' vast experiential backgrounds, self-directed learning tendencies, and motivation for personal growth during periods of transition, such as career changes or life crises (Dirkx, 2012). These characteristics make transformative learning a suitable framework for supporting lifelong learning and human development, as stressed by UNESCO (2022).

Importantly, the theory aligns closely with stakeholders' perspectives on the social-emotional needs of adult learners. First, emotional disruption often initiates the transformation process; stakeholders must thus recognise that disorienting dilemmas can be emotionally overwhelming, requiring accessible counselling and psychosocial support. Second, emotional safety is a prerequisite for authentic reflection. Learning facilitators, policymakers, and support personnel must cultivate environments where learners feel respected and supported to engage in vulnerability and critical dialogue (Taylor & Cranton, 2013).

Third, socio-emotional support structures such as mentorship and peer networks empower learners to rebuild their self-concepts and develop resilience (Abidogun & Mumuni, 2024). These interventions contribute to learners' capacity to act autonomously and meaningfully within their communities. This is an outcome emphasized by transformative learning (Illeris, 2014). Lastly, dialogue is central to this learning theory and is inherently relational. It requires trust, empathy, and emotional engagement, which underscores the necessity for relational pedagogies and inclusive learning communities that foster emotional connectedness (Brookfield, 2015; ProLiteracy, 2023).

In summary, Transformative Learning Theory not only explains how adults learn through reflection and meaning-making but also supports the inclusion of social-emotional support services, such as counselling and mentorship, in the adult education process. These support systems are vital for helping learners manage emotional challenges, critically reconstruct their identities, and fully participate in transformative learning.

While Mezirow's Transformative Learning Theory has significantly influenced adult education, it has been critiqued for its overemphasis on rational reflection while neglecting the emotional and affective dimensions of learning. Critics argue that by privileging logical analysis as the main driver of transformation, the theory underplays the essential roles of emotion, empathy, and interpersonal connection in shaping adult learners' capacity to process challenging experiences. Consequently, scholars and stakeholders advocate for more holistic approaches that integrate social-emotional support, such as counselling and emotional resilience-building into adult learning frameworks to meet learners' psychological needs (Dirkx, 2006; Taylor & Cranton, 2013; Illeris, 2014).

Methodology

This study employed a qualitative approach with an embedded case study design. This design was chosen because it helped to describe the events in the case being studied within a specific period (Yin, 2003). The study was conducted at Mpanda Municipality, specifically at Kashato T.R.C. Learning Centre for SEQUIP learners. It targeted various education stakeholders such as NGO practitioners, parents, students, facilitators, investors, education coordinators, heads of schools, and education officers who directly or indirectly oversee the monitoring and supervision of education and learning for adult learners at Kashato Learning Centre. Data were collected regularly from February to April 2025. Both face-to-face and online interviews (Swahili version) were conducted to gather data from respondents, notably parents, government officials, school owners, and NGO representatives. Direct observations of interactions involving SEQUIP learners were made during the researcher's formal and informal visits to the centre. A review of SEQUIP Project documents was carried out both during the study design phase and after the field data collection. Purposive and convenience sampling methods were used to select a total of 35 participants for the study. The sample included 2 NGO practitioners, 01 SEQUIP Learning Centre Coordinator, 10 parents, 04 SEQUIP facilitators, 10 SEQUIP learners, 04 Heads of secondary schools, 03 investors in education (school owners), and 01 education officer responsible for adult education. The collected data were analysed qualitatively using both thematic analysis (for interview, focus group discussion, and observational data) and content analysis (for documentary review data).

Results and Discussion

The study aimed at examining the role of continued social-emotional support for SEQUIP learners, exploring the importance of sustainable guidance and counselling for SEQUIP learners' life skills learning, and exploring the strategies for sustainable

project financial support to enhance SEQUIP learners' successful exit. The results are presented in themes in line with the presented specific objectives of the study.

Stakeholders' Perspectives on social-emotional support to SEQUIP learners

Socio-emotional support for learners

Creating an enabling environment for learners to thrive. The findings indicated that stakeholders were very concerned with having an unsupported learning environment for adult learners at both the home and at the Kashato learning centre. Thus, creating an enabling learning environment will help the adult learners to thrive as they continue learning in the future. When interviewed, the DEO for Adult Education had the following to say: *"Our role is to ensure that every learning centre has the right resources, trained facilitators, and a supportive atmosphere. This is because when we create an enabling environment, learners don't just attend the learning centre, they thrive*." (Interview- DEO-Adult Education Unit).

When the SEQUIP facilitators were asked about the same during an interview, one of the facilitators said, *"When learners feel supported, respected, and safe, they become more confident and willing to participate in the learning process. That is when real learning happens."* (Interview-SEQUIP Facilitator 01, Kashato Learning Centre). The two quotes from the DEO and SEQUIP facilitator suggest that creating an enabling environment for adult learners is essential and forms part of the social and emotional support that the adult learners need for their thriving.

During the focus group discussion with SEQUIP learners, the findings indicated that it could have been better for adult learners if the learning environment had been improved at both home and the Kashato learning centre. However, such an enabling environment still needs some additions. One of the learners pointed out that "*at home, there is too much noise, and I have many responsibilities, so I can't concentrate during my learning. Even here at Kashato Learning Centre, we don't have enough learning materials or proper space to sit. It's hard to stay motivated in such an unconducive environment"* (FGD- SEQUIP Learner 01-Kashato Learning Centre). This quotation from the learner implies that, despite the improvements made by the government through the SEQUIP project, there is a need to provide more support for these learners.

The findings from the parents indicated that they appreciate the government's efforts towards helping their children return to school after dropping out; however, they couldn't hide their disappointment with the government's poor economy, which prevented them from supporting the learners in their learning. In an interview, one parent stressed that, *"The government talks about supporting the learners at the centre, but at*

home we are left on our own. No one guides us on how to help our children, and yet we see them struggling with learning outside the centres." (Interview- Parent 03). The parents underscore the importance of government support for learners who returned to school; however, they also know that they are not fulfilling their part due to the poor economic conditions facing them, as noted by the SEQUIP coordinator at Kashato Learning Centre. When she was asked about this in an interview, she said.

> "It's very discouraging to see some parents not taking their role seriously. We do our part at the centre, but when learners return home and receive no support or encouragement from the parents, it affects their performance and attendance." (Interview-SEQUIP Coordinator, Kashato Learning Centre).

The explanation from the SEQUIP Coordinator indicates that, when the parents fail to support their children socially and emotionally, the children feel guilty and disrespectful, which in turn affects their concentration in their studies.

Social awareness creation among SEQUIP learners at the centre

As one of the indicators of social-emotional support, it was important to understand how socially aware the adult learners who have returned to school are. The findings showed that learners at Kashato Learning Centre are socially aware regarding their learning goals, thanks to the life skills subject taught at stage one (equivalent to form one and two) and stage two (equivalent to form three and four). This social awareness has fostered a sense of individual perspectives on various social challenges from family, school, and community that impact their learning. During the focus group discussion about social awareness among learners at Kashato Learning Centre, they expressed various opinions; one learner stated,

> I'm thankful for the social awareness lessons we have received. The lessons have helped me understand my rights and how to protect myself, both at home and here at the centre. But we still need continued support from teachers, parents, and the government to keep moving forward." (FGD- SEQUIP Learner 04- Kashato Learning Centre).

The above quotation suggests that the learners still require social awareness skills to handle various social challenges facing them from family, school, and community settings that currently exist and impede their learning progress.

The findings on the need to create social awareness among the adult learners indicated that the parents are the role models and ought to ensure that the learners at Kashato learning centre are well supported. When interviewed, one parent said,

> "Before, I didn't understand how my behaviour or words could affect my child's learning. But after becoming more aware, I now know the importance of listening, encouraging my child, and creating peace at home. It makes a difference." (Interview- Parent 02 of a SEQUIP Learner).

However, despite the importance of creating social awareness at both home and school, yet, the findings indicated that, SEQUIP project was initiated in an environment that lacked learners' parental social awareness support due to a lack of mass campaign about it. When interviewed, one of the NGO's practitioners noted that,

> "While the SEQUIP project has made strides in promoting social awareness at the learning centres, the lack of mass awareness campaigns targeting parents has left a big gap. Without parental understanding and involvement in the project, it is hard for learners to benefit fully both at home and at school." (Interview- NGO Practitioner 02).

The findings indicated further that the kind of education received by the adult learners becomes transformative when the learners are fully supported in their social awareness skills. When interviewed, one of the education investors said, *"Investing in social awareness is just as critical as building classrooms initiated by the government. When learners are supported at home and respected in their communities, education becomes transformative."* (Interview- Education Investor 01).

Overcoming socio-emotional barriers to SEQUIP learners' persistence

The findings have revealed that, for the past four years (2021-2025), the learners at Kashato learning centre enrolled under the SEQUIP programme have encountered social-emotional barriers such as negative attitudes towards their return to school, negative self-perception towards their learning and social rejection due to their previous background. When interviewed on what can be done to leverage the available resources at the centre to ensure that the learners benefit from social-emotion support in their learning, the SEQUIP Coordinator at Kashato learning centre said,

> "Many of our learners come with fears, low confidence, and past negative experiences with education. That's why creating a positive and welcoming environment is so important. This helps reduce insecurity and gives them the courage to participate and grow." (Interview- SEQUIP Coordinator 02, Kashato Learning Centre).

When SEQUIP facilitators were asked about the need to support their learners in addressing social-emotional challenges, the results indicated that it is important for SEQUIP facilitators who interact directly with the learners to create a friendly environment for the learners to overcome the existing social-emotional barriers for their persistence in the learning centre. When interviewed, one of the SEQUIP facilitators said,

> 'For our learners to truly gain socio-emotional skills, we as facilitators must show empathy and create a space where they feel safe, not judged. We also guide them to plan their studies independently, so they're not easily swayed by outside

> pressures or negativity." (Interview- SEQUIP Facilitator 03, Kashato Learning Centre).

However, despite such efforts shown by SEQUIP facilitators to support the learners, yet, the findings indicated that there is a need to have more realistic efforts toward boosting SEQUIP learners' awareness of various social-emotional support for them to continue learning progressively. When interviewed, the representative of NGO practitioners said,

> "Creating safe spaces and offering empathy is a good start, but it's not enough. If we truly want SEQUIP learners to thrive and overcome the social stigma they face, we need stronger, sustained efforts that result from a more community engagement, psychosocial support, and practical life skills training." (Interview-NGO Practitioner 02).

The findings from SEQUIP learners indicated that they equally support the efforts made by the government to support them in overcoming socio-emotional barriers; however, they indicated that more efforts should be made. In a focus group discussion, one of the learners pointed out that,

> "We are grateful for the social-emotional support skills we have gained here at Kashato, which have helped us build confidence and relate better with others. But we believe the government should put in more effort to expand and strengthen these services so that all learners can benefit equally." (FGD-SEQUIP Learner 08, Kashato Learning Centre).

The statement given by the learner indicates that the learners at the centre are still challenged by various social-emotional and psychological challenges that make the provision of social skills to overcome the existing social barriers become the most important aspect of their training at the centre.

Sustainability of guidance and counselling services to SEQUIP learners

For SEQUIP learners to thrive in an uncertain learning environment, sustainable guidance and counselling services must be provided to the learners at the centre. The findings about the need to have sustainable guidance and counselling services are presented under the following themes.

The need to have sustainable guidance and counselling services at the learning centre

The study revealed that, regardless of the challenges faced, the need to have guidance and counselling sessions at the centre is important. SEUIP Coordinator had the following to say during an interview,

> "Our learners face deep social, psychological, and cultural challenges that directly affect their ability to learn. Without sustainable guidance and counselling services, we are only addressing part of the problem. There is a real need for

> long-term investment in these services to support their well-being and academic success." (Interview- SEQUIP Coordinator, Kashato Learning Centre).

This statement indicates that, currently, there are no well-established guidance and counselling services at the centre. This leaves a gap due to its importance for learners' social-emotional and psychological growth.

When interviewed on the same matter, the result from the NGO representative indicates that it is important for such learners to have access to guidance and counselling services at the centre; however, such services are not available as expected due to the weaknesses in the initial project planning that failed to include that aspect in the implementation stage. He said,

> "While we commend the efforts made at the learning centre level, the truth is these plans are struggling because of weaknesses in the initial project design. The SEQUIP framework didn't fully account for the real social-emotional needs of adult learners, and until the Ministry addresses this gap, implementation on the ground will remain limited and inconsistent." (Interview- NGO Practitioner 02).

The findings from the learners during the focus group discussion indicate that, despite the importance of guidance and counselling services at the centre, the services are still not fully provided. One learner commented,

> We have that Madam who provides us with some guidance; however, there is no special room where one can stay comfortable during the session (FGD-SEQUIP Learner 06, Kashato Learning Centre)

This statement suggests that the guidance and counselling services provided at the centre require improvement, as they lack sustainability due to a lack of professionalism in their practice.

During observation, it was revealed that the learners exhibit behaviours that demonstrate the need for guidance and counselling services to be in place. However, a lack of trained personnel to execute such roles impedes the practicability of the services at the learning centre.

Integrating social skills, life skills, and the learners' daily life experience

Results indicate that when social skills, life skills and daily life experience are integrated brings better results. When interviewed, the SEQUIP coordinator said,

> "Since we don't yet have sustainable guidance and counselling services, I've started integrating social skills, life skills, and real-life experiences into our life skills sessions. This approach helps empower learners with the awareness and resilience they need to face daily challenges and grow both personally and academically." (Interview-SEQUIP Coordinator, Kashato Learning Centre).

This statement indicates that social skills, life skills and daily experience of the learners are integrated if they are to bring intended results. During the focus group discussion

with SEQUIP learners, the participant revealed the need to have such social skills and life skills integrated with their daily experience in the community where they live. One of the learners had the following to say,

> We live in the community with other members of the community, and thus having taught on how social skills and life skills match with our daily life experience matters a lot (FGD-SEQUIP Learner 09, Kashato Learning centre).

This statement offers experience that the learners who are either adults (by their age being more than 18 years) or expected adults have their expectations geared towards what they want to achieve; however, such goals should be clearly defined within the community lenses where they will work.

Strategies for sustainable project financial support to enhance learners' successful existence

Enable better cooperation between the funder, the beneficiaries and other stakeholders

The beneficiaries of the project being implemented (SEQUIP learners) need to better understand the nature of funding and thus be involved in all the processes during the whole period of project implementation. One of the investors in education had the following to say in an interview.

> "Sustainability in education projects goes beyond initial funding—it requires a strong, ongoing partnership between funders and beneficiaries. When we work closely with learning institutions and communities, we build trust, ownership, and shared responsibility. This cooperation ensures that our investments have long-term impact, empowering learners not just to complete their education, but to thrive afterwards." (Interview-Investor in Education 01).

This kind of statement highlights the investor's interest in impact, accountability, and sustainability, while also pointing to the importance of mutual engagement in achieving educational goals that are set at both the national and local levels. Another investor in education had the following to say,

> "As an investor in education, especially within the SEQUIP framework, we believe that sustainable impact is only possible when there is genuine cooperation between funders and beneficiaries. When learning centres, community stakeholders, and the government actively engage with us, not just during funding, but in planning and accountability, it creates a strong foundation for sustainability. This collabouration helps ensure that learners not only access quality education but also complete it successfully and transition into productive roles in society." (Interview-Investor in Education 02).

When interviewed, one head of school said,

> "For the sustainability of education projects like SEQUIP, it is crucial that there is a strong partnership between funders, school leadership, and the community.

> As a Head of School, I have seen that when we work together transparently by sharing challenges, aligning our goals, and involving parents and local leaders. By so doing, we not only safeguard the project's resources but also increase learner motivation and reduce dropout. This cooperation is key to helping our learners complete their education successfully and be well-prepared for life beyond school." (Interview-Head of school 01).

Such results imply that stakeholders see it as important to participate in financing the efforts towards boosting our learners; however, they are worried about getting the avenues that will consider their willingness to support the learners.

Involving internal and external stakeholders in funding adult education

The findings indicate that, when the key stakeholders (both state and non-state actors) are fully involved in planning meetings on how the learners should be supported financially, they are willing to engage fully. However, the results further indicate that, during the design phase of the SEQUIP project, the government that received funds became the main funder of the project. And if there are some other mechanisms through which other stakeholders can support such a funding system, it is not stipulated or any guidelines addressing such a need. When interviewed, one of the investors in education, who is also a school owner, had the following to say,

> Investing in adult education is not the responsibility of one actor alone. For sustainability, we need a collabourative funding model where both internal stakeholders, like government institutions, local authorities, and community groups, as well as external partners such as NGOs, the private sector, and development agencies, play a role (Interview-Investor in Education 02).

When all stakeholders contribute, it not only strengthens financial sustainability but also deepens ownership and relevance of the project being funded. This shared responsibility is what guarantees that adult learners complete their studies with skills that are meaningful and applicable in real life. When interviewed, the NGO practitioner said,

> "In Tanzania, and particularly under initiatives like SEQUIP, the long-term success of adult education depends on inclusive financing strategies. We encourage a model where internal stakeholders, such as the Ministry of Education, Science and Technology, local councils, and communities, work together with external development partners and private investors. This collective approach ensures that the education provided is not only funded sustainably but also aligned with local realities and thus helps adult learners' transition successfully into employment, entrepreneurship, or further learning." (Interview-NGO Practitioner).

The results indicate that there is a need to have an inclusive funding strategy that gives an opportunity for various stakeholders to participate in the funding process. However, as said earlier, the challenge remains in un unavailability of guiding models

and guidelines for such initiatives. When interviewed on the need to have both internal and external stakeholders involved in funding SEQUIP learners, the SEQUIP Coordinator said,

> "As a SEQUIP centre Coordinator, I have learned that sustainable adult education cannot rely solely on donor funding or government allocations. We must actively involve both internal stakeholders, such as local government authorities, learning centres, and communities and external partners, including NGOs, private investors, and international donors (Interview-SEQUIP Coordinator, Kashato learning centre).

This inclusive approach to project funding strengthens accountability, expands resource mobilisation, and ensures that programmes are responsive to the needs of adult learners. When all partners are engaged, they are better positioned to support learners not just through access, but through successful completion and transition into meaningful livelihoods.

Discussion

Social-emotional support to SEQUIP learners

The findings have indicated the need to have *an enabling environment for learners to thrive.* This was supported wholeheartedly by all the stakeholders involved in the study. However, the parents challenged the government support that could not improve the socio-economic background of the returning girls and boys. In reality, they are still facing some stigmatisation at the family level as some parents are not ready to support them economically, socially and emotionally. Thus, creating anxiety and uncertainties that have continuously affected their learning progress. This has also been reported in the study done by Izengo & Rupia (2022), which indicated that SEQUIP project is faced with management challenges for its learners. On the other hand, social awareness creation may have been influenced by non-family members as noted by UNESCO (2022), while the parents who have the core responsibility of orienting the teen mothers and boys who returned to school remain silent, and thus, the socio-emotional barriers facing the learners at Kashato TRC remain intact Kimaro, Machumu, Kalimasi & Heikkinen, 2023).

Sustainability of guidance and counselling services for adult learners

The findings have indicated the need and importance of having sustainable guidance and counselling services at the Kashato learning centre. The services that are currently offered do not meet the learners' requirements (JMT, 2022). This situation creates attention as the learners' background and experiences from their previous secondary schools suggest that they urgently require such services to correct the behaviours that

led them to drop out of school or to be suspended from school due to misbehaving (Izengo & Rupia, 2022). The fact that the social skills and life skills need to be integrated with daily life experience is very crucial. However, the problem lies in the process involved in coaching and integrating such skills in the absence of a clear schedule, and a professional actor poses more questions than answers to critical questions about the sustainability of guidance and counselling at the centre.

Strategies for sustainable project financial support to enhance learners' successful exit

Sustainability of financial support is vital in any project implementation. It is important that the findings have revealed the need to have better information on how the funder (the government of Tanzania through MOEST) will cooperate with the beneficiaries (learners) and other education stakeholders involved in the implementation of the project. Unfortunately, late involvement of such an important stakeholder has resulted in a non-responsive behaviour when they are asked to act or fulfil a certain role in the implementation process. This is different from Germany, where the parents are very active in financing the adult education, as noted by Popoviv (2021).

Conclusion and Recommendations

Conclusion

In light of the findings, it is recommended that social-emotional support to SEQUIP learners at the Kashato learning centre is important for the sustainability of these learners. To achieve this, the efforts towards the creation of an enabling environment, social awareness for the learners at both home and school, are crucial. It is also concluded that since guidance and counselling services are currently not professionally and efficiently given to the learners, as a result, if social-emotional and psychological challenges are continuously unattended, the learners may end up developing an upset mind and negative attitudes towards learning at the centre. It is further concluded that financial support of the project will be hampered if there are no strategic plans geared to involve other stakeholders in financing the project activities, especially when the project comes to an end in 2026.

Recommendations

From the findings of this study, it is recommended that documenting social-emotional support needed to SEQUIP learners who need immediate attention and response from the facilitators, the parents, the coordinator and the IAE resident tutor be made with immediate effect. The need to train and capacitate the SEQUIP coordinator at the

centre on important guidance and counselling skills to help the learners is recommended. It is also recommended that involving other stakeholders (both state and non-state actors) in financing the learners at the centre is important and should be done in accordance with the provided guidelines from the IAE headquarters. The aspects that are not covered by the project funds should be made clear to the stakeholders, and any plans to leverage efforts to support the learners financially or materially should be participatory and inclusive.

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Status of Learning Opportunities in Non-Formal Secondary Education in Ilala District, Tanzania

Bernadetha Kapinga & Anathe R. Kimaro, Institute of Adult Education

Email: *benadetakapinga@yahoo.com & anathe.kimaro@iae.ac.tz*

Abstract

Education is a fundamental human right and a crucial driver of sustainable development. Yet, many out-of-school youth and adults in Tanzania face substantial barriers to accessing quality Non-Formal Secondary Education (NFSE). This study decisively addresses the current state of NFSE in Ilala District, Dar es Salaam, with a focus on the characteristics of learners and their perceptions of available opportunities. Engaging 120 respondents, including teachers and learners, this research reveals that adults enrol in NFSE primarily due to obstacles in the formal education system, including high dropout rates and inadequate job skills. Urgent action is required to tackle significant challenges such as insufficient instructional materials, unqualified teachers, ineffective teaching methods, and financial difficulties. To rectify these issues, the Institute of Adult Education must be established as the primary coordinator for NFSE. This institution must oversee the registration and quality assurance of all NFSE providers, ensuring effective monitoring and enforcement of educational standards. Immediate reforms are essential to enhance access and quality in non-formal education.

Keywords: Non-formal education, learning opportunities, adult learners

Introduction

It is increasingly recognised that schools alone cannot provide quality basic education for 'all'. The global progress towards Education for All (EFA) since the World Education Forum in 2000 has been arguably significant, particularly regarding enrolment and gender parity at the primary level. However, in 2021, more than 244 million children and young people aged 6 to 18 were out of school worldwide, including 118.5 million girls and 125.5 million boys (UNESCO, 2024). Moreover, the current structure of formal education in many countries itself excludes certain groups of children. To secure the right to education for those who are not enrolled in school, diverse forms of provision through different learning pathways are essential. One such pathway is a non-formal secondary education programme.

Non-formal secondary school programme provides organised and systematic instruction outside the Formal Secondary Education (FSE) framework, offering educational opportunities to individuals of all ages (Ministry of Education, Science and Technology [MoEST], 2022). The reasons for establishing non-formal secondary schools vary from one region to another worldwide. For instance, non-formal

secondary schools in India initially emerged as a means of reducing the number of students in formal secondary education and supporting learners in private schools to excel in secondary education examinations (Mukherjee, 1992). The Indian government afterwards established the National State of Open Schooling to provide counselling and quality assurance services in these schools (Rumble & Koul, 2007; Hughey et al., 2008). In Latin America, Open schools were introduced as a way to complement and compensate for the shortcomings of the formal secondary education system (Coombs & Ahmed, 1974). Learners of non-formal secondary schools in Latin America follow the curriculum, sit for examinations and receive certificates in the same way that students in formal schools do. However, non-formal-school learners in Latin America differ from formal students in their mode of attendance. Some attend part-time schools, correspondence schools, evening classes for adults and distance learning via radio and television (Schugurensky, 2000).

Non-formal secondary education in Tanzania is provided through the Institute of Adult Education (IAE) under Act No. 12 of 75 (Cap. 139). Its implementation closely resembles formal secondary education, but with a few differences (Kanukisya, 2012). According to Shirima (2016), the institute is responsible for registering all non-formal secondary schools that meet the requirements (Institute of Adult Education, 2020). These schools are education centres that deliver the secondary curriculum through face-to-face and self-study programmes (Mushi, 2012). This form of education comprises three levels: Stage I, known as the Qualifying Test (QT), involves Forms one and two in the first year, followed by the QT and Stage II, which covers Forms three and four in the second year, culminating in the Form Four National Examinations. Stage III concerns Forms five and six, undertaken over one year (Mushi, 2012). Both re-sitters and first-time candidates may take the National Examination as private candidates. The process is managed by the National Examinations Council (NECTA), whereby all students passing the National Examination may enter the formal education system if they meet the age requirements.

Through the IAE network across the country, more Tanzanians, especially out-of-school youth, can now access non-formal secondary schools. The commitments to increase access to education have been supported by policies and institutional efforts aimed at attracting more resources from the private sector to fund education. Deliberate steps facilitate public-private partnerships to improve service delivery (URT, 2020). By 2023, there were 450 non-formal secondary school centres, officially registered in Tanzania, with 8434 learners- 4009 males and 4783 females (Institute of Adult Education, 2023). Although Tanzania's non-formal secondary education curriculum is intended to provide quality secondary education (URT, 2020), learners

often do not perform well in their final national exams (Lekule & Shirima, 2023). For example, an analysis of academic performance in schools registered as non-formal secondary schools that sat for the CSEE from 2023 to 2024, based on NECTA's specified score criteria, shows that only a limited number of candidates achieved the targeted Divisions I to III, as mandated by the 2024 education reform. In the National Form Two Assessment Examination (FTNA 2024), 1,687 students sat for the exam; 745 passed (44%), and 942 (56%) did not perform well (NECTA, 2024). Additionally, 1,556 students sat for the NECTA Form Four exam; 1,003 passed (64.4%), and 553 (35.6%) failed (NECTA, 2025). This performance has caused widespread concern among educational stakeholders nationwide, who argue that learners are unable to excel in national exams.

It should be noted, however, that even though almost every part of the world faces certain problems in non-formal secondary schools (Shirima, 2022), the nature, type and magnitude of these problems vary. Scholars identify common problems that face non-formal secondary schools across the world, such as a lack of clear policy guidelines (Michael & Matete, 2024), misinterpretations, varying understandings, and inconsistencies in practices among non-formal secondary schools (Lekule& Shirima, 2023). Hence, criticisms directed at non-formal secondary education vary from one place to another.

Various studies have been conducted on non-formal secondary education. For example, Shirima (2020) also focused on the management and sustainability of non-formal ordinary secondary education programmes in Tanzania. The study by Lekule and Shirima (2023) focused on the conceptions of sustainability of open Schools in offering quality secondary education in Tanzania. Msolla (2010) conducted a study on non-formal education as a strategy for poverty reduction in Tanzania. In addition to this, Kanukisya (2012) investigated the use of ICT for adult learners in non-formal education in Tanzania and Uganda. Kanukisya (2014) also investigated people who participated in non-formal secondary education in Tanzania and Uganda. Again, Kapinga and Mtani (2024) investigated the challenges in running evening class programmes at the Institute of Adult Education in Tanzania. However, there seems to be no study that has focused on the status of learning opportunities to non-formal secondary school learners in Ilala Municipal. If no study is carried out in this area, educational stakeholders may continue to lament the quality of learners that are prepared in secondary schools, including those in non-formal secondary educational settings. Nevertheless, the nation may continue lacking the skills that are required than ever before in world history, where countries face unemployment opportunities for

their youth population in the competitive and dynamic world. It was, therefore, important to undertake this study to bridge the knowledge gap.

Methods

This research is guided by the pragmatist paradigm, which asserts that reality is complex and multifaceted, and that different approaches may be necessary to understand it (Cohen et al., 2018). Epistemologically, post-positivism views knowledge as an ongoing process of inquiry that relies on experience and evidence—we want to have our knowledge checked by the force of experience (Gay & Airasian, 2003). Remarkably, Krishnaswami (2003) discloses that the supporter of this paradigm believes that true knowledge can be obtained by finding the weakness in the study and dealing with it by strengthening the study using the mixed method approach. In other words, the pragmatism research paradigm proposes a mixed-method approach as a way of allowing social science research to benefit from both commonalities and the discrepancies that exist between quantitative and qualitative research approaches. Hence, we employed a mixed-methods research approach, which integrates both qualitative and quantitative methods to enhance the depth and breadth of analysis. Mixed research paradigms can be applied concurrently, sequentially, or within a single study investigating the same phenomenon, offering a more effective, efficient, and robust approach compared to a single-method design (Creswell, 2014). The qualitative part used data from interviews comprising 5 coordinators and 30 teachers from 5 non-formal secondary school centres and one resident tutor from the Institute of Adult Education. For the quantitative part, a simple random sampling technique was used to obtain 84 learners who filled out a dull questionnaire.

This study was carried out in four non-formal secondary schools in the Ilala Municipal Council (MC) in Dar es Salaam Region, Tanzania. Therefore, Dar es Salaam Region specifically Ilala Municipal Council, was chosen for the following reasons: Dar es Salaam was selected out of the 26 regions in Tanzania because Dar es Salaam is the first best Region in terms of academic performance of learners in each non-formal secondary school in Tanzania (27%) compared to Mwanza (10.4%), Tanga (8.3%) and Coast (5%) (Institute of Adult Education, 2024). Also, Dar es Salaam Region was selected because it is one of the Regions with the highest number of learners enrolled in non-formal secondary schools in Tanzania (2260) compared to 1032 learners (Mwanza Region) and 867 learners (Manyara Region) (Institute of Adult Education, 2023). Additionally, Dar es Salaam has over 45% of all adult education programmes, including the non-formal secondary schools, compared to other Regions in Tanzania (Institute of Adult Education, 2020). Most learners in non-formal secondary schools are found in Ilala MC in the Dar es Salaam Region (Institute of Adult Education,

2024). Further, most of the non-formal secondary schools are found in Ilala MC (Institute of Adult Education, 2023).

In this study, the targeted population was non-formal secondary education coordinators, resident tutors, teachers and learners. Hence, the sample size is 120 participants. Categorically, included 5 centre coordinators, 30 teachers, one resident tutor and 84 learners. Furthermore, both purposive and simple random procedures were used to obtain the participants. Gall, Gall and Borg (2007, p. 178) state that «[...] in purposeful sampling, the goal is to select cases that are likely to be information rich. From this argument, centre coordinators and resident tutors were selected, taking into consideration that they are experienced in supervising and coordinating teaching and learning among non-formal secondary schools. Therefore, the researcher believed that centre coordinators and tutors might have more detailed information towards the phenomenon being examined. In addition to this, a simple random procedure was used to select teachers and learners. From each non-formal secondary school, six teachers were randomly selected to form the study population sample size. That made a total of thirty teachers.

Data were collected using four primary methods: focus group discussions (FGDs) and questionnaires. Interviews and documentary reviews. FGDs provided a platform for collective insights from participants, enabling the exploration of shared experiences and diverse perspectives. Focus groups are valuable for providing a forum to discuss diverse experiences and conflicting views held by participants (Best & Kahu, 2012). The questionnaire was used to collect information from 84 learners. The questionnaire had four sections (i.e., sections A, B, C, and D) that were formed from two objectives as presented in the introduction section. The questionnaire had open-ended, closed, and scale items that were set for the purpose of gathering quantitative data. This study also employed face-to-face interviews to gather qualitative data. Structured and semi-structured interview questions were pre-designed, pre-tested, and used to gather data from key informants (centre coordinator, teachers and resident tutor). These individuals were interviewed using separate interview guides that were formulated in line with their core functions that warranted their inclusion in this study. Semi-structured interviews were used because they allow for in-depth exploration of individual perspectives, providing flexibility to probe deeper into participants' responses while maintaining consistency in the topics covered (Krishnaswami, 2003). Documentary reviews, such as textbooks, learners' results, lesson plans and scheme of work were reviewed. Data triangulation enhances the reliability and validity of the findings. Each method was chosen for its relevance in capturing the multifaceted nature of the problem under study.

Descriptive statistics procedure was used to analyse questionnaire findings. Descriptive statistics enable a researcher to generate frequencies and percentages. With regard to qualitative data, thematic analysis, guided by Braun and Clarke's (2006) six-step framework, was employed. This involved familiarisation with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report. Data were analysed manually to ensure a nuanced understanding of participants' narratives. Two researchers independently coded the data to enhance reliability. Discrepancies in coding were resolved through collabourative discussions, ensuring consensus. Issues of validity, reliability, and transferability were addressed by maintaining a detailed audit trail, member checking, and triangulating data sources. Ethical considerations were upheld throughout the analysis process, ensuring the confidentiality and integrity of the data.

Findings and Discussions

The purpose of the study is to explore the status of learning opportunities for non-formal secondary school students in Ilala municipality in Dar es Salaam. The findings and discussions are organised into two key themes based on the research questions: evaluating the characteristics of learners enrolled in non-formal secondary education and exploring their perceptions regarding the availability of learning opportunities within this system. The following sections provide detailed findings and discussions on these topics, highlighting their significance in enhancing learning opportunities to non-formal secondary school students.

Characteristics of learners enrolled in Non-formal Secondary Education

The study included 84 adult learners, with 43 (51.1%) identifying as male and 41 (48.8%) as female. Although we aimed for gender balance through stratified sampling, the distribution reflected a slight male predominance, which is often seen in non-formal secondary education contexts. Tanzania has made strides in promoting universal education and closing the gender gap, especially at the basic education. The implementation of the free education policy in 2016 has fostered near gender parity in primary and secondary (O-level) education, as mandated by the Ministry of Education, Science and Technology through Prior Education Circular No. 3 of 2016. This policy directed public schools to provide fee-free education, ensuring that secondary education is accessible to all, supported further by the Education and Training Policy of 2014 that established secondary education as basic and compulsory.

However, despite these advancements, significant disparities remain between female and male students, particularly in post-primary education. This finding contrasts with data from developed countries, where the EU report indicated that in 2022,

participation in adult learning was slightly higher among women (47.2%) compared to men (46.0%). This suggests that while progress is being made in Tanzania, challenges persist, particularly for female learners in non-formal educational settings.

The study on educational history revealed that a significant portion of the participants were ex-primary school leavers, accounting for 34 individuals (40.4%). This was followed by 32 individuals (38.1%) who were ex-form two students, and lastly, 18 individuals (21.4%) who were ex-form four students. This finding contrasts with the work of Rinne and Kivinen (1993:123), which indicated that in Finland, higher participation rates in adult education were observed among those who went on to complete university degrees, while lower rates were noted among individuals with only basic vocational qualifications. Their research was conducted in a developed country known for its advanced education system. In the context of Tanzania, the implication is clear: most of the learners entering the non-formal secondary education system are primary school leavers. It is important to remember that, typically, completion of primary school is a prerequisite for secondary schooling.

Further analysis of the data shows that the majority of the learners in this study were unemployed, with 46 individuals (54.8%) falling into this category. In contrast, only 23 individuals (27.3%) were employed, and 15 individuals (17.9%) were self-employed. This suggests that most participants in the non-formal secondary education programme were not employed. Nonetheless, 27.3% (23 individuals) were employed, and 17.9% (15 individuals) were self-employed. However, others 23(27.3%) and 15(17.9%) were either employed or self-employed, respectively.

Table 1: Learners' Employment Status

S/N	Employment status	N	%
1	Unemployed	46	54.8
2	Employed	23	27.3
3	Self employed	15	17.9

Data in Table 1 shows that some of the learners who participated in a non-formal secondary education programme were either employed. The data presented in Table 1 indicate that some learners who participated in a non-formal secondary education programme were employed or self-employed.

The age distribution of learners in the non-formal secondary education programme revealed that the majority, 32 individuals (38%), were between the ages of 15 and 19. This was followed by those aged 20 to 24, who numbered 29 (34.5%), as summarised in Table 2.

Table 2: Age distribution of non-formal secondary education learners

S/N	Age category	N	%
1	10-14	5	5.9
2	15-19	32	38
3	20-24	29	34.5
4	25-29	8	9.5
5	30+	10	11.9

The data presented in Table 2 clearly indicate that the majority of learners in non-formal secondary school education are between the ages of 15 and 24. However, defining adult education is complex; age is an important but not the sole criterion for determining adulthood. According to Table 2, the age groups of 15-19 and 20-24 are the most prevalent, together comprising 72.5% of the total participants. Given this evidence, it is reasonable to conclude that those engaged in adult learning within non-formal secondary education are primarily young adults.

Regarding the reasons for attending non-formal secondary schools, a significant number of respondents, 32 (38%), indicated that they chose non-formal secondary education because they were not selected for public secondary schools and could not afford the tuition fees for private schools. As a result, they opted to join non-formal secondary centres. Another 29 respondents (34.5%) mentioned that they had dropped out of school for various reasons and later decided to enrol in non-formal secondary schools. Additionally, 10 individuals (11.9%) sought to join non-formal secondary education in order to upgrade their certificates, while 4 respondents (4.7%) were motivated by the aspiration to secure a job.

Table 3: Reasons for joining non-formal secondary schools

S/N	Reasons for joining centre	n	%
1	Lack of access to a formal secondary school	32	38
2	Drop out of formal secondary school	29	34.5
3	Seeking an opportunity to upgrade their certificate	10	11.9
4	Reseating for national exams	6	7.1
5	Early pregnancy	3	3.5
6	Employment	4	4.7

Data in Table 3 indicates that adults enrolled in non-formal secondary school centres primarily due to two main reasons: a lack of access to formal secondary schools and dropping out of formal secondary education. This finding aligns with UNESCO's (2019) report, which highlights that while many Sub-Saharan African countries, including Tanzania, have made significant strides in basic education enrolment, the rates of out-of-school children remain alarmingly high. Specifically, there are 6.7

million children, adolescents, and youth of primary and secondary school age who are out of school. The transition from primary to secondary education is particularly challenging, with girls disproportionately affected compared to boys. This is largely due to the limited number of available spaces in secondary schools and insufficient public funding for secondary education. Furthermore, some mature adults have dropped out of the education system for various reasons, preventing them from accessing or completing their secondary education (UNESCO, 2019).

Status of Learning Opportunities

This objective explored the status of learning opportunities available to non-formal secondary schools. The findings are presented in the following subthemes.

Availability of instructional materials

As observed in Table 4, a large number of 70(83.3%) learners disagreed that their centre has such resources as charts, maps and globes. Looking into specific items in the table, we come to realise that learners disagreed that non-formal secondary school centres have such resources as charts, maps and globes for teaching and learning.

Table 4: Learners' views on the availability of instructional materials

S/N	Statement	n=84					
		Agree		Certain		Disagree	
		N	%	n	%	n	%
1	My centre has such resources as charts, maps and globes	5	5.9	9	10.7	70	83.3
2	Apart from pamphlets, my centre has textbooks and reference books	3	3.5	14	16.6	67	79.7
3	Each subject has an adequate number of textbooks	8	9.5	16	19	60	71.4
4	My centre has an adequate number of textbooks	3	3.5	21	25	60	71.4
5	There are modern facilities, such as a computer, for teaching and learning	11	13	16	19	57	67.8
6	The centre has a projector for use in classes	2	2.3	21	25	61	72.6

The data presented in Table 4 indicates that a significant number of learners, specifically 67 (79.7%), disagreed with the statement, suggesting that their centres have textbooks and reference materials aside from pamphlets. Additionally, a noteworthy group of learners, totalling 60 (71.4%), disagreed with the assertion that each subject is provided with a sufficient number of textbooks. Furthermore, 57 (67.8%) of learners

disagreed with the claim that the centres are equipped with modern facilities such as computers and projectors for use during the teaching and learning process. These findings suggest that non-formal secondary school centres are facing a lack of instructional materials, which hinders effective teaching and learning. This conclusion is further supported by comments from the resident tutor, who explained that:

> I want to be sincere with you…. I cannot say all non-formal secondary education centres have sufficient instructional materials. For example, textbooks are not adequately available… simply because most of the centres do not have sufficient budget to buy them, and some have few; they don't have a library room. This also led to poor performance among their learners.

During the interview, teachers revealed that they bought the pamphlets and used them as supplementary materials in the classroom. One teacher narrated:

> Our syllabus is somehow different from the formal secondary school…we use an accelerated syllabus…for example, stage One learners cover form one and form two formal syllabi in one year…likewise stage Two, cover form three and form four formal syllabi…in one year…So I cannot use formal textbooks… Hence, we use pamphlets… despite that, they don't have detailed explanations and illustrations found in the formal secondary school textbooks…

Another teacher gave what could be the reasons for relying on pamphlet materials as he narrated:

> To be honest, we use our money to buy textbooks and other teaching materials. Due to financial constraints, we cannot buy many textbooks, so we end up buying at least one reference book. It helps to prepare a simplified pamphlet material and use it as lesson notes…

In this context, teachers reported that they utilised past exam papers as a teaching resource. During the interview, a teacher from centre 'C' remarked, "I usually use the past paper to inform my learners about potential questions related to their topics that are likely to appear in the examinations." Although teachers employed past papers in their instruction, they felt that the materials were insufficient for helping learners develop new ideas. For instance, an interviewed teacher from centre 'D' elabourated:

> Teaching students by using questions from paper reviews creates a chance for them to know how to answer the questions in the National Examinations. Teaching based on past paper reviews does not add any opportunity for learners to be creative on life issues; rather, it can help them in their academic matters, particularly in the examinations.

During FGD, learners also articulated that sometimes their teachers used pamphlets to teach them. Though pamphlet materials were good, some learners thought the materials made them inactive in learning, and they were unable to understand many things. Above all, it was found to be a business for the teachers. One of the learners from the centre 'D' stated during the interview:

> No matter how good pamphlets are, they are sometimes good, but they seem to be a business for our teachers. Our teacher usually sells out, and one pamphlet costs 10,000/-Tanzanian shillings for arts subjects, but for science subjects like physics and biology, it may cost 20,000/= to 30,000/=.

The observation method revealed a concerning reality: only one material resource—a teacher's pamphlet—was adequately available in the five visited centres, while essential resources like computers, the internet, and libraries were completely lacking. According to Michael and Matete (2024), teaching materials are fundamental to effective teaching and learning, and their absence can significantly hinder the achievement of educational goals. This critical shortage may well be a major factor behind the poor educational outcomes observed in non-formal secondary schools in Ilala municipality. Besides, Kapinga and Mtani (2024) stress the importance of instructional materials in enhancing the performance of both educators and learners. Yet, in many Sub-Saharan countries, including Tanzania, the challenge of insufficient instructional materials remains pervasive and unresolved. Lekule and Shirima (2023) assert that teaching aids are vital for maintaining learner engagement, ensuring that students stay focused and actively participate throughout lessons. Furthermore, they highlight that the effectiveness of mastering subject matter is closely tied to the suitability of these instructional aids. Many respondents have expressed a clear preference for locally made instructional materials, which they find highly valuable and effective in enhancing learning experiences. A study by Okongo et al. (2015) in Kenya reinforces this need, revealing that inadequate teaching and learning resources have significantly undermined the implementation of inclusive education in preschool centres. It's time we recognise and address these pressing issues to ensure that learning opportunities in non-formal education are not only available but truly effective for all learners.

Availability of learning resources

The data collected through questionnaires, in Table 5, shows that approximately 72 participants (85.7%) disagreed with the idea that their centres provide enough chairs and tables so that every learner has their own. This indicates that non-formal secondary school centres are experiencing a shortage of chairs and tables, resulting in uncertainty for learners regarding the availability of their own seating.

Table 5: Availability of Learning Resources

S/N	Statement	n=84					
		Agree		Certain		Disagree	
		N	%	n	%	n	%
1	My centre has enough classrooms	22	26.1	11	13	51	60.7
2	My centre has enough chairs and tables for learners in such a way that every learner has their own chair and table	0	0	12	14.2	72	85.7
3	My centre has a library and labouratories with enough furniture and equipment	16	19	4	4.7	64	76.1
4	My centre has a sufficient number of toilet pits for female and male learners	14	16.6	8	9.5	62	73.8

Furthermore, data in Table 5 shows that 64(76.1%) of the learners disagreed that their centres have libraries and labouratories with enough furniture and equipment. Likewise, 62(73.8%) of the learners disagreed with the statement that their centres have a sufficient number of toilet pits for female and male learners. The Finding also shows that classrooms were reported not to be enough, which led to learners being combined rather than having them in their respective streams.

Apart from the feedback from the learner questionnaire, interviews were conducted with the resident tutor, teachers, and centre coordinators. The resident tutor noted a significant lack of teaching resources in non-formal secondary school centres. The resident tutor highlighted shortages of tables, chairs, classrooms, library materials, and labouratory equipment. This indicates that non-formal secondary schools are facing a resource deficit. Centre coordinators expressed concerns about the availability of library facilities, labouratory equipment, and financial resources. Financial resources are essential for acquiring additional materials, such as textbooks, chalk boxes for instruction, and pens for teachers to grade assignments. They also cover supplies for learners, including exercise books and teachers' notebooks for preparing lessons to be shared with students. Furthermore, funds are utilised for various maintenance tasks, such as repairing chairs, tables, and the upkeep of school facilities, including classrooms, staff rooms, latrines, and storage areas. These findings align with Hobfoll's conservation of resources theory, which emphasises the importance of resource availability. Additionally, the results support Mege (2016), who found that facilities such as school buildings, classrooms, restrooms, and administrative offices are crucial for any educational institution.

The findings from the interviews and questionnaires were corroborated by the checklist results. It was found that the non-formal secondary school centres sampled did not provide a sufficient number of toilet facilities for both female and male students. This lack of facilities means that both learners and teachers cannot comfortably remain in the school environment without concern for where to relieve themselves. For instance, in one centre included in the study, students and teachers share latrines located within the administration offices. This placement is inappropriate due to insufficient privacy and potential health hazards. Additionally, while chalk pieces were available in the centres for instructional purposes, there was a noticeable absence of labouratories. This lack of facilities limited teachers from conducting even basic labouratory activities, which in turn contributed to higher levels of student underachievement and negatively affected learners' attitudes toward science subjects. Consequently, access to quality education in science is compromised. The concept of "learning by doing," as mentioned by Bruner (1990) in Sappaile & Djam'an (2017), is not new. However, implementing this approach within the classroom represents a significant shift from traditional teaching methods. In this context, labouratories are essential components of education, as they provide students with valuable hands-on experience (Sappaile & Djam'an, 2017).

Use of effective teaching and learning strategies

Table 6 provides a summary of the findings from 84 learners on the teaching and learning strategies used by their teachers in the visited centres.

Table 6: Learners' responses to teaching and learning strategies used by teachers

Types of teaching and learning strategies used by teachers	N	Frequency
Lecture	76	90.4
Questions and answers	51	60.7
Group discussion	25	29.7
Demonstration	12	14.2
Oral presentation	8	9.2
Problem solving	3	3.5
Project work	2	2.3

Data in Table 6 shows that the lecture, question, and answer were mostly used by teachers in teaching learners in the five visited non-formal secondary education centres. Problem-solving and project work were rarely used in the teaching and learning process. The learners' questionnaire finding was supported by classroom observation findings. It was revealed that most of the teachers adopted the lecture method as the method of teaching, leaving little room for learners' voices to be heard.

For five consecutive observation sessions, I got the impression that teachers still perceived teaching as a mode of transferring knowledge from a connoisseur to less experienced persons.

For instance, the following excerpt succinctly represents what transpired during the observation at centre 'A'. One of such sessions on the topic, *Major Features of the Earth's Surface*, began at 10:30 am without a stated specific objective of the lesson and the sharing of competencies the learners expected to demonstrate at the end of the lesson ended in a kind of 'one-man' show. The teacher attempted to present an overview of the lesson and also presented points for the class discussion by first underscoring the meaning of a continent. The teacher adopted the lecture method since about 85% of the discussions emanated from him. In the Use of learning resources, the teacher did not use any extra resources apart from the normal chalkboard, chalk and duster. He appeared not to have prepared the learners' minds before the lesson for pre-reading on the topic. There was more discussion on the points raised, even when the teacher asked intermittently formative assessment questions to assess learners' learning progress vis-à-vis the lesson for the day. Another observed physics teacher made some efforts to make the class interactive through questions with little success, since learners were not stimulated enough to be actively engaged. I made this observation, particularly with the other three centres, the questions the teachers posed afforded learners only a little chance to interact with them. The approaches teachers used in general for the five observed centres did not allow for brainstorming and collabourative learning. The findings suggest that lecture, questions and answers methods were mainly used by observed teachers.

The findings indicate that the teaching and learning strategies employed by teachers in non-formal secondary schools were ineffective, largely due to a reliance on teacher-centred approaches. The data collected revealed that these techniques were frequently used because they required minimal materials and took less time, resulting in limited student involvement during lessons. Additionally, many teachers lacked the necessary pedagogical skills and qualifications to implement learner-centred approaches effectively. Consequently, methods such as group discussions, inquiry-based learning, and role play were either used less frequently or not at all. This aligns with the research conducted by Chimbi and Jita (2022), which found that teachers' choices of teaching methods in Zimbabwe were not influenced by large class sizes or new pedagogical policies. There is a clear relationship between teacher preparation and poor pedagogical practices. The study also highlighted that environmental factors—such as inadequate teaching and learning materials, insufficient administrative support,

teachers' heavy workloads, and an unwelcoming teaching and learning environment—contributed to the limited variety of teaching methods employed by teachers.

Availability of staff

As indicated in Table 6, the overall learners' views regarding staffing status were negative, denoting that teachers generally disagreed that staffing status in their centres is adequate. Looking into specific items, learners 65(77.3%) disagreed with the statement that their centre had teachers for guidance and counselling, and only 3(3.5%) agreed with the statement as indicated. This is very worrying since guidance and counselling are essential ingredients for appropriate student behaviour. Furthermore, sports and games are essential for the physical fitness of the learners.

Table 7: Staffing resource

S/N	Statement	n=84					
		Agree		Certain		Disagree	
		N	%	n	%	n	%
1	My centre has a teacher for guidance and counselling	3	3.5	16	19	65	77.3
2	My centre has a teacher for sports and games	5	5.9	32	38	47	55.9
3	My centre has an adequate number of teachers	28	33.3	11	13	45	53.7
4	Teachers have a manageable teaching load	17	20.2	28	33.3	39	46.4
5	Teachers are equally distributed per subject	13	15.4	11	13	60	71.4
6	Each subject has a sufficient number of teachers	12	14.2	10	11.9	62	73.8

Data indicate that a significant number of respondents, 62 (73.8%), disagreed with the statement that each subject has an adequate number of teachers, while only 12 (14.2%) agreed. Additionally, 60 respondents (71.4%) disagreed with the idea that teachers are evenly distributed across subjects and that each subject has a sufficient number of educators. Although the non-formal secondary schools being examined had teachers available for sports, games, and guidance and counselling programmes, the overall number of teachers was insufficient to meet the needs of every subject. This situation may result in teachers being overloaded with assignments. According to Lekule and Shirima (2023), the poor performance of open school learners in national examinations is linked to the shortage of qualified, permanently employed teachers. The limited staffing in these schools was further corroborated by a resident tutor who stated in an interview that non-formal secondary school centres lacked adequately qualified teachers to cover all subjects.

> Many non-formal secondary school centres do not have permanently employed teachers…. They hire teachers on contract terms…. This leads to a shortage of teachers because teachers are working in more than one centre…some of them are government employees, hence they work after official working hours…mostly evening sessions.

Frequent changes in teachers create an inconsistent teaching timetable, negatively affecting students' learning. Many teachers work short contracts or leave due to low salaries, which are often distributed late. This leads some to seek additional income, causing increased absenteeism and decreased commitment to their roles. These issues harm students' academic performance and threaten the sustainability of non-formal secondary school centres meant to provide quality education alongside conventional schooling. The challenges faced by non-formal education centres become even more pronounced during holidays when a surge of students arrives for remedial classes. This influx often leads to conflicting schedules for teachers, resulting in erratic timetable changes and critical gaps in subject coverage. Moreover, the management of part-time teachers is fraught with difficulties due to their precarious contracts, which can severely limit study time and hinder student performance. Nevertheless, these teachers are indispensable in fostering essential study skills and sustaining learner motivation, as underscored by Garcia-Martinez and Tadeu (2018). However, the constant turnover of teachers creates an unstable learning environment, undermining the educational experience for students.

Conclusion and Recommendations

In order to promote quality secondary education in non-formal secondary school centres, there should be an effort to overcome the challenges impairing learning opportunities for learners. On the learners' characteristics, the study revealed that the male learners slightly outshine the female learners in non-formal secondary schools. The study also revealed that a large number of informants were ex-primary school leavers, followed by ex-form two, and last were ex-form four. It also revealed that a large number of learners who participated in this programme were unemployed, with an age range of 15 to 24 years old. The results showed that adults enrolled in the non-formal secondary school centres mainly due to limited access to formal secondary schools, dropping out of formal secondary education, failing the Form Two and Form Four national examinations, or seeking opportunities to upgrade their skills and improve employment prospects. The study identified several factors that negatively affect learning opportunities, such as a shortage of instructional and learning materials, a lack of qualified teachers, reliance on part-time instructors, ineffective teaching methods, unfavourable learning environments, financial constraints, and inconsistent teacher attendance. It is recommended that the Institute of Adult Education be

designated as the primary coordinator for these opportunities. This institution should oversee and register all other NFSE providers to enable effective monitoring and ensure quality assurance in programme implementation.

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Exploring Adult Learners' Participation Motives and Challenges in SEQUIP-AEP Programme: Experiences from an Open School in Morogoro, Tanzania

Gennes H. Shirima, University of Dar es Salaam & Glory G. Mphuru, Institute of Adult Education

Email: shirimagh@gmail.com & gmphuru@gmail.com

Abstract

This qualitative study explored the motives and challenges behind adult learners' participation in the SEQUIP-AEP programme at Wamo Open School in Morogoro Municipality as one of the Adult Learning and Education (ALE) programmes. Using a single-case study design, 15 adult learners were purposively recruited. Data were collected through interviews and documentary review, and then analysed thematically. Findings revealed that adult learners participate for varied motives such as career goals, personal development, and social recognition; however, financial constraints, poor learning environment, health-related challenges, and negative attitudes among the teachers and peers thwarted their participation. Overall, the study enriches the existing knowledge on adult learning in resource-constrained contexts as it reveals how motivation and challenges interact. The study recommends comprehensive policies, government financial support, and an improved learning environment. Further study could be directed towards analysing the long-term impact across different Open Schools to determine the sustainability of the ALE in Tanzania.

Key words: SEQUIP-AEP, Motives, Challenges, Participation.

Introduction

Adult Learning and Education (ALE) is considered an essential strategy for addressing socio-economic challenges, such as poverty, illiteracy, and unemployment, while promoting lifelong learning and sustainable development (Ng'umbi, 2022). ALE provides an avenue for a second-chance education to those who have been unsuccessful in their early formal education due to varied factors, while providing supplementary educational chances for those who require an improvement of their skills and capabilities (Lee, 2018). On the other hand, Cross (1981) and Boshier (1973) argue that ALE provides the necessary knowledge and skills to improve the lives of adults. In addition, ALE has been considered as comprising the fundamental elements of personal advancement and societal progress (Edwards-Fapohunda, 2024). Thus, many adults are being motivated to participate in various ALE programmes because of different opportunities offered, such as entrepreneurship skills, employability skills, life skills, social integration, and psychological-related issues like social recognition in society.

While some adult education programmes allow adults to participate in specific methodical and structured activities through which they facilitate their understanding and learning (Kapur, 2019), ALE, on the other hand, is lensed as a lifelong learning process where individuals are allowed to pursue what they need (Cabus & Stefanik, 2019). Due to the fast-growing technological development, ALE programmes have become more famous and easier for many adults. Different groups are joining ALE programmes, including elders, professionals, illiterates, and dropouts, looking for a second chance due to various educational opportunities available that suit their needs. Thus, since adults need to improve their knowledge, skills, and attitudes to cope with the dynamic world (UNESCO, 2022), ALE programmes through open schools are becoming paramount in the Tanzanian context. Open schools provide flexible learning opportunities that enable learners to learn outside of the formal classroom to achieve different goals (IAE, 2022).

In the Tanzanian context, different institutions have engaged in providing ALE through different programmes and projects. One of these institutions is the Institute of Adult Education (IAE), which acts as the custodian and leads to the development of ALE programmes and projects in Tanzania. Thus, there are several efforts taken to improve ALE, including the expansion of learning centres and the initiation of different learning programmes under IAE. For example, the Institute of Adult Education has reaffirmed and launched programmes and projects, including the Integrated Community Based Adult Education (ICBAE), Integrated Post Primary Education (IPPE), Integrated Programme for Out of School Adolescents (IPOSA), Kijana Nahodha, Alternative Secondary Education Pathway, Alternative Education Pathway (ASEP- AEP), and Secondary Education Quality Improvement Programme, Alternative Education Pathway (SEQUIP-AEP). To achieve their intended strategic goals and objectives, different international organisations like the World Bank (WB), the Korea International Cooperation Agency (KOICA), the International Monetary Fund (IMF), and the United Nations Children's Fund (UNICEF) have joined the efforts to facilitate the smooth operation of the programmes through funding in collaboration with the Tanzanian government (IAE, 2022). All these programmes aim to equip adult learners with skills that can help them fit in their respective communities and address their socio-economic challenges (Ng'umbi, 2022; Institute of Adult Education, 2022; UNESCO, 2021).

Some motives prompt individuals to choose ALE, including professional development, advancing skills and social integration. However, ALE programmes face numerous challenges that constrain adult learners from fully engaging adult learners in those programmes. Inequality in ALE participation has been stated, specifically

concerning variations in the distribution of opportunities for ALE within and between countries (Desjardins et al., 2006). Other challenges facing adult learners include time limits, family responsibilities, financial hardships, job-related challenges, low confidence levels, and negative attitudes among adult learners (Rubenson & Desjardins, 2009), which hinder their full participation in ALE programmes. Cross (1981) underscores that the challenges to the participation of individual adults in ALE programmes can be categorised into situational, dispositional, and institutional challenges. The situational factors are outside the institution, such as family responsibilities, health problems, and financial constraints. Institutional challenges are within the institution, which include poor learning environments, curriculum, tight timetables and insufficient facilitators. Dispositional factors include negative attitude towards academics, poor self-perception in academics, confidence and fear of failing (Cross, 1981; Rubenson & Desjardins, 2009). Given the challenges facing adult learners, it remains questionable whether they can participate well in their studies and perform well, and whether the programmes are supportive enough of the motives behind adult learners' participation.

Secondary Education Quality Improvement Programme, Alternative Education Pathway (SEQUIP-AEP) in particular, is a Tanzanian government initiative by the Ministry of Education, Science and Technology (MoEST) and the President's Office, Regional Administration and Local Government (PO-RALG) in collaboration with the World Bank. The SEQUIP -AEP programme was assigned to the Institute of Adult Education (IAE) to provide education for those who missed or were denied the first chance at education. It is a five-year plan (2020/2021 -2024/2025), aimed at increasing access to quality education at the secondary level, especially for the marginalised groups, including adolescents and out-of-school youth, by addressing challenges such as pregnancy, poverty, as well as dropouts. The programme was established to support alternative education pathways through community-based education centres. It contributes to the context of adult education because it offers adult learners the opportunity to participate in secondary education frameworks, attaining qualifications to improve their lives (Msese, 2020; Nkwama, 2023).

The literacy rate in Tanzania has declined since the 1970s, when it was around 90 per cent to 83 per cent in 2022 (NBS, 2022). Although the 2022 population census indicates improvement from the illiteracy rate of 29.1 per cent in 2012 to 20% in 2022, the current participation rates for adults enrolling in ALE are still low compared to the Tanzanian total population, regardless of the deliberate efforts made by the government and international economic stakeholders. These statistics show that adult learners' ALE programmes are still not satisfactorily effective in providing adequate

opportunities or in attracting more adult learners. Therefore, understanding the motives and challenges for participation in ALE from the perspective of learners, particularly at the Open School level, is essential. This is what prompted the current study, so that the findings can help to come out with significant and valuable recommendations to the policy makers, educational providers, and the institutions offering these programmes.

Thus, the Secondary Education Quality Improvement Programme, Alternative Education Pathway (SEQUIP-AEP), as one of the ALE programmes, has emerged as a significant platform for adult learners to attain educational and career aspirations, has drawn the attention of researchers. Adult learners, including those at Wamo Open School in Morogoro, enrol in the SEQUIP-AEP to get qualifications to develop careers, social recognition, as well as to get opportunities that would make them functional in the community. Despite the efforts that have been made by the government, non-governmental and international organisations to improve ALE and motivate adults to enrol in its related programmes by establishing and operating projects and programmes like SEQUIP-AEP in Tanzania, experience reveals that the rate of adult learners' enrolment and participation in ALE centres is still low. The SEQUIP-AEP is hindered by several challenges, such as a lack of science laboratories and living allowances for students, whereby learners struggle with food and transport costs. Furthermore, the adopted curriculum lacks practical, community-relevant components, as it concentrates on formal education while adult learners require multiple skills. These factors weaken participation rates as well as the success of adult learners in different open schools. Some studies were conducted in the Morogoro region, attempting to explore the provision of education through open schooling (cf. Francis, 2023). Nonetheless, the focus on the motives and challenges that adult learners face in accessing ALE programmes, specifically in open schools, was lacking. All this calls for an attention to exploring and understanding in detail the motives and challenges facing adult learners to participate in the SEQUIP-AEP in this unique context of open schools. The overarching question that guided the undertaking of this study was thus: What are the key motives that drive adult learners and the challenges that affect their participation in the SEQUIP-AEP as one of the ALE programmes at Wamo Open School in Morogoro region?

The study provides evidence-based results valuable in designing and delivering more inclusive, responsive and context-specific ALE programmes in Tanzania. The findings also inform policymakers, educational planners and practitioners in identifying and tackling the critical hindrances, in addition to enhancing the improvement of open schooling and adult education frameworks that are locally relevant and equality-

oriented to contribute to the national goals of lifelong learning and sustainable development in Tanzania.

Theoretical Perspectives

The study used Cross's Chain of Response Model of 1981 to explore the motives that drive and the hindrances that constrain adults to participate in ALE. According to Cross (1981), various factors influence and hinder adult learners from engaging in learning. According to Cross (1981), adults engage in learning because of the motives driving them. These motives emerge due to personal goals and attitudes, the dynamism of the world, and accessibility to learning opportunities. In summary, Cross (1981) argues that learning in adults is impacted by the combination of various factors like age, life phases, developmental stages, and the context of the learning environment. Similarly, Nyaruwata (2014), and Rwegerera & Bhalalusesa (2005) agree with Cross (1981) that adults engage in learning because of different socio-economic factors.

The theory by Cross (1981) claims, on the other hand, that adults are hindered by institutional, situational and dispositional challenges to engage in learning smoothly. In this aspect, Cross argues that financial hardship, inadequate teaching and learning resources, social issues, poor learning environment, family responsibilities, and inadequately trained personnel are common challenges that face adult learners. Moreover, other scholars argue that physical and financial factors also hinder adult learners from knowing their motives in the ALE programmes (Boeren, 2009). Furthermore, socio-economic, cultural factors, and psychological factors, including attitudes, confidence, and intentions, also hinder adult learners (Boeren, Nicaise, & Baert, & 2010:57). Therefore, this theory emphasises that adult participation in learning activities is not linear, but rather, they are convinced by the interplay of intrinsic and extrinsic factors, which must be addressed comprehensively to ensure sustainability and equality in accessing ALE. Therefore, this study adopts the thinking of Cross to explain the motives and challenges for adults to participate in learning at the open school level. The theory provides a structured way of analysing the existing situational, dispositional and institutional challenges, in addition to highlighting how adults' motives are shaped by internal desire, life transitions and self-improvement.

Contextualising Participation: Motivational Drivers and Barriers to ALE

Choosing to participate in ALE activities is, then, affected by personal choice and by socially contextualised structural factors (Rubenson & Desjardins, 2009). Related literature presents that adult learners engage in ALE due to varied motives, including career development, promotion, social recognition, meeting technological changes and the labour market, as well as escaping from life hardship situations (Mavropoulos et

al., 2021; Boeren et al., 2019). Also, others tend to be influenced by other needs, such as changing job roles, salary increases, getting qualifications for enrolment in further educational programmes and securing job positions (Onchari, 2016; Rothes et al., 2014). On the other hand, the death of loved ones, misunderstandings in families and workplaces, loneliness, and retirement are also considered as motives for participation in ALE programmes (Cross, 1981). Furthermore, adult learning influences life transformation, transition, and impact-making in their communities. Simply, adult learners tend to pursue education to elevate their socio-cultural, economic, and political status (Manuwar & Akhter, 2017; Rwegerera & Bhalalusesa, 2005). These driving motives are prominent in different areas experiencing poverty, such as Tanzania and many areas in Sub-Saharan Africa.

Adult education plays a crucial role in helping individuals achieve not only their personal goals but also helps them to achieve national development goals, as stated in the Sustainable Development Goals (Boeren, 2019). Various government and international initiatives have been implemented to enhance its effectiveness in skills and professional development. However, existing research highlights that in ALE, adult learners face different challenges, such as situational, dispositional, and institutional challenges that hinder their full participation (Cross, 1981; Rubenson & Desjardins, 2009). Institutional challenges include financial challenges that limit the accessibility of different resources that facilitate learning (Machumu et al., 2015). Also, the underfunding of the Adult Education sector by the government limits the accessibility of human and material resources that are crucial for the smooth running of the ALE programmes (Kway, 2016). The funds are needed for improving infrastructure, paying the facilitators and coordination costs, as well as buying teaching and learning materials. Moreover, the presence of rigid schedules and academic issues, health-related challenges, and social interactions is considered a dispositional challenge to participation in ALE programmes (Spivey, 2016). Additionally, multiple responsibilities in their workplaces, families and the society they live in are considered as situational challenges (Cross, 1981). In this regard, flexible schedules facilitate the participation of adult learners in ALE programmes.

Despite the depth of these insights highlighted in the literature, much of the existing literature generalises adult learners' motives and challenges through the lens of universal perspectives, leaving aside their context-specific factors that shape their participation in open schools (Boeren & Kalenda, 2025). Additionally, many studies lack engagement with learners' direct experiences, particularly in developing countries like Tanzania, specifically in Open schools; therefore, the direct voices of adult learners will help to provide in-depth information about motives and challenges towards

participation in SEQUIP-AEP programmes. The study will contribute to the existing literature by providing a detailed contextual grounded analysis of adult learners' motives and challenges in the SEQUIP-AEP programme in Morogoro. It will also help to bridge the gap between theoretical models and practical realities that will help to inform the policy makers, government and open school providers, as well as advancing knowledge in the field of adult education participation.

Given the challenges facing adult learners, it remains questionable whether they can participate well in their studies and perform well. Similarly, one is surprised whether the SEQUIP-AEP programme is supportive enough of the motives behind their participation. Therefore, the current study explored the motives that drive and the challenges that hinder adult learners from participating in ALE programmes through the Open School approach. Thus, the study aimed to contribute to the debate on Adult Learners' participation in ALE programmes by drawing empirical evidence from Wamo Open School in Morogoro Municipality.

Method

The study was conducted at Wamo Open School, operating under the Institute of Adult Education in Morogoro, Tanzania. The school provides flexible learning to adult learners under the Secondary Education Quality Improvement Programme, Alternative Education Pathway (SEQUIP-AEP). The area was selected because of its diverse characteristics, including the adult learners' population in the area, which offered a convenient and relevant choice of the sample size, from which rich and diverse information on the motives and challenges of participating in ALE programmes was collected. The study adopted a qualitative research approach to discover the lived experiences of adult learners studying in ALE programmes (cf. Cresswell & Cresswell, 2017). The approach was relevant because it allowed investigation of multifaceted personal, social and economic factors influencing participation, which cannot be straightforwardly measured. Cohen et al. (2018) assert that a qualitative approach allows researchers to uncover varied insights, emotions and meanings that adult learners attach to their participation and challenges in ALE programmes.

In relation to the adopted research approach, an exploratory case study design was deemed necessary to provide a detailed and contextual understanding of the motives and challenges for adult learners' participation in ALE programmes within Wamo Open School. Another rationale was its suitability for understanding complex social issues like motivations and challenges towards generating rich and contextual insights (cf. Yin, 2018). 15 participants were recruited purposively to form the sample of the

study, including 10 adult learners, 3 teachers, 1 academic coordinator and 1 resident tutor who had a direct involvement in the SEQUIP-AEP programme and adequate experience with the ALE programmes. The open school's academic coordinator assisted in identifying participants who met the aforementioned criteria, which ensured the inclusion of data-rich individuals. The study data were collected through a semi-structured interview guide and documentary review. Interviews were led in Kiswahili to ensure vibrant communication with ease, audio recorded with informed consent, and later transcribed and translated into English. The documentary review encompassed ALE programme articles and institutional records related to the SEQUIP-AEP initiative.

Possible sampling biases included the overrepresentation of more active learners, perhaps excluding the voices of dropouts or highly disadvantaged learners. To improve this, efforts were made to include learners with diverse attendance patterns, such as those with gaps in learning due to health, family, or financial challenges. Data were analysed thematically through steps identified by Braun & Clarke (2006). The researcher, maintained privacy and safeguarded the secret of participants' personal and identifiable information (Ary et al., 2010). The researcher started by transcribing and thoroughly reading the interviews to familiarise themselves with the data. Initial open coding was done manually, recognising meaningful statements and assigning them descriptive codes such as economic motives, family responsibilities or negative attitude. These codes were classified into broader categories and advanced into key themes associated with the research questions and the Cross (1981) theoretical framework. This process enabled deep, structured interpretation of learners' experiences and ensured that analysis was transparent, consistent and grounded in both theory and data.

To ensure trustworthiness of the study, prolonged engagement in the field, triangulation and member checking were done, to ensure credibility, an audit trail was done, to ensure dependability, reflective journaling to ensure confirmability, and thick description to ensure transferability were done. Ethical clearance was obtained from the Wamo Open School authority. Participants were fully informed about the nature and objectives of the study, and written informed consent was obtained. Confidentiality was maintained by using pseudonyms (AL1, AL2) and anonymising identifying information. Participants were also informed of their right to withdraw at any stage without consequences. Audio recordings were stored securely and solely for academic purposes.

Results and Discussion

This section presents data together with a critical discussion of the revealed findings on the motives and challenges facing adult learners in Wamo Open School under the SEQUIP-AE programme in the Morogoro region.

Adult Learners' Motives to Participate in Adult Learning and Education

The first research objective was to identify key motives for adult learners' participation in Open schools. The aim was to get participants' views on the different motives of the adult learners' participation in ALE. Data were collected through in-depth semi-structured interviews. The study findings revealed that adults have diverse motives for participating in ALE, ranging from career or individual goals to social and economic motives as presented and discussed hereunder:

Career motives

Most adult learners revealed that they were attracted to joining ALE programmes, and the SEQUIP-AEP in particular, to develop their skills and knowledge for career development. Adult learners at Wamo under the SEQUIP-AEP programme, during in-depth interviews, emphasised robust career motives for joining ALE programmes. The majority of adult learners were motivated by a wish to escape from economic adversities by developing careers of their choice and to secure formal employment in the future. This lines up with the reality in many parts of Tanzania, including Morogoro, where job scarcity dominates the economic landscape. Participants expressed the hope that education would act as a stepping stone out of unemployment. One participant shared:

> I joined this programme because I believed that after completion, I would have the necessary academic qualifications to join further education and training such as secretarial service or office attendance, which is my current wish, hence a chance for formal employment in the formal sector. Through employment, I will be enabled to cater for my basic needs and those of my family (AL5).

The above argument and expectations of the adult learner were strongly supported by the other 9 out of 10 adult learners involved, though each had a different choice regarding the job they wished to be employed in. In their testimonies, adults perceive education as not merely a tool for knowledge but also as a practical survival strategy. Their shared expectations reflect the reality that education is a tool that can enable them to build employment careers and survive in the world market, whereby one can attain the basic needs and progress further socially and economically. These uncovered findings are consistent with Boeren et al. (2019) and Boyadjieva & Ilieva-Trichkova (2021), who empirically established that employability is still a dominant drive for adult learners to participate in education globally. In the Tanzanian context, where informal

and uncertain employment dominates, particularly in Morogoro peri-urban areas, education in any form of delivery is perceived as a bridge to economic security. Nonetheless, Cross (1981) underscores that adults may primarily be driven by external goals, but their participation is often sustained by intrinsic factors like self-actualisation. Thus, the emphasis on external rewards, such as salary and promotions, can lead to dropouts if their hopes are not met. Therefore, Tanzanian non-formal education policy must broaden its scope by integrating career guidance and vocational skills and entrepreneurship skills within the SEQUIP-AEP Centres. Moreover, collabouration with local employers could open transitional pathways from learning to work, particularly in sectors like agriculture and digital services that are growing in Morogoro.

Securing white collar jobs

This was also identified as a motive for joining the open school, as adults saw it as a way to be employed in office work to undertake light activities that are not physically tiring. Uneducated people perform manual activities such as quarrying, assisting in construction activities, and selling vegetables in the streets while moving around looking for customers, which is more tiring. Most of the participants reported that a Form Four academic certificate would help them to escape from labour-intensive jobs and get white collar jobs. This is common in many Tanzanian communities and many parts of third-world countries, where labour-intensive physical activities are done by people with no academic skills, so they wanted to escape from that at the same time being economically free. In this regard, one participant said:

> I have been selling kitchen utensils and accessories around the street. It is very tiring, as sometimes it is too sunny and the goods I am selling are heavy. This makes the work very tough, and because I am not educated, I have no other choice. So, I decided to join this SEQUIP-AE programme to get a Form Four certificate that can enable me to secure military work, as in some military sections, the entry requirement is a Form Four certificate (AL2).

These activities with high fatigue make people tired with little earnings, hence the need to perform white collar jobs became a motive to join the ALE under the SEQUIP-AEP programme to acquire certificates. That can help them acquire jobs without going to further training, such as military, security jobs, unskilled industrial work and assisting in projects that will help them undertake light duties. In the street, uneducated people undertake manual work such as quarrying and road sweeping. In line with Boeren et al.'s (2019) study, employment dynamics influence adult learners to join different ALE programmes, particularly to cope with the changes in the labour market, to improve their economic status.

Fulfilling personal education goals

Most participants revealed that they also joined the ALE programme under SEQUIP-AEP to fulfil the missed opportunities, as some of the adult learners reported dropping out of school because of different situations such as poverty, health and gender related issues, ignorance and lack of guidance. Most of the adult learners indicated their reason to join the SEQUIP-AEP is to fulfil their long-term education ambitions, as they felt something was missing in their lives. Under this, participants reported that they only need to finish ordinary level education without further intentions, currently believing that in the future, such a qualification will help unlock some opportunities that they might get.

> I dropped out of school when I was in form one because of peer pressure… I listened to my peers more than I did to my teachers and parents. So, when I stayed idle at home, I realised to had made a mistake, hence decided to join this programme to at least acquire a secondary certificate that I had wished to have for a long time (AL9).

This indicates that such an adult learner's motive was rooted in personal decisions and commitment to life goals, but also in relating learning to self-identity. Adult learners perceived learning as a necessary part of life that needs to be fulfilled. Thus, this motive implies that adults' motive to learn is not directly influenced by external factors only, such as promotion, but rather it can be rooted in personal desire for self-actualisation as well as long-term goals, and so, education is not only psychological but also an emotional journey. Programme designers and policy makers should integrate issues that will help these learners achieve their goals. This is consistent with Rubenson and Desjardins (2009), who asserted that adult learners join adult learning programmes for personal objectives, including self-fulfilment.

Identity and social recognition

Many participants sought social recognition and respect, particularly those who had been excluded or disrespected due to their low educational status. In the sociocultural fabric of Tanzania communities, particularly in rural and semi-urban areas like Morogoro, education carries significant symbolic capital. One participant revealed:

> In a religious gathering, I was once disrespected when giving out my views about our church development. Someone told me that I cannot contribute constructively because I have no secondary education… I was very much embarrassed and decided to go for further studies to be recognised and respected (AL4).

The revealed evidence indicates how the absence of formal education translates into a lessened social voice even in community participatory settings. In different communities, education is regarded as one of the factors to be respected, as

knowledgeable people are regarded as having power in the community. Cross (1981) clarifies that adult learners are motivated not only by personal goals but also by their alleged status and the societal value positioned on education. This is particularly in Tanzania, where educated individuals are more likely to be heard in community decision forums. Additionally, the findings align with Mushi (2010) and Rothes et al. (2014), who propose that adult education offers not only skills but also social status and confidence. In Morogoro communities where decisions are made communally, being knowledgeable and formally educated can directly influence one's ability to participate meaningfully in civic life. The study authenticates the empowering potential of ALE; it also calls attention to the need for adult education to deliberately promote civic empowerment. The prevailing SEQUIP-AEP curriculum should be reviewed to include community engagement skills to help adult learners proclaim themselves more confidently in public settings and encourage democratic participation.

Challenges Facing Adult Learners' Participation in SEQUIP-AEP as an ALE Programme

The second research objective was to analyse the challenges faced by adult learners participating in SEQUIP-AEP through Open schooling. The findings of the study disclosed various challenges facing adult learners' participation in SEQUIP-AEP as one of the ALE programmes. The challenges include situational challenges, institutional challenges, and dispositional challenges.

Situational barriers to participation in SEQUIP-AEP

Situational barriers emerged and ranked high in the data, with gendered responsibilities and poverty disproportionately affecting adult learners, particularly women. Women were mostly affected because they are the ones who mostly participate in family responsibilities as well as societal roles. Many participants reported that women in their communities perform many responsibilities, which in turn hinder their learning as compared to men. Despite this barrier being common in literature, women at Wamo in particular face critical challenges because of cultural expectations rooted in community norms. In addition, Wamo is also different from other ALE centres where learners are given stipends to support their learning. Lack of both learning and living allowance adversely affected their participation rates due to intense poverty. One of the female participants explained:

> Last year, I could not write my exams because my kid was sick and there was no one at home […]. I had to choose my kid's health first, instead of coming to school with worries. I knew even if I came to write exams, I would not make it […]. This is my second time to be in Wamo Open School (AL3).

This quote illustrates how caregiving responsibilities can directly disrupt educational continuity. It highlights that there are some learners, particularly women, who wish to participate in ALE programmes for different ambitions, but they fail or they partially participate because of these responsibilities. In Tanzanian culture, women are the ones known to take care of the family, so for that reason, they fail to attend learning because they do not have help at home. Cross (1981) acknowledges that situational barriers, often outside learners' control, are among the strongest inhibitors of adult participation. Despite this barrier being common in literature in Wamo, this barrier is peculiar because learners engage themselves in multiple responsibilities, including caregiving roles, which are rooted in gendered norms among communities in Tanzania. Women in Morogoro and Tanzania more broadly often face a triple burden of work, childcare and learning, leaving little room for academic consistency. In parallel, financial hardship was also cited to be another critical challenge. As one learner noted, *"There are times I fail to afford transport costs […] I find myself destroying learning" (AL6).*

The absence of stipends in many SEQUIP-AEP centres compounds this financial fragility. This is because learning combines multiple activities; it is not about being in the classroom only. Learners need food, transport, and some learning materials, which are not directly offered by the SEQUIP-AEP learning centres, such as exercise books and pens. The scholarship offers tuition fees only, where learners have to pay for other utilities. While SEQUIP-AEP aims to promote equitable access, its current funding structure leaves many adult learners unsupported. This calls for policy reforms that embed a stipend for learners within the programme. This structural support would directly reduce dropout rates and enhance retention, especially among marginalised learners.

Institutional barriers to participation in SEQUIP-AEP

Learners reported the presence of poor facilities, especially for the learners taking science subjects. They criticised the available labouratory because it does not have enough facilities and a quality place for doing practical lessons. They added that during national examinations, they write their exams in nearby schools where they are not used, hence it triggers the fear of failing. Wamo is different from funded ALE centres reported in different literature because the SEQUIP-AEP provides labouratory chemicals and apparatus, but there is no standard labouratory where practicals can take place; accordingly, it kills the ambitions of some learners in that science field, such as future health workers. One of the participants shared:

> There are inadequate teaching and learning materials for science subjects, especially in the labouratory, which discourages me […] I see my dreams fading

> as I want to become a doctor in the future, so I feel like I am wasting my time […] (AL7).

These barriers are within institutions offering ALE programmes that hinder the participation of learners. The institutional environment has a strong influence on learners' success because in their communities, they already face a lot of challenges. These learners wish to have comfortable places where they can study with few challenges. When the studying areas have challenges, it hinders their participation. According to MacKeracher, Suart & Potter (2006), poor programme design, inflexible design, inflexible schedules, and lack of adult-centred pedagogy undermine adult education effectiveness. In Morogoro, learners' complaints about having to sit exams in unfamiliar locations due to a lack of infrastructure underscore how underfunding impacts learner experience.

Equally concerning is the negative attitude from some teachers and peers. Most of the participants need to be respected and trusted with their abilities. They added that they already have low confidence in studying, so a negative attitude discourages their participation. One participant said:

> My teacher told me that with my academic ability, together with my kid's responsibilities as a parent, I wouldn't manage to pursue science subjects. Actually, I had a lot to deal with and my mind was not settled, hence, unable to take science subjects as they are for the highly committed students with less responsibilities […]. All that hindered my full participation in the programme (AL5)

Despite this barrier being found in other literature, it is peculiar to Wamo because most of the learners come from different traumatising backgrounds, including societal isolation due to the nature of the programme requirement, hence they require motivation rather than discouragement. Adult learners need to be trusted and appreciated as they have experience in different areas; a negative attitude towards them discourages their learning. A positive attitude means a great thing towards learners' success in the learning process because learning is a secondary role for them. When teachers, fellow learners and administrators undermine their ability, it weakens their confidence as well as their studying ability. Instead, adult learners should be motivated to participate well in education. Cross classifies such negative interactions as dispositional challenges influenced by institutional teachers. These attitudes can discourage learners, especially those with low academic confidence or who are returning to education after a long absence. Therefore, institutions offering ALE programmes should motivate learners to enhance their participation instead of discouraging them.

Dispositional challenges to participate in SEQUIP-AEP

Adult learners reported dispositional barriers, including health issues and negative self-image, as well as limited participation. Unlike institutional barriers, dispositional factors are within learners' lives, including experience, psychological issues and personal fears in education. This barrier is also found in literature referring to the ALE programme provision, where in some areas they offer wellness support like counselling services, but to Wamo, they offer none in terms of mentoring and psychological support. These factors hinder adult learners' participation in ALE programmes as they undermine their ability to participate in learning effectively. AL1 shared that:

> I stopped attending school because I was physically challenged, having eye problems. I attended medical services for a long time because I could not see well, so participating in learning was a challenge to me. I had to wait until I got relief […] started afresh after one year of sickness […].

Effective learning requires mental and physical health, and so when the health is not good, it affects their participation in SEQUIP-AEP programmes. Learning takes place when the learners can study intensively to achieve their goals. Such internal challenges are well-documented in adult education literature (MacKeracher et al., 2006). Cross (1981) highlights how experience is often shaped by earlier school failure, which can persist in adulthood, deterring re-engagement. In rural and peri-urban Tanzanian contexts, where health services are scarce and disability is stigmatised, such issues are further compounded.

While many learners overcame such challenges, this was often due to personal resilience rather than institutional support. Programmes like SEQUIP-AEP must therefore integrate counselling, peer support systems and accessible health screening if they are to reach the most vulnerable learners. Programmes must also recognise that motivation is not static; it is involved with context. Drawing from the Cross model, interventions should be comprehensive, addressing both internal goals, attitudes and self-perceptions. and external (resources, institutional practices) dimensions.

Conclusion and Recommendations

Participation in the SEQUIP-AEP programme is driven by a blend of career ambitions, economic survival strategies, personal development goals and the pursuit of social respect and identity within the community. To the adult learners, education offered through SEQUIP-AEP is instrumental in escaping poverty, transitioning to less strenuous employment, and gaining social recognition in the public. Despite the potential usefulness of the SEQUIP-AEP programme, adult learners still encounter multifaceted challenges, including situational and institutional barriers as well as dispositional barriers, which in their combination limit effective participation in the

process of learning. It is recommended that the SEQUIP-AEP programme would be improved through interconnectedness of efforts from both government and stakeholders by financing adult learners through stipends to reduce economic burden among low-income adult learners. Moreover, IAE would create a flexible environment to accommodate different learners with varying needs, particularly the women who, despite having a great motive to enrol in the programme they encounter a lot of challenges. In addition, the IAE could improve the learning environment, including well-equipped science laboratories and libraries to enable engagement and retention of learners, while investing in capacity building of the facilitators, and providing basic academic guidance and counselling services.

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The Financing Status of Adult and Non-Formal Education Programmes in Tanzania

Tulia Michael, Tanzania Institute of Education

Email: tuliamichael2015@gmail.com

ORCD: https://orcid.org/0000-0002-4335-1201

Abstract

In today's globalised world, financing Adult and Non-Formal Education (ANFE) is essential for promoting inclusive, equitable, and lifelong learning opportunities. This study examined the financing status of ANFE programmes in Tanzania using a qualitative and phenomenological approach. A purposive sample of 143 participants, including District Primary Education Officers, District Adult Education Officers, facilitators, Head Teachers, District Commissioners, District Executive Directors, and Ward Education Officers, was drawn from Mbogwe, Geita, Rorya, and Kwimba district councils. Data collection involved in-depth interviews, focus group discussions, and document analysis. The findings revealed that the financing status of ANFE programmes was inconsistent. It was revealed that while programmes such as Integrated Post-Primary Education (IPPE), Integrated Programme for Out-of-School Adolescents (IPOSA), and Alternative Pathway Education received funding, others, including Complementary Basic Education in Tanzania (COBET) and Integrated Community-Based Adult Education (ICBAE), received little to no direct financial support. The study also found minimal involvement from NGOs in ANFE programmes and also lack of structured mechanisms for providing honoraria to facilitators. The study recommends establishing a dedicated budget sub-vote for adult and non-formal education programmes, enhancing the financial involvement of NGOs, institutionalisation of honoraria and incentive structures to enhance the effectiveness and sustainability of ANFE programmes.

Key words: Adult and non-formal education, lifelong learning, financing, programmes

Introduction

In recent years, evidence has consistently emphasised financing Adult and Non-Formal Education (ANFE) due to its great importance to an individual, society and nation in the ever-changing world of the 21st century. The ANFE is also highly emphasised due to the tremendous changes in science and technology (Michael et al., 2021; Michael, 2022; Michael & Matete, 2024). Various studies show that adult and non-formal education are tools that empower people to alleviate poverty, improve health and well-being, and contribute to a sustainable learning society; it is a pathway for personal growth and professional development; it enables people to respond to technological change and challenges; it brings changes in individual, social, and

national development (Chieke et al., 2023; Michael & Matete, 2021; Michael, 2022; Popović, 2021; Vaculíková et al., 2024) Adult and non-formal education make a great contribution to bringing individual change and national development.

Concepts and definitions of adult education and non-formal education

Adult education is a learning activity in which an adult acquires new knowledge, skills, and aptitude in either a formal or non-formal setting in order to change life economically, professionally, politically, and socially based on his or her needs. Mushi (2022) conceptualises the term adult education as "organised educational activity aimed at developing the abilities of adults to improve their lives in society". Non-formal education is a learning activity in which children, youths and adults acquire new knowledge, skills, and competence outside the formal system for the purpose of meeting their needs. Heinze and Hinzen (2022) define non-formal education as "any organised educational activity outside the established formal system, whether operating separately or as an important feature of some broader activity that is intended to serve identifiable learning clienteles and learning objectives".

Adult and non-formal education have different programmes which offer different learning activities that empower learners to meet their learning needs and transform their lives. In Western countries, for example United Kingdom (UK), France, Finland, Australia, United States of America (USA), Germany, Netherland, and Nordic countries, adult and non-formal education programmes equip individuals with skills and knowledge needed for tremendous changes of science and technology; fostering active citizenship; supporting personal and community development; and contributing to socio-economic development (Kaplan & Anustekin, 2022). In middle-income countries such as India, Indonesia, Bangladesh, Pakistan, and the Philippines, adult and non-formal education programmes equip people with essential skills for employment and active citizenship, promote lifelong learning and address specific community needs (Ohashi & Abid, 2019). In sub-Saharan African countries such as Tanzania, Mozambique, Namibia, Zambia, Rwanda, Burundi, Congo, and Kenya ANFE programmes play a vital role in development by addressing the individual needs such as education for those outside formal schooling, low literacy rates, skills development gaps, unemployment, and contribute to poverty reduction and overall societal progress (Michael et al., 2021; Michael, 2022; Shirima, 2020).

Adult and non-formal education programmes in Tanzania

Adult and non-formal education programmes focus on functional literacy, post-literacy, life skills, vocational skills, and professional development, such as certificates, diplomas, and degrees with various government partners, non-state actors, institutions

and universities (Heinze & Hinzen, 2022; Shirima, 2020). The Integrated Community-Based Adult Education (ICBAE) is the main programme in Tanzania which focuses on basic and advanced literacy training and enrols learners in extension activities, income generation, life skills and vocational skills (Heinze & Hinzen, 2022; Hinzen & Weber, 2019). In addition, Complementary Basic Education in Tanzania (COBET) is another programme that is designed to provide basic education to the out-of-school children aged between 9-17 years who drop formal schooling or do not attend formal schools due to various reasons and are integrated into the formal system (Heinze & Hinzen, 2022; Michael, 2022; Shirima, 2020).

Another programme is Non-Formal Secondary Education (NFSE) that offers secondary education to children, youths, and adults who missed the opportunity to attain formal secondary education for various reasons (Mbilu, 2019; Michael, 2022; Shirima, 2020). Non-formal secondary education embraces open learning secondary education in three Qualifying Test (QT) levels that are QT level I, QT level II, and QT level III (Heinze & Hinzen, 2022; Michael, 2022). The Integrated Programme for Out of School Adolescents (IPOSA) is another programme aimed at providing a second chance to adolescents of 14+ years, who missed the opportunity of formal schooling, and it integrates literacy skills, life skills, vocational skills, and entrepreneurship skills (Siafu, 2024). Secondary Education Quality Improvement Project-Alternative Education Pathway (SEQUIP-AEP) is another programme that aims to increase access to secondary education, targeting girls (underage marriages and teenage pregnancies) who failed to continue with formal secondary school (Mwita, 2023).

The Integrated Post Primary Education (IPPE) is also another ANFE programme that aims to provide education to children who have not completed primary school, and it also offers alternative pathways to vocational training and other skills development (Siafu, 2024). Open and Distance Learning also provides adult education through certificates, diplomas and degrees (Heinze & Hinzen, 2022; Shirima, 2020). Focal development Colleges (FDCs) and Technical and Vocational Training (TVT) are also proved ANFE services (Heinze & Hinzen, 2022). Other ANFE through continuing education are within different programmes such as open schools, evening classes, and other academic courses which are offered through Open and Distance Learning (ODL).

Rationale for financing adult and non-formal education programmes

Adult and non-formal education programmes make great contributions to an individual, society and nation at large. Based on their contributions, ANFE

programmes are financed by the public and private sectors. Sources of funding for ANFE programmes include the government through ministries, Civil Society Organisations (CSOs), Non-Governmental Organisations (NGOs), and development agencies such as the World Bank (WB), United Nations Development Programme (UNDP), and UNICEF (Popović, 2021). The impetus for financing adult and non-formal education programmes is derived from its high contribution to an individual, society and national development. Studies show that financing ANFE programmes reduces poverty and unemployment; improves health and wellbeing; supports economic growth; and enhances civic participation and social inclusion (Chieke et al., 2023; Popović, 2021; Vaculíková et al., 2024). Adult and non-formal education programmes promote lifelong learning, which enables people to learn throughout their lives. Responding to technological global change and challenges in the 21st century is another factor for financing ANFE programmes (Michael & Matete, 2024; Shirima, 2020; Vaculíková et al., 2024). Financing ANFE aligns with national and global priorities such as Tanzania Education and Training policy 2014 version 2023, Education Sector Development Programme (ESDP) 2021/22-2025/26, Tanzania Development Vision 2025, and UN Agenda 2030 in Sustainable Development Goal 4 (SDGs) 2030 (MoEST, 2014; Mushi, 2022; Popović, 2021).

Adult and non-formal education programmes must be financed for sustainable lifelong learning and building a competitive, literate and adaptable society today and in the future. Literature is scarce on financing adult and non-formal education programmes in Tanzania. For example, Mushi (2022) examined the state of adult education funding in Tanzania, delineating issues and challenges. Further, Harid (2023) examined how adult and non-formal education centres are financed in Tanzania. However, among these studies, little attention has been paid to the financing status of adult and non-formal education programmes in Tanzania. The main research question is: What is the current status of funding for adult and non-formal education programmes in Tanzania? Therefore, conducting this study will bridge the existing gap in the financing status of adult and non-formal programmes in Tanzania.

Methodology

This study employed a qualitative research approach with a phenomenological design. The approach and its design were used because they help in providing an in-depth understanding and rich, detailed data that captures the real world from the lived experiences of people in adult and non-formal education contexts (Creswell & Poth, 2018). This study was carried out in four District Councils (DC) in the Lake Zone region. These districts are Kwimba DC, Mwanza region; Rorya DC, Musoma region; Mbogwe DC, Geita region; and Biharamulo DC, Kagera region. The districts were

selected since research shows that in Lake Zone regions, there is a high violation of human rights, such as the right to life, freedom from violence, equality before the law, and personal security (LHRC, 2025). In areas with excessive malpractices and violations of human rights, like those existing in the lake zone regions, it is assumed that adult and non-formal education programmes are not implemented well.

Purposive sampling was used to obtain 143 participants (97 males and 45 females) from the adult and non-formal education context. These include: 4 District Commissioners, 4 District Executive Directors, 4 Primary District Education Officers, 4 District Adult Education Officers, 16 Ward Education Officers, 37 Head Teachers, 37 Integrated Community Based Adult Education (ICBAE) facilitators, and 37 Complementary Basic Education in Tanzania (COBET). Purposive sampling was used to select participants based on specific criteria in adult and non-formal education contexts and who are information-rich and provide deep insights into complex issues (Andrade, 2020; Nyimbili & Nyimbili, 2024). These participants were chosen based on their roles and responsibilities as well as experience in adult and non-formal education settings.

This study involved three types of data collection methods that are the interviews, Focus Group discussions, and document analysis. The in-depth interview was used to collect data from district leaders who were District Commissioners, District Executive Directors, District Primary Education Officers, District Adult Education Officers, and Ward Education Officers. The in-depth interview was used in this category so as to allow participants to articulate the way they interpret and understand the world of adult and non-formal education, and share their experiences in the adult and non-formal education context (Eppich et al., 2019). Although an interview gathers thick information about a participant's experience towards a phenomenon, it is time-consuming and sometimes a participant may hide some of the information. To mitigate this constraint, it was important to clarify the questions and continue to probe.

The Focus Group Discussion (FGD) was used to collect data from Head Teachers, COBET teachers, and ICBAE facilitators. The FGD was used to allow participants to respond to each other's views, which can reveal shared or divergent perspectives in adult and non-formal education (Adler et al., 2019). The study had 12 FGDs, whereby each group had 9 members. This method enabled a researcher to collect rich data from a large group of people with different backgrounds, where they shared their experiences, views, opinions and ideas concerning adult and non-formal education programmes. Though FGD enabled the researcher to obtain a large amount of data in a short time, some participants wanted to dominate groups by airing their ideas and experiences. To mitigate this, the researcher opened the room to allow every

participant to participate within the group. Each FGD took 40-60 minutes to be completed within the school and centre settings. Document analysis was also used to obtain data from the policy and strategies documents that put much emphasis on adult and non-formal education. Document analysis was worth using because it allows researchers to study phenomena where direct observation is impractical, providing deep insights into the financing status of adult and non-formal education programmes (Dalglish et al., 2020). The analysed documents were: Education and Training Policy (2014 version 2023), National strategy for Adult and Non-Formal Education 2010/11-2014/15, National Adult Literacy and Mass Education Rolling Strategy (NALMERS) (2020-2025), Medium Term Expenditure Frameworks (MTEF) for Education 2023/24 and 2024/25, Education Sector Development Plan 2025/26 -2025/29, Sustainable Development Goal (SDG4), and Tanzania Development Vision 2025. The information sorted from these documents was policy emphasis on adult and non-formal education, percentage of total education budget allocated to adult and non-formal education, and strategic targets and indicators of adult and non-formal education. Though document analysis seems to be a valuable method for generating insightful and impactful research findings, its weakness is the bias of the researcher during the interpretation of the findings. To mitigate this, the researcher tried to avoid bias in interpretation so as not to influence results through triangulation to ensure the credibility of the results.

This study employed qualitative data analysis, whereby both thematic and content analysis were used to analyse the data. In thematic analysis, data from interviews and Focus Group Discussion (FGD) were analysed, followed by the six steps given by Creswell & Poth (2018). The first step was to gather all data from interviews, FGD and documents and interpret them from Kiswahili to the English language. The second step was to read all the data to understand it and get the meaning. The third step was coding all the data after the first interview, FGD and reading the first document by using three colours that were turquoise, violet and teal. The raw data was analysed and presented in three memos. The memo labelled with yellow colour reflected the most important point from the interview, FGD and documents. In addition to this, the memo labelled with blue colour reflected an important point, while the memo labelled with green colour reflected a less important point. The fourth step was to code the data to generate the themes from participants' information about the financing status of adult and non-formal education programmes. The fifth step was to interpret the data from participants' voices and documents to get the meaning of the study findings. The sixth step is to analyse the data. Content analysis was also used to analyse the secondary data from policy and strategy documents.

Furthermore, ethical issues were also considered in this study. Considering ethical matters, three issues were considered; firstly, seeking permission from the authorities to carry out the study in the identified districts. Secondly, the researcher asked the participants for their consent to participate in the study. Thirdly, Privacy and maintaining confidentiality were also considered, whereby pseudonyms were used for all participants. All participants were named letter R1, R2…R37 for confidentiality and security purposes.

Results and discussion

Limited funds for adult and non-formal education programmes

The study findings reveal that there were limited funds for adult and non-formal education programmes. Through in-depth interviews with district leaders (District Councillors, District Executive Directors, Primary District Education Officers, and District Adult Education Officers), they said that there were limited funds to enable all activities of adult and non-formal education to be done effectively and completed within their districts. One of the District Education Officers states during the interview:

> Even though adult and non-formal education programmes are financed by the Ministry of Education, Science and Technology and other NGOs, the funds are very limited to enable adult and non-formal activities to be done effectively. To avoid idleness, sometimes I assign Adult Education Officers some tasks to perform within my department (R 14).

On top of that, one of the District Adult Education Officers said during the interview:

> The budget for adult and non-formal education is not always enough. For example, when we want to conduct Adult Education Week, we normally solicit fund from private sectors like banks, such as CRDB and NMB through the eyes of our District Executive Director are on those banks. So, the little amount we get from the banks, contributes something in enabling celebrations of adult week to go smooth" (R 9).

Another District Adult Education Officer explained during the interview:

> We normally get a small amount of money for doing follow-ups and monitoring of adult and non-formal education activities. Sometimes, I use my money to do activities of ANFE, such as buying fuel to go to the field and buying chicken to give capital for the literacy cycles of ICBAE. If time allows, during the monitoring of primary education activities, I also monitor ANFE activities (R1).

It was further confirmed during FGD that there was limited funding provided to adult education practitioners to run ANFE programmes. For example, during FGD 109 out of 124 participants (Head Teachers, ICBAE Facilitators, and COBET teachers) said that the amount they received to run the ANFE activities was very low compared to

the multiple activities within the ANFE programmes. One of the Head Teachers remarked during the FGD:

> In my experience, I see that ANFE programmes such as ICBAE and COBET are not fully or partially financed because facilitators are always crying about their honoraria, as well as the inadequacy of teaching and learning materials. These cries are caused by the limited funds (R 3).

In confirming the interview and FGD, through document analysis, the National Strategy for Adult and Non-Formal Education 2010/11-2014/15 indicates that the adult and non-formal education sub-sector is suffering from chronic underfunding. In addition, the Education Sector Development Plan 2025/26 -2025/29 reveals that one of the challenges facing public education institutions in Tanzania is the overall insufficiency of government funding. Further, data from the Ministry of Education, Science, and Technology reports indicate that adult and non-formal education receives no separate allocation, likely under 1% of total educational spending. Further, through document analysis, it was found that the ANFE programmes such as IPOSA, SEQIP-AEP and IPPE are consistently financed by international agencies such as UNICEF, UNESCO and the World Bank.

These findings indicated that there was limited funding for adult and non-formal education programmes. The limited fund caused some activities of adult and non-formal programmes not to be performed, while others were performed ineffectively. While three programmes that are IPOSA, SEQIP-AEP and IPPE were found to be well financed, others, such as ICBAE and COBET, were less financed. This implies that most of the adult and non-formal education activities were not effectively implemented due to the limited financial resources.

The study findings revealed that there were limited funds for adult and non-formal education programmes. Majority of adult and non-formal education practitioners such as District Adult Education Officers, COBET teachers, ICBAE facilitators proved to be dissatisfied with the little amount of money which they received from the department of primary education for implementation of adult and non-formal education programmes. These findings are consistent with previous studies done in Tanzania by Mwaikokesya and Mushi, (2017) who found that one of the biggest challenges that faced adult and non-formal education programmes was underfunding. Further, the study findings concur with what have been found in the National strategy for Adult and Non-Formal Education 2010/11-2014/15 and Education Sector Development Plan 2025/26 -2029/30 that adult and non-formal sub-sector are facing challenge of limited fund. These findings concur with the study by Mushi, (2022) In Tanzania, who found that the funds allocated for the Education Sector Development

Plan (ESDP) 2016/17-2020/21, adult education was low (0.5%) for high-quality adult education programmes.

The current study findings contradict with the study done by Mahmud and Saad, (2024) in Nigeria, who found that there was adequate funding from the government for adult and non-formal education programmes that came from UNESCO, UNDP and World Bank. Even in Tanzania, the fund from international agencies such as UNESCO, UNICEF, and World Bank that fund the IPOSA, SEQUIP-AEP, and IPPE initiatives seem to be adequate for the specific small coverage area of operation. The allocation of limited funds on ANFE programmes, mainly COBET and ICBAE, leads to deterioration of the implementation of adult and non-formal education activities that might cause many negative impacts among society members.

Less prioritisation of financing of adult and non-formal education activities

The study findings revealed that financing of adult and non-formal education programmes was less prioritised compared to activities within primary and secondary departments. The study found, through in-depth interviews with District Education Officers, that adult and non-formal education programmes were not given priority by them; rather, they prioritised their activities. One of the District Primary Education Officers explained during the interview:

> "We get OC, which is not enough to enable all activities within my department. It is very difficult for me to take a huge amount of money and allocate it for adult and non-formal education activities, but if teachers die, I suffer from searching for money for the coffin, fuel and transport to go for burial. No funds have been offered at the moment, so nothing has been paid at all for the activities of the ANFE programmes. What we do is that, after using all the money for important activities, we allocate the remaining amount for ANFE activities such as adult education week" (R2).

Further, the District Executive Directors and District Councillors during the interview were found to be less aware of the budget allocation for adult and non-formal education programmes. One of the District Councillors stated during the interview:

> Funds for ANFE are directed by the central government within the Department of Primary and Secondary Education. The DEOs are the ones responsible for allocating the budget. No funds have been offered at the moment, so nothing has been paid at all. After all, I don't see the existence of ANFE programmes. I think even those people showcasing their products during adult education week, most of them are not adult learners from adult centres (R4).

On top of what has been said by R4 above, the District Executive Director stated that allocating fund for ANFE programmes was not their priority. One of the DEDs said during the interview:

> "Through my experience, I allocate budget according to the ceiling. Allocation of our own resources is a problem. What about adult education? Adult education is the last in allocation because it depends on the flow of funds, as ANFE programmes are handled by employed professionals who have salaries" (R6).

Contrary to what has been said by participants during the FGD and interview, through documents analysis, the policy and strategies documents analysed include Training Policy [ETP] 2014 version 2023; Education Sector Development Programme 2025/26-2029/30; Sustainable Development Goal 4; The Tanzania Development Vision 2050; National strategy for Adult and Non-Formal Education 2010/11-2014/15 found to prioritize adult and non-formal education.

The findings reveal that adult and non-formal education programmes had last priority in the plan of education activities within the districts. This implies that adult and non-formal education activities were of a second rate, even in the financing issues, while primary and secondary education was given the first priority.

The findings again indicated that financing of adult and non-formal education programmes was less prioritised. It was stated that most of the district leaders from the District Councils, who are the chairpersons of adult and non-formal education within their districts, up to the District Primary Education Officers, gave adult and non-formal education last priority. Adult and non-formal education activities were found to be of a second rate. These findings concur with what has been found by Mushi, (2022) In Tanzania that adult and non-formal education seem in the bottom hierarchy in terms of allocations of funds, and it was seen as a second best in the budget. These also support what Mwaikokesya and Mushi (2017) stated. These scholars affirmed that adult and non-formal education in Tanzania is attributed to low status due to underfunding. The literature shows that adult literacy belongs to the most neglected sectors financially and strategically, and has a financial gap (Popović, 2021). The limited priorities of adult and non-formal education activities given by the district leaders caused the District of Adult and Non-Formal Education Officers, ICBAE facilitators and COBET teachers to be demotivated in performing adult and non-formal education activities. Less prioritisation of adult and non-formal programmes among adult education practitioners from the district to the community level led to underperformance of adult and non-formal activities. The higher priority given to adult and non-formal education activities results the higher outcomes and positive impact from individual to national level.

Ineffective mechanism of paying honoraria to facilitators

The findings indicated that there was an ineffective mechanism for paying honoraria to COBET and ICBAE facilitators. For example, during FGD, 51 out of 74 ICBAE facilitators and COBET teachers said that they were not paid honoraria for a long time, while a few of them said that they were paid honoraria occasionally. One of the COBET teachers elaborated during the FGD:

> We have forgotten being paid honoraria. We may stay several months without being paid honoraria. Since teaching is within my blood and I feel guilty leaving teaching COBET learners. COBET learners are at–risk children, so leaving them may lead to them dropping out of school and creating more problems in society (R31).

On top of that, during the FGD, one ICBAE facilitator remarked:

> "I don't remember when I was paid honoraria. Our Adult Education Officer always encourages us to continue facilitating adult learners in literacy cycles. Sometimes she gives us a small amount of money as motivation" (R27).

The study also found through FGD that the District Executive Directors paid little or no attention to allocating or paying honoraria to facilitators in both COBET and ICBAE programmes. During the FGD, one of the Head Teachers had this to say:

> Paying honoraria has been a song which I see will never end among adult COBET and ICBAE facilitators. I do hear several directives from different national leaders, including the Prime Minister and Minister for Education, through the radio and TV, insisting that the DEDs allocate budget for honoraria, but the DEDs allocate minimal amounts or do not pay. Sometimes teachers and parents do contribute some amount to COBET and ICBAE facilitators (R1).

On top of that, the findings reveal that the education budget does not explicitly indicate the budget for adult and non-formal education programmes rather it is general. Through document analysis, the ETP 2014 (Version 2023) and National Adult Literacy and Mass Education Rolling Strategy (NALMERS) (2020-2025) show that adult and non-formal education receive no separate allocation.

The findings show that most of the ICBAE and COBET facilitators were not paid honoraria because even the education budget is silent on adult and non-formal education programmes. This implies that, financing mechanism is unsystematic and poorly integrated into the education budget. Thus, facilitators in ANFE programmes are not motivated to work.

The study showed that there was an ineffective mechanism for paying honoraria to facilitators. It was revealed that facilitators in COBET and ICBAE programmes were rarely paid their honoraria. Further, the current study findings have some similarities with what was found by Harid (2023) in Tanzania, that adult facilitators were lowly

paid or not paid. Further, the findings confirm what has been indicated within the budgets allocated in the Medium-Term Expenditure Frameworks (MTEF) for Education 2023/24-2024/25 and Education Sector Development Plan 2025/26 - 2029/30, which does not indicate a specific budget allocation for paying honoraria for adult and non-formal education facilitators rather is a whole. In addition to this, the Tanzania Development Vision 2025, Sustainable Development Goal (SDG4), Education and Training Policy (2014 version 2023), and NALMERS 2020-2025 are silent on the budget allocated to pay honoraria for facilitators who implement adult and non-formal education activities. The current study findings are contrary to those of Lertkittisuk (2019), who found that people who participated in non-formal education in the United States, Finland and Thailand were empowered in different aspects, including honoraria. Also, the current study findings go against the study done by Popović (2021) in Ethiopia that tutors in non-formal education had 2.19% and 1.17% allowances.

Low participation of Non-Governmental Organisations (NGOs) in supporting the financing of adult and non-formal education programmes

The study findings revealed that the Non-Governmental Organisations NGOs, Faith-Based Organisations (FBOs), and Civil Society Organisations (CSOs) have not been active participants in supporting financing adult and non-formal education programmes. It was revealed that previously there were a few NGOs which directly used to supported adult and non-formal education activities. For example, one of the District Adult Education Officers said during interview:

> Previously in 2017, we had an NGO known as Graca Machel Trust, which aimed to finance out-of-school children by providing them with school bags, uniforms, exercise books, pens and pencils. Teachers facilitating COBET learners were given some training as well as some amount of money an honorarium. Currently, there is no NGO which directly provides material and financial support for adult and non-formal education programmes"

On top of that, Ward Education Officers said that there were no NGOs, Faith-Based Organisations (FBOs) or Civil Society Organisations (CSOs) that funded adult education activities directly like some years ago. One of the Ward Education Officers said during FGD:

> Nowadays, there is no NGO in my ward that supports adult and non-formal education activities. I remember a few years ago, we had one Faith-Based Organisation of AICT church known as Grain Grow Foundation, which has been recorded to help literacy centres (R15).

The study further found that there were a few NGOs that indirectly support adult and non-formal education activities, such as Maji Safi Group and Waraghabishi in two

districts (Rorya and Mbogwe). It was revealed that these NGOs were found to support primary school pupils as well as the community through providing education and other needs related to society. One of the District Adult Education Officers stated during the interview:

> Currently, we have one NGO known as Maji safi group, which indirectly supports adult and non-formal activities. Maji Safi Group targets girls by providing health education for girls, sanitary pads, building toilet pits, and providing health education to community members (R3).

The findings indicated that there was little participation of NGOs, CSOs and FBOs in supporting the financing of adult and non-formal education programmes. This implies that the NGOs had little contribution in terms of financial and material support for the adult and non-formal education programmes. This led some ANFE programmes not to be effective in their implementations.

Furthermore, the study findings revealed that there was low participation of Non-Governmental Organisations (NGOs) in supporting and financing adult and non-formal education programmes. It was revealed that the NGOs and CSOs had not been active participants in supporting and financing adult and non-formal education programmes. The current study findings had some correlation with those of Nkemjika et al., (2024) In Nigeria, who found that NGOs primarily focused on the capacity development of adult learning facilitators and providing teaching and learning materials, though they were challenged with funding uncertainty. The financial constraints hindered NGOs from financing adult and non-formal education programmes. However, the current study findings have some similarities with those of Mahmud & Saad, (2024) In Nigeria, who found that overdependence on external donors, such as international organisations and NGOs, was one of the challenges and barriers to efficient financing of adult and non-formal education programmes. Based on the importance of ANFE, it is urged that the NGO participate in financing the ANFE activities so as to contribute to the learning society, lifelong learning, and adaptability of 21st-century changes and challenges.

Lack of an incentive scheme for adult and non-formal education programmes

The study findings revealed that there was no incentive scheme for adult and non-formal education practitioners, such as District Adult Education Officers, COBET and ICBAE facilitators, and Ward Education Officers. This was revealed during FGD with Head Teachers, COBET teachers, and ICBAE facilitators. During the FGD, one of the head teachers said: *I have never received any kind of training or money as an incentive for supervising adult and non-formal education programmes*" (R 33). Another COBET teacher said

during FGD: "*Some years ago, we used to get several trainings on how to teach COBET learners, but nowadays we are not invited*" (R19).

It was further revealed that some of the adult and non-formal education practitioners received some incentive packages occasionally and implicitly related to adult and non-formal education from NGOs. One of the District Adult Education Officers said during the interview:

> "I have been a District Adult Education Officer for three years now. I have never received any incentive, either money or materials, or a refresher course. The district Adult Education Officers are like stepchildren. Being considered to be given an incentive is like a dream. I got an incentive of a certificate by participating in a seminar which dealt with environmental conservation, though it was given by one NGO" (R 26).

These findings indicated that there was no incentive scheme prepared for adult and non-formal practitioners. It was revealed that there was also no incentive scheme that had been put into action for adult education facilitators in the COBET and ICBAE programmes. This implies that, lack of an incentive scheme for key adult education players caused them to be demotivated in implementing adult and non-formal education activities.

The study revealed that there was a lack of incentive schemes for adult and non-formal education implementers, such as District Adult Education Officers, Ward Education Officers, Head Teachers, COBET teachers, and ICBAE. These findings are similar to those of Harid, (2023), who found that there was a lack of motivation among teachers and adult learners. These findings are similar to those of Acha et al. (2024) in Nigeria, who found that staff were not adequately motivated by the management of the state agency to perform their job for adult and non-formal education programmes to enhance their job performance. The current study findings differ from those of Hanemann (2021), who found that adult learners were paid incentives such as study allowance, grants, and payments of educational leave and students' loans in New Zealand. There is a great discrepancy between the developed countries, like New Zealand and the developing countries, like Tanzania, whereby in New Zealand, adult learners are paid incentives, while in Tanzania, adult and non-formal education facilitators are not consistently paid honoraria. The lack of an incentive scheme is a demotivating factor for adult and non-formal education practitioners, which causes many activities within ANFE to be underperformed and uncompleted.

Conclusion

The study findings revealed that there were limited funds for adult and non-formal education programmes. There are so many activities within adult and non-formal

education programmes which need to be done and bring high impact in lifelong learning among children, youth and adults and the nation at large. For example, COBET and ICBAE programmes are still a puzzle between what is being reported and the reality of what was being disbursed in the centres.

Furthermore, the findings revealed that there was low participation of Non-Governmental Organisations (NGOs) in supporting and financing adult and non-formal education programmes. Non-Governmental Organisations (NGOs) have not been active participants in supporting and financing adult and non-formal education programmes. A few NGOs, such as Graca Machel and AICT church, and the Grain Grow Foundation, have been recorded to help literacy centres in recent years.

The findings have indicated that there was an ineffective mechanism for paying honoraria to facilitators. There has not been an effective mechanism to ensure that honoraria are paid to COBET and ICBAE facilitators. COBET and ICBAE facilitators had received honoraria occasionally. Facilitators were therefore not motivated to work. While working on permanent employment for facilitators of ANFE programmes, there was a need to start paying honoraria to adult and non-formal education facilitators as per government guidelines and seculars.

The findings showed that there was a lack of an incentive scheme for adult and non-formal education practitioners who facilitate COBET and ICBAE programmes. There is a need to develop an incentive scheme for adult and non-formal education facilitators in COBET, ICBAE and other adult education programmes. The findings revealed that there was a diminished prioritisation of financing of adult and non-formal education activities. There is a need to establish a clear description of activities (action plan) that distinguishes formal and adult, and non-formal schooling activities in the districts.

Recommendations

Based on the study findings, the study recommends the following:

i) There is a need for the Government to bring the sub-vote for adult and non-formal education programmes for running ANFE activities effectively to bring a positive impact to an individual, society and the nation at large. The Ministry of Education, Science, and Technology (MoEST), in collaboration with the President's Office, Regional Administration and Local Government (PO-RALG) and the Institute of Adult Education (IAE), should create a budget for the implementation of adult and non-formal education programmes under consultation with responsible government departments.

ii) There is a need for NGOs to participate in financing adult and non-formal education programmes for the development and sustainability of lifelong learning among children, youth and adults within the society. The government should involve the NGOs, CBOs and FBOs to participate in financing adult and non-formal education programmes.

iii) The MoEST should ensure timely payment of honoraria to all adult and non-formal education facilitators.

iv) The government, through the Ministry of Education, Science and Technology, in collaboration with the PO-RALG, is required to develop an incentive scheme for adult and non-formal education practitioners.

v) District Educational Leaders (DELs), such as Council Directors, should ensure that District Adult Education Officers (DAEOs) and Wards Education Officers (WEOs) prioritise adult and non-formal education activities and account for them regularly.

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Managing Quality in Private Alternative Secondary Education Pathways Centres: A Case of Non-Formal Secondary Education in Tanzania

Blandina Kannonyele & Anathe R. Kimaro, Institute of Adult Education

Email: mengikannonyele@gmail.com & anathe.kimaro@iae.ac.tz

Abstract

This study rigorously assesses the quality of non-formal secondary education provided by private centres in Dar es Salaam, Tanzania, highlighting critical issues related to compliance with the Ministry of Education, Science and Technology (MoEST) standards. It directly examines students' perceptions and the significant challenges these centres encounter. Based on data from 227 respondents, including students, teachers, and quality assurance officers, the findings starkly reveal that these centres consistently fall short of MoEST standards, with students expressing strong dissatisfaction regarding the education they receive. The key challenges—ranging from inadequate teaching materials and classroom shortages to insufficient funding, poor staff remuneration, high facilitator turnover, and a lack of textbooks—must be addressed decisively. To ensure the delivery of quality non-formal secondary education, immediate action is required from these centres. Furthermore, MoEST must enhance its monitoring and support mechanisms to enforce compliance and significantly improve educational outcomes.

Key words: Non-formal secondary education; quality; quality education

Introduction

Education is not a way to escape poverty, it is a way of fighting it' - Mwalimu Julius Nyerere, the late president of the Republic of Tanzania. Education is considered a useful ingredient to improving economic competitiveness, raising incomes, improving health, accomplishing peace and stability programmes, and achieving sustained growth of nations. The responsibility for providing education is an obligation of the government (Farrel & Asha, 2018), as education is considered both a social good and a merit good (Orodho, 2018). This concern is even more pronounced in developing countries, particularly in resource-poor African countries (DeStefano & Schuh-Moore, 2010). In Tanzania, significant progress has been made in relation to enrolment in basic education (Lekule & Shirima, 2023), especially after the implementation of the fee-free education policy since 2016. However, this unprecedented increment does not match the current expansion of the secondary education sub-sector. As is the case in most Sub-Saharan African countries, Tanzania showed great achievements in the enrolment of basic education, yet the out-of-school rates are still very high, with 6.7

million children, adolescents and youth of primary and secondary school age being out-of-school (UNESCO Institute of Statistics, 2024).

In particular, the transition from primary to secondary education is not fully guaranteed, with girls lagging behind boys. This is because of limited spaces available in secondary schools, compounded by limited public spending on such education. Additionally, there are mature adults who, for various reasons, have dropped out of the education system and, hence, have failed to access or complete secondary education (UNESCO, 2019). This dire situation created a huge demand for secondary education and changed the government's focus on improving access to secondary education. In response, some individuals and private institutions established tuition centres to provide secondary education through the ASEP system. In consequence, Tanzania experienced a mushrooming of largely uncoordinated and unregulated centres purporting to offer quality secondary education in the form of non-formal secondary schools. Such an environment may suggest that the availability of teaching and learning facilities, teachers, teaching and learning processes and even the learners' academic performance, which constitute and determine the quality aspect in offering education, would also be at stake.

In this context, the Ministry of Education, Science and Technology (MoEST), through the IAE, finds it necessary to establish ASEP Implementation Guidelines that will act as a benchmark for operating the ASEP learning centres (i.e. non-formal secondary schools). The guidelines elabourate on the policy and operational procedures to be observed by different ASEP providers in fulfilling their responsibilities in the provision of quality education (URT, 2022). In Tanzania, these centres derive their mandate to operate from the ASEP guidelines (URT, 2022:36), which provide for the Basic Standards for Registration of ASEP Learning Centres. It outlines key characteristics of a quality ASEP centre, which include: (i) availability of conducive teaching and learning environment such as good classrooms with ventilation, desks, writing board and teaching and learning aids; (ii) qualified and competent facilitators (diploma holders and above; (iii) well establish administrative structure; (i.e. centre coordinator, academic coordinator and guidance counsellor; (iv) compliance with health and safety.

Since the introduction of the MoEST open school guidelines of 2013 and its revised Alternative Secondary Education Pathway (ASEP) guideline in 2022, few studies have been conducted to examine the extent to which private ASEP centres comply with the guidelines. Besides, public concern about the quality of ASEP centres in providing quality secondary education is on the increase. For example, Shirima (2020) found that most of the learners in open school learning centres were performing poorly in

national exams. Hence, the current study sought to address the following research questions: (i) how well private ASEP centres comply with the MoEST's requirements for quality non-formal secondary education? (ii) What are the students' perceptions of the quality of education offered by ASEP centres? (iii) What are the challenges private centres face in delivering quality non-formal secondary education?

Methodology

According to Saunders (2012), research design characterises an exploration outline as the set of conditions for gathering and examining data in a way that objectives join essential state to the exploration reason with the least process. This research is both quantitative and qualitative. This research looked at the quality of non-formal secondary education provided by private open school centres in Dar es Salaam, Tanzania. The study employed a cross-sectional study design. In this design, data are collected on different kinds of respondents in a relatively short period of time at a single point (Ali, 2021). The design was considered useful and appropriate for this study, as it required participants' views on the quality of non-formal secondary education provided by private open school centres in Dar es Salaam, Tanzania. The design allows a combination of various survey methods for gathering a body of both qualitative and quantitative data and offers quick results with low costs (Ali, 2021). The location for the study was the Ilala Municipal Council in the Dar es Salaam Region. Dar es Salaam was selected out of the 26 regions in Tanzania mainland for it is the best Region in terms of academic performance of learners in the ASEP schools in Tanzania (27%) compared to Mwanza (10.4%), Tanga (8.3%), and Coast [5%] (Institute of Adult Education, 2020). In addition, the Dar es Salaam Region was selected because it is a Region with the highest number of learners' enrolment in the non-formal secondary schools in Tanzania, with 4,605 learners compared with 1,549 learners only in the Morogoro region and 1,270 learners in the Mwanza Region (Institute of Adult Education, 2023).

The study used a multistage sampling technique, which allows more than one sampling method to be used and involves sampling in phases (Rehman & Alharthi, 2016). It involved the selection of the study area and respondents based on the availability of ASEP centre coordinators, teachers, resident tutors, students and quality assurance officers, as follows. The first sampling stage involved stratification of ASEP centres in Ilala district in Dar es Salaam into city centre and periphery centres, and the purposive sampling technique was used to select five ASEP centres (i.e. three from the city centre and two from the periphery) from a list of existing ASEP centres.

The second stage of sampling focused on selecting study respondents, consisting of ASEP centre coordinators, teachers, resident tutors, students and quality assurance officers. A total of 200 learners were randomly selected to make the study sample. To achieve this, 40 stage two learners were chosen from each of the five sampled ASEP centre. Learners picked a slip of paper marked "YES" or "NO," and those who selected "YES" were included in the sample. Stage two learners were purposively selected for their longer duration in the centre, ensuring they had enough knowledge to contribute to the study. Likewise, 20 teachers were purposively selected from ASEP centres, and they were only teachers who had stayed in the centre for at least one year. Additionally, one resident tutor, five coordinators and one quality assurance officer were purposefully selected. This resulted in a total of 200 learners, 20 teachers, 5 ASEP centre coordinators, 1 resident tutor and 1 quality assurance officer.

Data were collected by using four main research methods: interviews, observations, questionnaires, and documentary review. These methods were very useful in the collection of required information for examining the aspects being studied (Creswell, 2014). The interview was the main data collection method in this study, in which an in-depth interview was employed. The in-depth interview was conducted for quality assurance officers, resident tutors, teachers, and the coordinator of non-secondary schools. The reason for the use of an in-depth interview is that the approach allows the elicitation of rich and detailed information by asking more questions based on the experience, ideas, and feelings of the participants towards the issue under discussion (Cope, 2014). A questionnaire was used to collect primary data from learners. An Observational Checklist was used to collect data on the compliance with ASEP guidelines in the study of non-formal secondary school centres.

The descriptive tool from SPSS version 20 software was used in analysing the quantitative data from the questionnaires and presented results through frequencies and percentages. Interviews were recorded using a voice recorder app on a smartphone, and then the data were transcribed into text. The transcriptions were coded and categorised according to study questions, and a few selected quotations were used to support the claims in the presentation sections. In the study, validity and reliability were attentively considered throughout the research process. In reliability, the research procedure followed clear steps from preparing the proposal and presenting it for peer review and discussion, which refined the focus and ways of obtaining the data. Also, after getting the data, the process of writing, reading and re-reading the transcript was done. The process also involved re-visiting the respondents and conducting interviews on the same questions in a paraphrased way to compare their data. Ethical considerations were observed for all participants. Before giving out

the questionnaires, learners were informed about the study that was being conducted and those who agreed filled in the questionnaires. The participants who agreed to participate were ensured that the data collected or information provided would be used only for the study and not otherwise. Respondents' identities were hidden as those who filled out questionnaires and were interviewed used numbers instead of names. Also, they were given the freedom to withdraw anytime they wished to and skip items they thought were too sensitive to personal information.

Findings and Discussion

This section presents the main results and discussion from the data analysis concerning the compliance of selected private ASEP centres in Ilala Municipal, Tanzania, based on ASEP guidelines.

Compliance with ASEP Guidelines Requirements on Quality Education

To evaluate and analyse the quality of education provided by ASEP centres, the primary aim of the study was to determine whether these centres meet the requirements outlined in the ASEP guidelines for quality education. The researcher employed an observational checklist, which guided the assessment of how well private ASEP centres adhere to these guidelines. Table 1 below summarises the findings from the observations.

Table 1: Compliance with ASEP Guidelines Requirements on Quality Education

S/N	ASEP guidelines	Number of ASEP meetings	ASEP guidelines quality requirements
1	Availability of a valid certificate	4	1
2	Adequate classrooms	2	3
3	Availability of competent and qualified teachers	2	3
4	Availability of the centre coordinator	2	3
5	Availability of the academic coordinator	1	4
6	Availability of the centre guidance counsellor	-	5
7	Compliance with health and safety rules	1	4
8	Availability of mini-library	0	5
9	Availability of a mini-labouratory	0	5

Table 1 reveals that out of the five ASEP centres visited, four had valid registration certificates, while one was operating illegally. Only two centres had adequate classrooms, resulting in student enrolment exceeding capacity. Additionally, only two

centres employed qualified facilitators, while most teachers lacked professional teaching qualifications. This highlights the need for supervision to enhance quality education and support staff development. Furthermore, only two centres had coordination mechanisms in place, leading to a deficiency of essential teaching materials like lesson plans and notes. Interestingly, all five centres, maintained attendance registers, primarily for calculating teacher salaries. This focus on remuneration, contrasted with the lack of lesson planning, suggests that teachers may prioritise their pay over their teaching responsibilities. The absence of professional documentation and low morale could be contributing to low pass rates reinforcing Harris (2008) noted a strong link between student performance and educator effectiveness.

Data in Table 1 also shows that all the sampled 5 ASEP centres did not have library and labouratory rooms. These observation findings corroborated with interview findings from the quality assurance officer and the Institute resident tutor. Quality assurance officer narrated:

> …actually, only a few ASEP centres meet all guidelines demands…many are operating without meeting all registration requirements. To mention a few, they do not have qualified teachers, a library, or labouratory equipment. Some do not even have sufficient toilets for both male and female students…in some centres, students are forced to use nearby toilets. Even some centres do not have running water, and students rely on nearby buildings for water or toilets.

An interview with the Institute's resident tutor revealed that most ASEP centres lack adequate classrooms, libraries, labouratory equipment, and qualified teachers. For instance, ASEP guidelines require centre owners to ensure a conducive learning environment; however, it was noted that the condition of classrooms at ASEP centres is generally poor. Many classrooms have broken floors, damaged windows, and missing ceiling boards, resulting in dust and discomfort for students. The teacher also highlighted that most teachers at ASEP centres work part-time and are not always available to assist learners. Their availability to conduct classes is limited, which reduces contact hours with students. Additionally, managing these part-time teachers is challenging due to their temporary and makeshift work contracts. This flawed organisational structure leads to insufficient study time, hindering learners' academic performance. Nevertheless, as Lekule and Shirima (2023) argue, these facilitators play a crucial role in helping learners in open schools develop study skills, overcome obstacles, stay motivated, and build positive relationships with students, all of which are essential for enhancing academic performance.

Students' perceptions of the quality of teaching and learning environment in ASEP learning centres

Table 2 presents the frequency and percentages of learners' perceptions of the quality of teaching and the learning environment in ASEP centres. Regarding the availability of adequate toilets for learners, a significant number agreed 83 (41.5%) with the notion, while 39 (19.5%) disagreed. This suggests that, in some of the centres visited, there was a shortage of toilets for learners.

Table 2: Perception of learners on the quality of teaching and learning environment

S/N	Statement	Agree		Certain		Disagree	
		n	%	n	%	n	%
1	In this, there are sufficient teaching and learning facilities	37	18.5	48	24	115	57.5
2	This centre has a library with all the necessary textbooks and reference books	6	3	53	26.5	141	70.5
3	In this centre, there is adequate labouratory equipment	5	2.5	36	18	162	81
4	This centre has an adequate number of facilitators	32	16	67	33.5	101	60.5
5	In this centre, there is a conducive learning environment	19	9.5	12	6	169	84.5
6	The classroom has enough seats and desks for every learner	44	22	61	30.5	95	47.5
7	In this centre, there are sufficient toilets for all students	83	41.5	78	39	39	19.5
8	In this centre, learners receive academic guidance and counselling services	9	4.5	21	10.5	170	85
9	In this centre, there are remedial classes to help learners with low achievement	7	3.5	12	6	181	90.5
10	In this centre, the tuition fee is affordable	63	31.5	17	8.5	120	60
11	In this centre, facilitators cover all topics before the examination	36	18	22	11	142	71

Table 2 indicates that a large proportion of learners, 181 (90.5%), disagreed with the statement that their centres provided remedial classes, while only 7 (3.5%) agreed. This implies that adequate support is lacking for students who face learning issues or difficulties, preventing them from mastering the subject. As Sudhakar (2018) argued, students who have temporarily fallen behind or need short-term support during their learning have the right to access remedial teaching. Furthermore, Hema and Sonam (2020) recommended remedial teaching as a practical solution for low achievers. They emphasise that remedial instruction by current secondary-level teachers can improve student learning. Overall, the remedial teaching programme was successful in boosting the learners' achievement in Tamil Language (Munene *et al.*, 2017).

Regarding learners' perception of academic guidance and counselling, 170 (85%) disagreed with the statement, while only 9 (4.5%) agreed. This indicates that students generally perceive the accessibility of these services negatively within their centres. It demonstrates that academic guidance and counselling services are not sufficiently available to all learners in the sampled ASEP centres. The lack of adequate guidance and counselling presents a challenge; as adult learners face numerous academic issues that require appropriate support. Common challenges include unfamiliarity with the programme, difficulties in balancing studies and social responsibilities, financial constraints, and recurring poor performance in examinations. These issues affect learners' motivation and their academic success. As Kim et al. (2018) highlight, guidance and counselling are vital learner support services that improve retention, participation, and performance in schools.

The data presented in Table 2 indicate that only 19 learners (9.5%) agreed that the learning environment in private ASEP centres is conducive. In contrast, the majority, consisting of 169 learners (84.5%), disagreed with this notion. This suggests that most learners are dissatisfied with their learning environment. Bradley (2018) highlights that a conducive school environment fosters positive outcomes by enhancing students' sense of connectedness throughout the school day. Nathaniel (2014) emphasises that the primary significance of the learning environment lies in its impact on students' comfort and, consequently, their ability to learn. Students who feel uncomfortable are less likely to learn effectively compared to those who feel at ease. Moreover, the learning environment can significantly influence students' morale. For instance, if students perceive their classroom as inferior to that of their peers in formal secondary schools, they may feel discouraged, upset, and less motivated to learn. Alexander (2013) stresses that a classroom atmosphere characterised by love, trust, humanity, cooperation, and mutual respect creates an environment conducive to effective learning. A supportive classroom setting helps mitigate negative emotions and fosters

a sense of tranquillity, which enhances student learning. Conversely, a poor classroom climate can lead to distractions and various issues that impede student learning. This negative perception of the learning environment is further supported by the fact that 162 participants (81%) disagreed with the statement asserting that their ASEP centres were equipped with adequate labouratory facilities. Explaining the situation during the focus group discussion, one learner from ASEP centre 'A', in a very discouraged way, had the following to say:

> In this centre, I am doing a science subject, but we are not doing any proper practicals due to a lack of a proper chemistry room. We have only one small room, where all science practicals are conducted, and we don't have all the required apparatus. We don't have a proper store, so we just put them in a small store! This situation affects our learning; hence, we cannot get what we're supposed to learn, and it affects our own performance when compared to formal secondary school students, because they have labouratories with equipment for each science subject.

Seeking more information on the issue of the labouratory, the researcher talked to a science learner who said that:

> I am taking science subjects, but I don't expect to do better in my final examinations, as this is due to a lack of practical experience. I sometimes meet with my friends who some are in public secondary schools, they tell me how they do practicals in their schools, really, I feel lagged, because in this centre we only go to the small room which we call labouratory, we have very few equipment's, and because we are very many in the class really, we get nothing! This situation makes many of us dislike science subjects and even opt for arts classes, which do not require practical classes!

The labouratory has been designed as a dedicated space, either a room or a building, for teaching through demonstration, transforming theoretical concepts into practical applications. Bybee (2000) suggested that "seeing is believing," highlighting the significant impact of labouratory use in the teaching and learning of science and related disciplines. Students tend to comprehend and remember what they see more effectively than what they hear. The success of any science course heavily relies on the availability of labouratory facilities. Schools with well-equipped labouratories generally perform better in science subjects compared to those without such resources. Fisher et al. (1999) found that schools with better-equipped labs achieved higher success rates in science exams. Additionally, the study observed that ASEP centres faced a shortage of labouratories, which likely hindered the teaching and learning process, as well as student performance in science subjects. Data from Table 2 clearly demonstrates that a substantial majority of learners, 142 (71%), do not believe facilitators adequately cover all exam topics in their ASEP centres. This lack of confidence is indicative of widespread negative perceptions regarding the preparation for exams. These

perceptions can be directly attributed to the part-time employment contracts of teachers at these centres, which limit class availability and contact hours with students.

Moreover, 141 learners (70.5%) firmly disagreed with the claim that ASEP centres are equipped with sufficient libraries and reference materials, with only a mere 6 (3%) in agreement. This significant scarcity of educational resources is alarming, as such materials are vital for ensuring quality education and supporting student learning (Hakielimu, 2007). The national standard mandates a 1:1 book ratio (URT, 2007); however, the centres studied fall drastically short of this requirement, compelling students to depend solely on facilitators' summaries. Furthermore, findings from Lekule and Shirima (2023) reinforce this issue, showing that libraries serving open school learners offer only a limited selection of books, primarily in Kiswahili, Geography, and History. These resources are not tailored for adult education programmes, which severely undermines learners' motivation and contributes to their poor academic performance, as highlighted by one learner. This situation demands urgent attention and action to ensure that learners receive the quality education they deserve.

Challenges faced by the private ASEP centres in providing quality education

An interview was conducted with centre coordinators and teachers to unveil the challenges private ASEP centres faced in providing quality secondary education, as summarised in Table 3.

Table 3: Challenges affecting ASEP centres complying with ASEP guidelines

Category	Theme	Findings overview
Centre facilities	scarcity of teaching and learning materials -shortage of classrooms, library and labouratory, lack of learning space	The scarcity of teaching and learning facilities hindered the effectiveness of teaching and learning
Funds	Lack of funding, poor remuneration of staff, and late payment of tuition fees	Non-formal secondary school centres depend on unreliable learners' tuition fees to operate their centres
Facilitators	High facilitator turnover, unskilled manpower, and a lack of professional training for facilitators.	Non-formal secondary school centres do not have permanent staff, including facilitators. They all paid daily, i.e., the number of periods they attend per day
Textbooks	Lack of textbooks and reference books, use of modules and past papers	Private non-formal secondary school learners depend on the facilitator to summarise notes and pamphlets

Teaching and learning environment	Lack of staff rooms, inadequate classrooms, inadequate toilets, lack of library and laboratory rooms and limited learning space, noise	Some of the private non-formal secondary school centres were located in noisy areas, such as in the market, bus stand or in people's residences.
Regulatory board	Lack of effective regulatory authority.	Mushrooming of unregistered non-formal secondary school centres

Source: Field data, 2025

The findings from Table 3 revealed that ASEP centres faced challenges ranging from a scarcity of teaching and learning materials to a lack of funds to support centre operations, such as remunerating staff, a lack of library and laboratory rooms. During interview sessions (ref. findings from Table 3), the centre coordinator of the ASEP centre responded that:

> In this centre, we experience a high turnover of qualified facilitators, limited space for learning, a shortage of staff rooms, a lack of a library and a laboratory room. Teaching and learning processes have been compromised, as it is hard for learners to have continuity due to frequent changes of facilitators. It has been very hard to hire competent and permanent facilitators because we don't have sufficient money to pay their salaries on time. Moreover, students can't visit them in their office for guidance because we don't have sufficient office space. This has been one of the factors that caused the failure to provide the required standard of secondary education. This is because students are missing important knowledge and skills in their learning processes, while they need to learn more in a practical and interactive manner.

Moreover, a District Quality Assurance Officer commented that:

> A shortage of qualified and permanent facilitators to teach non-formal secondary school centres hinders the provision of quality secondary education in centres. This is because the available facilitators are not qualified teachers by profession, and worse still, are not permanently employed. They work in more than one centre; as a result, they only visit the centres after working hours. They don't have time to prepare a lesson plan or even lesson notes. They don't even have sufficient time to meet the learners outside the classroom for consultation or even feedback, and consequently, students may fail to get the required learning content and educational standards.

The study found that most teachers work under short-term contracts, and some do not have contracts at all. Additionally, it was noted that managing part-time facilitators is challenging due to the nature of their often unstable and ad hoc work arrangements. These inadequate working conditions have resulted in insufficient study time, negatively impacting learners' academic performance. The management at the ASEP centre sometimes had to replace teachers frequently due to high turnover rates caused by unreliable funding for their salaries. This led to some teachers leaving students with

incomplete topics, while many new teachers would start fresh with topics of their own choosing. Consequently, students ended up with several unfinished topics in their subjects. One centre coordinator expressed concerns regarding this issue. As another centre coordinator has this to say:

> We don't have the capacity to employ and retain good teachers because we don't have a reliable source of funds…. If only the government could assist us, because all the challenges we are facing are emanating from a lack of financial resources. Lack of funding is also supported by the fact that the ASEP centres have limited funding as they solely rely on learner fees. This results in failure to enter into a permanent contract with most of our facilitators, which may lead to frequent turnover.

Inadequate funding has been identified as a significant factor contributing to non-compliance among ASEP centres. Some of these centres are struggling to build their own facilities and have resorted to renting buildings that do not meet educational standards. During interviews, teachers expressed concerns about the lack of adequate rooms to accommodate all students at once. As a result, some students are taught outside, under trees or in corridors during sessions. Additionally, respondents voiced concerns about the unsatisfactory state of the toilets at their centres. The number of toilets available was insufficient for the student population, and they often lacked running water and hand sanitisers. Many highlighted that the existing toilets were not only dirty but also inaccessible for students with disabilities, making it difficult for them to use the facilities.

The availability of teaching and learning books is crucial for providing quality education, as they help both teachers and students by simplifying the learning process (Hakielimu, 2007). The national standard stipulates that each student should have access to one book (1:1 ratio) (Mbilu, 2019). However, in the study centres, there was a significant shortage of textbooks. One of the ASEP centre coordinators had this to say:

> Teaching facilities like textbooks have a great impact on the quality of non-formal secondary education because they guide learners on what to study according to the demands of that particular time…unfortunately, we don't have them…we prepare our own notes and use available pamphlets which contain materials of the old curriculum…I think the government should help us to ensure non-formal secondary schools are supplied with textbooks like formal secondary schools.

The assertion shows that important learning material, like textbooks and reference books, was another challenge that affected the provision of quality education in the visited ASEP centres. As Siti-Nabiha and Salwani (2015) maintain, appropriate teaching and learning materials have an impact on the learners' academic performance. The findings are also in line with a study by Muya and Ngirwa (2024), who concluded

that the lack of textbooks would degrade educational standards. Moreover, there should be a critical investigation by educational authorities from the MoEST and the Institute of Adult Education so as to mitigate the negative effect of the lack of appropriate books for ASEP learners.

The majority of studied ASEP centres had a challenge of a shortage of learning infrastructures, such as a library and laboratory equipment. This study corresponds with Khatibu (2010), who found that a shortage of classrooms, books and laboratories hindered open schools from being registered because it could not reflect the provision of quality education in non-formal secondary schools. Lekule and Shirima (2023) reported that a lack of library and laboratory equipment hinders the provision of quality secondary education in open school centres.

Conclusion and Recommendations

The study unequivocally demonstrates that private ASEP centres are failing to comply with the Ministry of Education's requirements for quality non-formal secondary education, leading to unacceptable educational outcomes. These centres are plagued by a severe lack of textbooks, qualified teachers, adequate furniture, and essential library and laboratory equipment. Additionally, numerous centres are operating illegally, with learning environments that present serious health and safety risks. The absence of proper staff supervision and a stable funding system exacerbates these issues. Learners are justifiably dissatisfied with the education they receive, harbouring negative perceptions that are rooted in inadequate learning environments and a complete lack of remedial support.

Private ASEP centres face formidable challenges in their efforts to enhance educational quality, primarily due to an unreliable funding structure that causes critical resource shortages and staff demotivation. To rectify this situation, immediate collaboration is essential among the government, private centre owners, parents, and the community. The government must take proactive steps to provide funding comparable to that allocated for formal education through the establishment of a revolving fund specifically for ASEP centres. Furthermore, these centres must develop income-generating projects, such as stationery shops, to decrease reliance on tuition fees. This approach will enable them to improve their educational environments, hire permanent teachers, and upgrade their infrastructure, ensuring that they can deliver the quality education learners deserve.

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Adult and Non-Formal Education in Tanzania: A Bibliometric Review of Research and Publication Within the Framework of Sustainable Development

Andrew Keha Kuko, Reuben Sungwa & Walter Mbaula , The University of Dodoma

Email: *andrew.kuko@udom.ac.tz/ kehakuko@yahoo.com, reubensungwa@gmail.com, & walterseke@yahoo.com*

Abstract

This bibliometric review explores the trends, patterns, and impact of research on adult and non-formal education in Tanzania. It used data from the Dimensions database from 2015 to 2024 to examine publication output, key authors, productive institutions, countries, and leading journals. The findings reveal that research in this area grew steadily, with 2023 recording the highest number of publications. Sustainability emerged as the leading journal, Russia was identified as the most productive country, and the University College of London was the top institution. The analysis highlights an increasing intersection between adult education and sustainable development, digital technology, policy provisions, and inclusivity. Unfortunately, no records about authors, institutions or journals were visualised from Tanzania, indicating her limited research on ANFE. These findings offer insights for scholars and policymakers responsible for the growth of ANFE and lifelong learning sub-sectors. It contributes to a clearer understanding of the role of ANFE towards sustainable development.

Key words: Adult and non-formal education, Inclusive adult education, Lifelong learning, Sustainable development

Introduction

Global efforts to achieve sustainable development have placed education at the forefront of policy, research, and practice, as explicitly declared in SGD Goal 4 (United Nations, 2015). However, according to UNESCO (2022), more than 773 million adults worldwide still lack basic literacy skills, and two-thirds of them are women, highlighting a persistent and deeply rooted educational inequality. Responding to such disparities, adult and non-formal education (ANFE) has gained increasing recognition as a strategic avenue to promote lifelong learning and social inclusion, especially for the marginalised populations (Gupta & Dixit, 2025; Holford et al., 2023). Scholarly research indicates that while global societies put efforts into addressing persistent contemporary issues such as climate change, digital transformation, gender issues, migration, and social inequalities (Storey & Wagner, 2024; URT, 2023), the need for investing in ANFE systems simultaneously becomes more pressing. Practically, ANFE programmes are expected to equip adult populations with relevant knowledge, skills,

and values needed to solve complex socio-economic realities hindering their sustainable development initiatives.

Given that Sustainable Development Goal 4 (SDG-4) explicitly calls for inclusive and equitable quality education and lifelong learning opportunities for all, it affirms the relevance of ANFE to the global development agenda (United Nations, 2015). Sub-targets such as SDG 4.3, 4.4, and 4.6 prioritise affordable access to technical, vocational, and adult learning pathways, as well as improved adult literacy and numeracy. The UNESCO Global Report on Adult Learning and Education (GRALE V) emphasises that adult education is not only a human right but also a catalyst for empowering adult citizens to achieve sustainable changes in other development goals, such as gender equality, health, decent work, and democratic participation (Singh & Duraiappah, 2020; UNESCO, 2022). Despite this emphasis, it is articulated that between 2016 and 2023, the global youth and adult literacy rate for the population aged 15 years and older increased by only 1 percentage point: from 86% to 87%. At least one in ten young people and adults still lacked basic literacy skills in 2023 (UNESCO, 2024). It is further claimed that almost 250 million children and youth worldwide are out of school. These data call for global scholarly research attention in adult and non-formal education, especially in its relationship to promoting sustainable development through advancing a body of knowledge informing relevant interventions.

Despite the growing scholarly interest, the landscape of research in adult and non-formal education within the sustainability framework remains fragmented, heterogeneous, and often limited by regional, methodological, or thematic constraints. Recent reviews suggest that research outputs are unevenly distributed across countries and regions, with limited collaboration and visibility from the Global South (Molomo, 2023; Righettini & Lizzi, 2022; Singh & Duraiappah, 2020). Moreover, there is a scarcity of systematic knowledge about key contributors, influential journals, thematic patterns, and emerging research hotspots in this field. Given that the global education policies increasingly emphasise lifelong learning, equity, and resilience, it becomes essential to take stock of the intellectual structure, knowledge production patterns, and conceptual trajectories of adult and non-formal education in the context of sustainable development.

Against this background, bibliometric analysis emerges as a powerful method for systematically examining the scientific literature and identifying structural dynamics in the field of adult and non-formal education. Bibliometric methods allow researchers to quantify research trends, analyse collaboration networks, evaluate the impact of publications, and map thematic evolutions over time (Donthu et al., 2021; Aria &

Cuccurullo, 2017). In the context of ANFE, bibliometric reviews are useful for understanding how the field is developing globally, what areas remain underexplored, and how it intersects with cross-cutting themes such as digital literacy, environmental education, climate change, disaster management, gender, and social inclusion (James & Thériault, 2020; Lacher, 2024; Righettini & Lizzi, 2022; Nwizu, 2023' Storey & Wagner, 2024). Yet, despite the value of such reviews, comprehensive bibliometric studies focusing specifically on ANFE and within sustainable development are rare, particularly in developing countries. Regarding its valuable significance in promoting sustainable development in Tanzania, advancing a comprehensive research body on ANFE to inform policy interventions, curriculum development and learning strategies is vital.

Therefore, this study undertakes a global bibliometric review of research on adult and non-formal education within the framework of sustainable development, covering the period from 2015 to 2024. This timeframe allows a look at recent historical trends and inclusion of the most recent scholarly publications, particularly in the wake of global disruptions such as the COVID-19 pandemic, youth unemployment, and the advancement of digital technologies. These themes are dominant as they intensify the demand for flexible, inclusive, and resilient education systems (Molomo, 2023; UNESCO, 2024). The review aims to answer critical questions about the volume and growth of publications, key authors and institutions, influential sources, and major thematic clusters shaping this field. In doing so, the study provides a meta-perspective on how ANFE is being framed and pursued as a tool for advancing knowledge and skills for the attainment of the Sustainable Development Agenda globally. To guide this bibliometric investigation, the following research questions were formulated:

i) What are the publication trends and annual growth patterns in global research on adult and non-formal education within the framework of sustainable development from 2015 to 2024?

ii) Which authors, institutions, journals and countries are most productive in advancing research on adult and non-formal education within the framework of sustainable development?

iii) What thematic clusters, co-occurrence patterns, and emerging research hotspots can be identified through keyword and co-word analyses?

Significantly, by situating ANFE within the broader discourse of sustainable development, this study is expected to add knowledge to ongoing debates about educational equity, transformative learning, and inclusive growth for all humankind. It is further expected to stimulate the actual integration of sustainable development

principles into adult education curricula, practices, and policy alignment through informed strategic planning endeavours. Additionally, the study responds to the call for evidence-informed educational planning and investments by international agencies, development practitioners, national governments, and ANFE programme institutions committed to advancing the growth of the sector.

Methodology

This section outlines the methodological procedures followed to collect, screen, and analyse global research on ANFE within the framework of sustainable development. It details the data source, search strategy, inclusion and exclusion criteria, and analytical tools used to generate bibliometric insights. The approach was carefully structured to ensure transparency, consistency, and replicability throughout the research process.

This study adopted a bibliometric methodology to systematically analyse global research on ANFE within the framework of sustainable development. Bibliometric analysis enables researchers to uncover structural patterns, intellectual trends, and influential contributions within a field by quantitatively assessing published literature (Donthu et al., 2021). This approach is particularly suitable for synthesising large bodies of scholarly work, identifying thematic concentrations, and tracing the evolution of knowledge production over time (Aria & Cuccurullo, 2017). Given the growing body of research connecting ANFE with sustainability, a bibliometric approach was deemed appropriate to map the field, assess its development, and identify gaps and research frontiers.

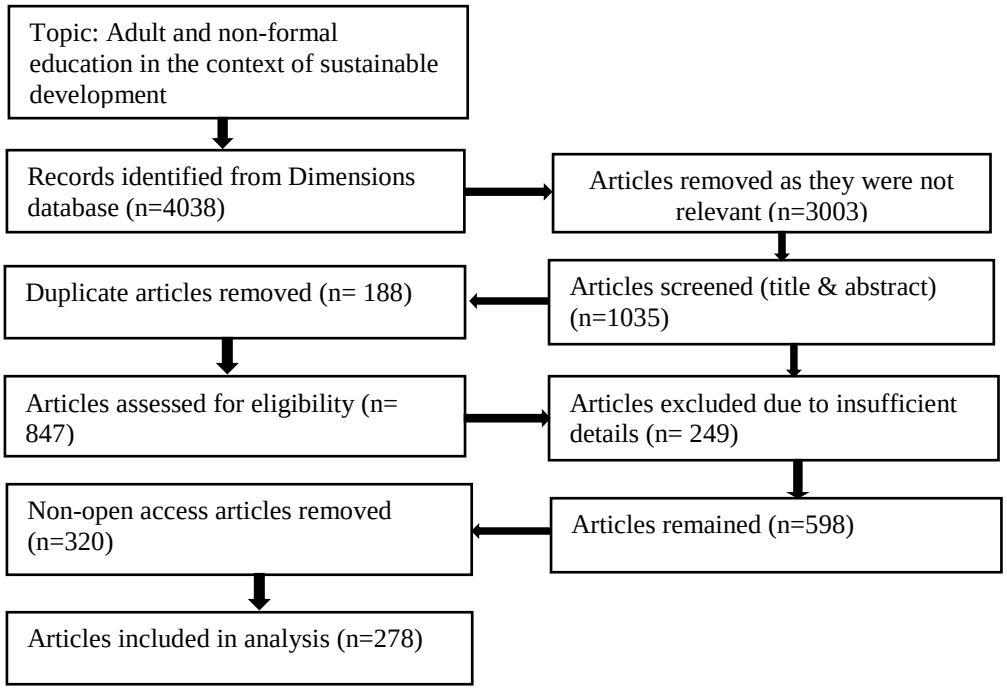
The Dimensions database was selected as the data source due to its broad coverage of peer-reviewed academic publications, including journal articles, book chapters, conference proceedings, and policy-related documents. Unlike other databases such as Scopus or Web of Science, Dimensions includes a wider range of open-access and interdisciplinary materials relevant to education and development studies (Hakkaraki, 2024). It also offers robust metadata, including author affiliations, citation counts, keyword indexing, and research categories, which are essential for bibliometric visualisation and analysis. Given the study's global scope and emphasis on sustainable development, Dimensions provided a comprehensive and diverse dataset for capturing the complexity of the field between 2015 and 2024.

A systematic search was conducted in the Dimensions database using Boolean operators to connect the core concepts of this study: adult education, non-formal education, and sustainable development. The following search string was applied: ("adult education" OR "non-formal education" OR "lifelong learning" OR "continuing education" OR "community education") AND ("sustainable

development" OR "SDG 4" OR "sustainable development goals" OR "education for sustainable development" OR "inclusive education" OR "equity in education") AND language: English. The search was conducted on June 2nd 2025, and limited to documents published between 2020 and 2024 to ensure the inclusion of the most recent research trends, before and in the post-pandemic context. Only documents written in English were included to maintain consistency in language analysis and avoid translation-related bias (Zupic & Čater, 2015).

To ensure transparency and rigour, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines were followed during the screening process (Page et al., 2021). The initial search yielded a total of 4,038 documents. A total of 3003 were removed due to thematic irrelevance, publication timeframe, missing metadata, or non-scholarly content. The remaining total of 1,035 full-text documents were assessed for eligibility, and 188 duplicates were excluded, leaving 847, which were assessed for eligibility. The eligibility assessment led to further exclusion of 249 records due to insufficient details. A total of 598 records were generated out of which 320 records were excluded as they were non-open-access articles. Ultimately, 278 documents were included for bibliometric analysis. The full selection process is summarised in the PRISMA flow diagram (Figure 1).

Figure 1: PRISMA Flow Diagram Showing an Overview of the Data Collection Process



Source: PRISMA Analysis Output

To ensure that only relevant and high-quality documents were analysed, the authors applied a well-established filtering process for the selection of documents that directly addressed the core themes of the study and met academic publication standards. Table 1 presents the list of criteria that were applied for the inclusion and exclusion of search results.

Table 1: Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Database	Dimensions	Other databases
Topic of focus	Adult and non-formal education and sustainable development	Unrelated to adult and non-formal education and sustainable development
Publication type	Peer-reviewed journal articles	Scholarly book, book chapters editorials, commentaries, theses, and dissertations
Language	English only	Non-English publications
Accessibility	Open access articles	Non-open access articles
Publication year	2015-2024	Before 2015 or after 2024

Source: Author analysis plan for inclusion or exclusion of search records from the Dimension database

The bibliographic metadata for the final dataset was exported in CSV format from Dimensions, including details such as author names, institutional affiliations, publication titles, publication years, sources, keywords, and citation counts. The dataset was analysed by using VOSviewer (Van Eck & Waltman, 2010), a widely used software tool for constructing and visualising bibliometric networks, which was employed to generate co-authorship, co-citation, and keyword co-occurrence maps, allowing the identification of influential authors, collaborative networks, and thematic clusters within the field.

In addition, quantitative indicators such as publication trends, citation frequencies, and productivity metrics were computed to assess research output and impact. The analysis focused on identifying the most productive authors, countries, and institutions; the most frequently cited documents and journals; and emerging topics based on keyword co-occurrence. The insights derived were used to answer the study's research questions and to reveal patterns and gaps in global scholarship on ANFE within the framework of sustainable development.

Results

This section presents the findings of the bibliometric analysis on global research addressing ANFE within the framework of sustainable development between 2015 and 2024. The results provide an overview of the research structure, highlighting key patterns of trends, influential contributions, and emerging themes in the field.

The publication trends and annual growth patterns in global research on adult and non-formal education

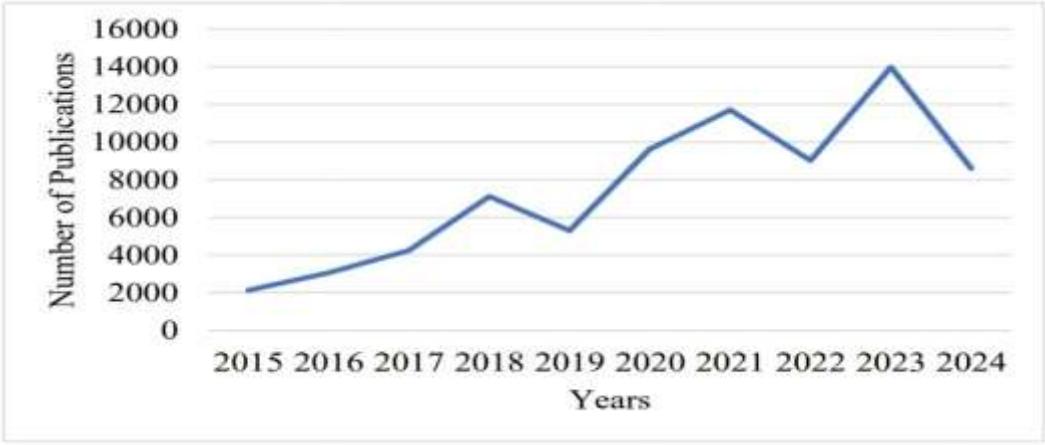
Annual Publication Trends: Publication trends reflect the annual volume of scholarly works produced within a specific timeframe and thematic scope. These trends are important for understanding the pace and direction of knowledge production, identifying periods of rapid growth, and recognising possible declines in research activity. In this study, annual publication counts on ANFE within the framework of sustainable development were extracted from the Dimensions database for the years 2015 to 2024, providing a ten-year perspective on the evolution of scholarly engagement in the field. The findings are presented in Table 2 and Figure 2.

Table 2: Annual Trends in Publications in Adult and Non-formal Education Between 2015-2024

Year	No. of Publications	Percentage	Cumulative Percentage
2015	2125	2.8	2.8
2016	3057	4.1	6.9
2017	4244	5.7	12.6
2018	7110	9.5	22.1
2019	5303	7.1	29.2
2020	9627	12.9	42.1
2021	11714	15.7	57.8
2022	9024	12.0	69.8
2023	13978	18.7	88.5
2024	8614	11.5	100
Total	74796	100	

Note: This Data is an Extract from a Bibliometric Analysis Records 2nd June 2025

Figure 2: Annual Publications in Adult and Non-formal Education 2015-2024



Note: This Figure presents a Data Graph Developed by using Excel 2019 Figures and Charts

Data in Table 2 and Figure 2 indicate that, across the 2015-2024 period, a total of 74,796 publications were recorded. In 2015, the output was 2,125 publications, representing 2.8 percent of the total, while in 2023 it reached 13,978 publications, accounting for 18.7 percent of the total and marking the highest production year. The data show a general upward trajectory, with notable increases in 2018 when 7,110 publications were produced, and in 2020 when the count rose to 9,627. This upward movement culminated in the sharp rise of 2023, followed by a decline in 2024 to 8,614 publications. This indicates that the 2019 COVID-19 pandemic and post-pandemic socio-economic shocks triggered publications in ANFE, showing its relevance in addressing social problems.

The distribution of publications over time reveals steady growth in the first half of the study period, moving from 3,057 in 2016 to 4,244 in 2017 and 7,110 in 2018. There was a reduction to 5,303 in 2019 before a significant climb in the subsequent years. The period between 2019 and 2020 saw a marked increase, as did the period between 2022, when 9,024 publications were recorded, and 2023, the peak year.

Most Productive Authors, Institutions, Journals and Countries in Advancing Research Outputs in ANFE

Most Productive Authors: Authorship productivity was analysed by applying a threshold of a minimum of three documents and at least five citations per author. From a total of 6,816 authors identified in the dataset, only 74 met these criteria. This indicates that a relatively small proportion of authors contribute substantially to the research field, underscoring a pattern of concentrated scholarly productivity. These findings are summarised in Table 3 below presents the detailed distribution of output among the most prolific authors in the field.

Table 3: Most Productive Authors in Publications on Adult and Non-formal Education Between 2015-2024

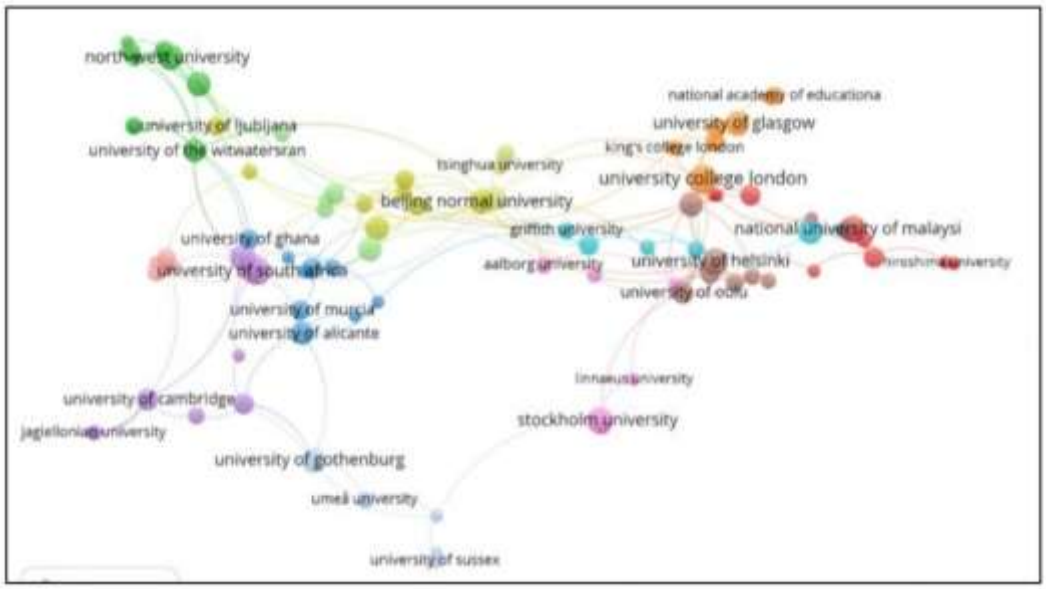
S/N	Author	TP	TC	TLS
	Yunus, Melor Md	8	123	4
	Nguyen, Tien-Trung	7	154	3
	Hashim, Harwati	7	130	4
	Ramírez-Montaya, María Soledad	6	633	0
	Tran, Trang	6	186	3
	Schwab, Susanne	5	267	0
	Jeronen, Eila	5	105	0
	Colomer, Jordi	5	99	8
	Mcintyre, Joanna	5	64	2
	Roche, Stephen	5	60	0

*TP-Total Publications, TC- Total Citations, TLS- Total Link Strength

Data in Table 3 show that among the key authors, the most productive was Yunus, Melor Md, who contributed 8 publications during the study period 2015-2024. He was followed by Hashim, Harwati and Nguyen, Tien-Trung, each with 7 publications. The fourth most productive author was Tran, Trang, who recorded 6 publications. The remaining authors within the top ten list each produced 5 publications, demonstrating a close distribution of productivity among leading contributors.

Most Productive Institutions: Institutional productivity was examined by assessing the number of publications and corresponding citation counts across universities and research centres included in the dataset. The analysis revealed that leading contributions came from a small group of institutions that have established themselves as key players in advancing research on adult and non-formal education in the context of sustainable development. Figure 3 provides a detailed summary of the leading institutions and their respective outputs and impact.

Figure 3: A Network Visualisation Map of the Most Productive Institutions on ANFE Publication 2015-2024



Note: The VOSviewer Data Output from the Dimensions Database, 2nd June 2025

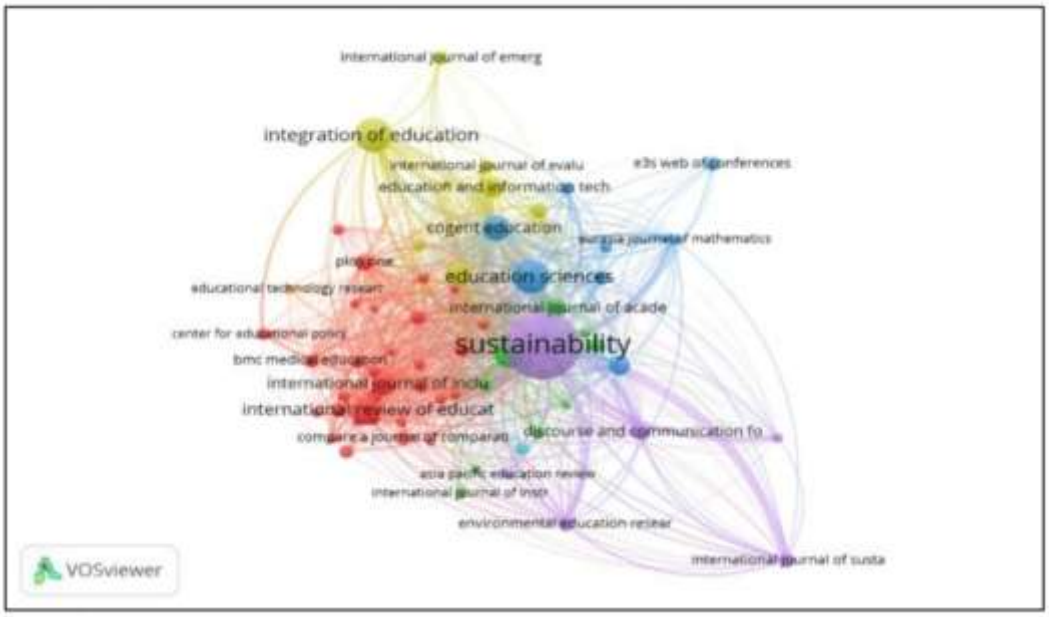
Data in Figure 3 indicates that the University College of London ranked first with 21 publications and 319 citations, reflecting both strong output and consistent scholarly influence. It was followed by the University of South Africa, which produced 19 publications and attracted 376 citations, and the University of Johannesburg, which contributed 18 publications with 269 citations. This is followed by Stockholm University also recorded 18 publications, though with fewer citations at 199.

Moreover, both the National University of Malaysia and the University of Helsinki had 17 publications, but differed in citations by 247 and 267 citations, respectively.

Other institutions among the top contributors include the North-West University, which produced 16 publications with 309 citations. The Indonesia University of Education recorded 16 publications with 90 citations, while the Monterrey Institute of Technology and Higher Education produced 15 publications but stood out with 1,134 citations, indicating high impact despite a smaller volume of output. Similarly, the University of Gothenburg registered 15 publications with 782 citations, highlighting its strong influence in the field.

Most Productive Journals: Journals play a central role in shaping and disseminating knowledge, and their productivity provides insight into the key publication outlets for ANFE research within the framework of sustainable development. The analysis shows that a small group of journals dominate the field both in terms of volume and citation impact, reflecting their importance as platforms for scholarly exchange. Figure 4 below presents the top journals by both output and citation performance.

Figure 4: A Network Visualisation Map of the Top Productive Journals on ANFE Publication 2015-2024



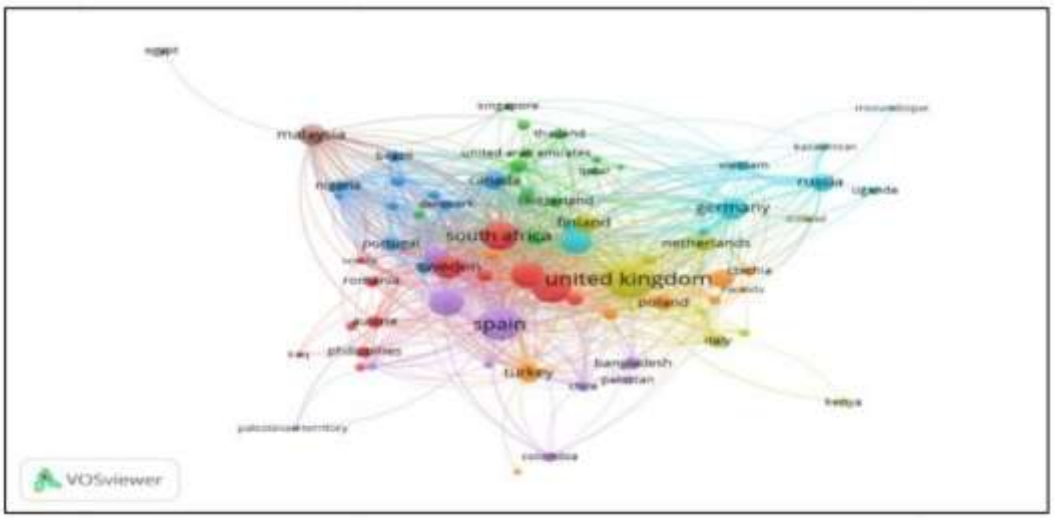
Note: The VOSviewer Data Output from Dimensions Database, 2nd June, 2025

Data in Figure 4 above indicates that the ***Sustainability*** journal emerged as the leading outlet with 291 publications and 8,698 citations, positioning it as the most influential source in the dataset. It was followed by *Education Sciences*, which recorded 73

publications with 1,074 citations, and *Integration of Education*, which produced 72 publications and 167 citations. Other notable outlets included the *International Review of Education* with 54 publications and 890 citations, and *Frontiers in Education*, which contributed 45 publications with 516 citations. Further contributions came from *Cogent Education*, which published 42 articles and accumulated 900 citations, and *Heliyon*, with 36 publications and 687 citations. These results indicate that while a handful of journals carry the majority of publications, their levels of citation impact vary, suggesting different degrees of scholarly visibility and influence.

Most Productive Countries: The analysis of country-level contributions provides an overview of the geographical distribution of research productivity in ANFE within the framework of sustainable development. The results reveal that research in this field is globally distributed, although output is concentrated among a small number of leading countries, as presented in Figure 5.

Figure 5: A Network Visualisation Map of the Most Productive Countries on ANFE Publication 2015-2024



Note: The VOSviewer Data Output from the Dimensions Database, 2nd June, 2025

Data in Figure 5 above show that the United Kingdom ranked first with 234 publications, demonstrating its strong engagement and leadership in advancing this area of research. It was followed by Spain with 179 publications and Indonesia with 149 publications, reflecting growing participation from both European and Asian contexts. South Africa contributed 135 publications, standing out as the leading country from the African continent, while China produced 121 publications, underscoring Asia's active involvement in the field. Other key contributors included the United States with 107 publications, Australia with 96 publications, and Sweden

with 90 publications. The German research community added 84 publications, while Malaysia produced 72 publications, strengthening the representation of Southeast Asia in the dataset. Together, these countries form the core hubs of global research productivity, highlighting the international scope of scholarly engagement with ANFE in relation to sustainable development. Figure 6 below provides a detailed summary of the most productive countries and their outputs.

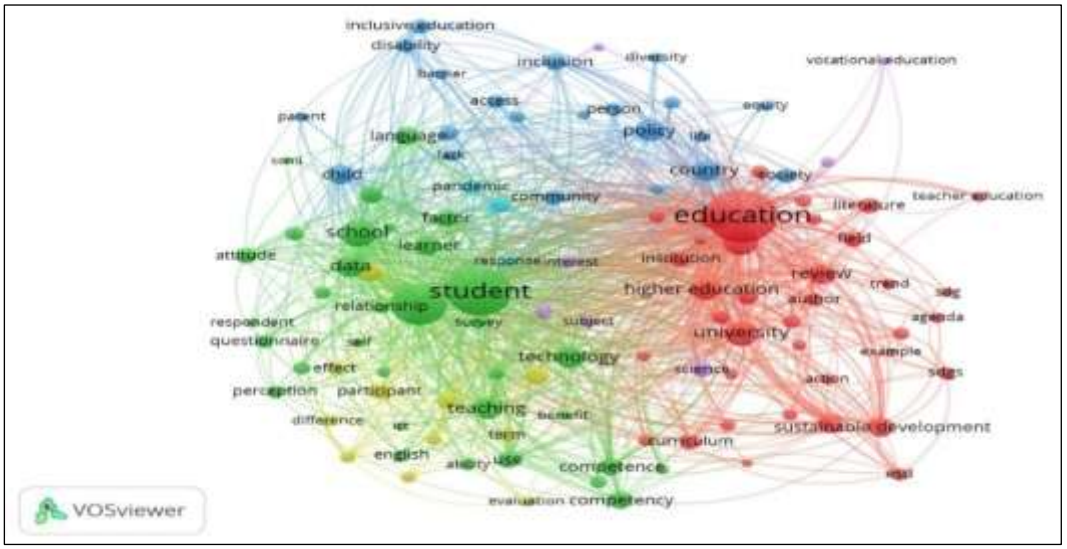
Thematic Cluster, Co-Occurrence of Keywords and Emerging Research Hotspots

Keyword co-occurrence analysis provides insight into the conceptual structure of research by identifying the terms that most frequently appear together in titles and abstracts. Using full counting with a minimum threshold of 100 co-occurrences, a total of 178 terms met the criteria out of 40,161 identified in the dataset. This indicates that certain concepts are consistently central to scholarly discussions, reflecting both the thematic scope and evolving priorities within the field of ANFE within the framework of sustainable development.

The most prominent term was sustainable development, which unsurprisingly anchors much of the literature given the study's focus. Closely linked were education, equity, and policy, signalling that research in this area not only emphasises access to learning opportunities but also addresses fairness, inclusivity, and the policy frameworks that sustain lifelong learning initiatives. The frequent occurrence of professional development, competence, and teaching underscores the importance of equipping educators and practitioners with the skills needed to advance adult and non-formal education agendas.

In addition, keywords such as child, higher education, student, learner, and interventions highlight the intersection of adult and non-formal education with broader educational pathways, suggesting that sustainability-oriented education extends across life stages and institutional levels. Terms such as pandemic also appeared prominently, pointing to the significant impact of global crises on reshaping ANFE delivery and priorities. Together, these clusters of terms illustrate how scholarship in this domain connects sustainability with inclusivity, policy, workforce readiness, and resilience in education systems. Figure 6 presents a visual summary of the most frequent co-occurring terms and their relationships.

Figure 6: A Network Visualisation Map of the Most Productive Countries on ANFE Publication 2015-2024



Note: This Figure Presents the VOSviewer Data Export from the Dimensions Database, 2nd June, 2025

Discussions

A consistent growth in ANFE publication trends from 2015 to 2018 indicates a significant role the sector played during the period. The ANFE sector is responsive to the global education agenda on promoting equitable and quality education for all as envisioned in Sustainable Development Goal 4 (United Nations, 2015). These findings concur with other scholarly studies such as Righettini and Lizzi (2022) and Sianes (2021), who support that research and publication trends tend to respond to reforms in development policies and agendas at the country, region or global development agendas. The results pinpoint the role of ANFE in informing educational policies and practices towards the attainment of the Sustainable Development Goals. Likewise, Unjah, Yunus, Rafiq & Hashim (2024) critically associated educational outcomes among adult persons, including those in higher education, with the sustainable development of the learners and the society. Similarly, Boeren (2019) underscores the pivotal role of adult learning in promoting civic engagement, workforce development, climate awareness, and health literacy, all of which fall within sustainable development goals. Therefore, critical reviews informing a body of literature on trends in the development of policies, interventions and strategies promoting ANFE programmes keep the sector visible and contribute to the societal development and livelihoods.

Moreover, the rise in publication trends that had consistently grown after 2019 at the outset of the COVID-19 pandemic indicates the role of ANFE in promoting community education, capacity building, and community resilience against disaster

events. This fact is further supported by scholarly works such as Lacher (2024), and James and Thériault (2020), who clearly articulated the role played by adult education intervention activities in resolving the dreadful impact of the Covid-19 pandemic. Other studies explain the linkage between adult and lifelong learning with enhancing the community awareness aimed at building healthy and stable communities through functional skills, self-awareness and capacity to cope with emerging socio-economic dynamics (Do et al., 2021; Molomo, 2023; Schreiber-Barsch & Mauch, 2019). However, it is unfortunate that there is a slight decline in publication trends after 2024, implying a loose engagement of the sector with the socio-economic routines of contemporary societies. Decline in ANFE research and publication in this era is threatening, given that the world still has more than 13 percent adult illiteracy (UNESCO, 2024) and about 17 percent in Tanzania (URT, 2022). Beyond research outputs, the progress of these populations regarding rights to education would be undocumented in the empirical literature.

Furthermore, the fact that among the six top leading institutions, four universities were from the developed countries, implies that adult education has earmarked its needful position in promoting and addressing development agendas and challenges, respectively. A time ago, Nyerere (1968) underscored the role of adult education to sharpen the minds and attitudes of change for national socio-economic development and the sustainability of the Tanzanian society. In a developed society, ANFE empowers the marginalised and the voiceless groups and bridges vulnerability gaps through inclusive education and lifelong learning interventions (Holford et al., 2023; Nwizu, 2023; Verma & Ambedkar, 2023). This link is further branded through the key journals such as *Sustainability, Education Sciences and Congent,* implying that ANFE research and publication couple the development agendas advanced through the journal scopes. Henceforth, inadequate research and publication make the country's efforts and development in the sector invisible, dull and stagnant in attracting scientifically informed interventions and innovations needed to spark the contributions of ANFE towards sustainable development initiatives.

Results about the leading countries and productive authors also bring another milestone in understanding the importance of ANFE in socio-economic development. It was found that the five (5) top-most authors were from Southeast Asia in particular, Malaysia and Vietnam, while the rest were from Australia and Mexico. The results indicate a high priority level given to ANFE among scholars from these Southeast Asia countries, being the world's fastest-developing economies (World Bank, 2024). Research on ANFE sector in these countries draw a deep linkage between adult education and factors contributing to development planning such technological

innovations, lifelong learning, policy reforms, social empowerment, citizenship, cultural globalization, and literacy development (Do et al., 2021; Lacher, 2024; Ramalingam, Yunus & Hashim, 2022; Singh & Duraiappah, 2020; Unjah, et al., 2024). Likewise, South Africa, being characterised by a dual economy, was also among the leading countries underpinning that adult education and development are intertwined. On the contrary, the African continent has few representations in ANFE research productivity, although it is considered among the fast-growing economies (Kasyanenko et al., 2023). The reasons for this feature may include limited career development in the field of adult education and a low level of policy responses. Because the results are limited to the Dimensions database, it might also be thought that most authors from Africa, including Tanzania, do not publish in journals indexed in the selected database.

Nevertheless, this bibliometric analysis of ANFE research trend has captured at least three Eastern African countries: Uganda, Rwanda and Kenya. Unfortunately, the VOSViewer exports from the Dimension database could not map records from Tanzania regarding authors, journals, institutions (universities), and countries' contributions. This means that the country is invisible in the world of research and publications based on the selected Database sources. Despite her lack of visibility, Tanzania implements a variety of ANFE programmes. The national Education and Training Policy [ETP] 2014, revision 2023 (URT, 2023), and the national development vision TDV 2050 (URT, 2025) prioritise adult and continuing education in offering learning opportunities for all persons outside the formal education systems. Key programmes such as the Integrated Community-Based Adult Education (ICBAE), Integrated Programme for Out-of-School Adolescents (IPOSA), and Complementary Basic Education in Tanzania (COBET) are conducted under the ANFE sub-sector. However, the lack of global visibility of these programmes means a lack of international comparability in the world of science, which may consequently hinder transferable learning from a body of empirical knowledge about critical issues, trends, success, challenges and innovations needed to promote substantial growth of the sector in the country.

Conclusion and Recommendations

In conclusion, ANFE is not only an educational imperative but a developmental necessity in today's rapidly changing world. As global efforts to achieve SDG 4 intensify, it is vital to critically assess how the ANFE field is evolving within the academic discourse and to what extent it contributes to broader sustainable development outcomes. Meanwhile, this bibliometric analysis of data from the Dimensions database has evidenced the relevance of ANFE in promoting sustainable

development agendas among human communities. There is a simultaneous growth in research and publication trends with sustainable development agendas, and initiatives addressing social problems such as emerging diseases, social inequalities, illiteracy rates, unemployment and inequalities among human communities. Within the body of empirical knowledge, ANFE is linked with development initiatives underpinned to policy reforms, digital technological innovations, entrepreneurial education, and livelihoods sustainability. However, despite the existence of various ANFE programmes in Tanzania, the sector is poorly represented in the global research body from the selected database. These findings bring forth critical insights for scholars, adult education policy makers, educators and development partners to gauge the knowledge gaps towards promoting effective performance and growth of the sector.

Based on these findings, the study recommends that the responsible government authorities, adult education policy makers, scholars, and adult educators strengthen the contribution of the research agenda in promoting the ANFE sub-sector in the country. This includes developing a specific policy framework for the ANFE sub-sector or advocating its visibility within the general education and training policy, increasing budgeting and funding for ANFE research agendas, ANFE professional development trainings, and adopting globally learnable innovations and technologies into the national frameworks responsible for the development of the sector. Moreover, the study recommends further research on bibliometric review using other sources of electronic databases for comparative analysis of the sector, as well as field research to explain the growth of knowledge, innovation and issues in the ANFE sub-sector in the country.

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The Determinants of Adult Literacy Rate in Tanzania: The Heterogeneity Effect of Integrated Community-Based Adult Education Centres in Rural Areas

Patroba E. Mgonya & Regina V. Mukama, National Institute of Transport

Email: patroba.mgonya@nit.ac.tz & regina.vicent@nit.ac.tz

Abstract

Adult literacy has been a central component of Tanzania's development agenda since independence, recognised for its significant impact on health and economic growth. Grounded in human capital theory, this study examines the factors influencing adult literacy, with a focus on the role of Integrated Community-Based Adult Education (ICBAE) centres in both rural and urban areas. Using national survey data across 183 local councils, the study employs Ordinary Least Squares (OLS) regression to identify key influences. Results indicate that poor living conditions hinder literacy, while large district populations and primary education levels may create substitution effects. The impact of ICBAE attendance and income distribution varies. Rural ICBAE centres demonstrate more promise for improving literacy than urban ones, suggesting regional disparities in programme effectiveness. These findings emphasise the importance of increasing support for rural ICBAE centres, where targeted investments in human capital can produce substantial literacy improvements. The study also contributes to the discussion on adult education as a vital component of human capital development in Tanzania.

Key words: Adult literacy rate, ICBAE, adult education centres, Tanzania

Introduction

Adult literacy is a critical component of social, economic, and human development, particularly in low- and middle-income countries such as Tanzania (Fute et al., 2023). Literacy extends beyond the ability to read and write; it empowers individuals to engage in lifelong learning, improve livelihoods, and participate fully in community and national development (UNESCO, 2022; McKay, 2018). In Tanzania, while primary school enrolment has significantly increased over the years, adult literacy remains unevenly distributed, with rural areas facing disproportionately lower literacy rates (URT, 2021). In response to persistent adult illiteracy, the Government of Tanzania, in collaboration with development partners, introduced the Integrated Community-Based Adult Education (ICBAE) programme (Mwamkinga, 2023). This initiative aims to promote functional literacy through decentralised and flexible learning structures adapted to local contexts. ICBAE centres provide basic literacy and numeracy skills while integrating life skills, agricultural practices, entrepreneurship, and health education (MoEST, 2020). However, the effectiveness of these centres,

especially in rural versus urban settings, has not been thoroughly assessed using district-level empirical data (Anderson & Young, 2018).

The study aims to investigate the determinants of adult literacy rates across Tanzanian districts, with a particular focus on how the presence and performance of ICBAE centres impact literacy outcomes in rural areas. It integrates both structural variables (e.g., population size, educational attainment, geographic classification) and programmatic variables (e.g., number of ICBAE centres, enrolment in ICBAE programmes, presence of vulnerable learners) to evaluate the heterogeneity of ICBAE's impact. In this study, the adult literacy rate serves as the dependent variable, operationalised as the percentage of individuals aged 15 years and above who can read and write with understanding in any language (URT, 2022). To investigate the determinants of adult literacy across Tanzanian districts, the analysis incorporates a range of independent variables capturing both structural and programmatic dimensions. First, the population size of each district is examined, based on the premise that larger populations may generate increased demand for adult education services, while simultaneously placing pressure on existing educational infrastructure (World Bank, 2023). Second, the educational attainment of individuals aged four years and above is included as a proxy for the overall educational environment, reflecting both the historical context of education access and potential intergenerational learning dynamics (UIS, 2022).

Third, enrolment figures in basic literacy programmes within ICBAE functional literacy centres are used to measure community participation and the extent of outreach of adult education services (MoEST, 2020). Fourth, the number of ICBAE centres per district serves as an indicator of spatial coverage and service availability, thereby influencing access to adult learning opportunities (URT, 2021). Fifth, the rural-urban classification of districts is accounted for, acknowledging that urban areas typically enjoy better infrastructure, access to information, and institutional support, all of which may contribute to higher literacy outcomes (UNESCO, 2023). Finally, the proportion of pupils living in vulnerable environments, including those affected by poverty, orphanhood, or disability, is considered, as these factors often hinder both access to and retention in education, including adult literacy programmes (UNICEF, 2022). Collectively, these variables provide a comprehensive framework for analysing the drivers of adult literacy and for assessing the differentiated impact of ICBAE interventions across diverse Tanzanian districts.

The study is motivated by the need to provide disaggregated insights into the factors driving literacy improvements and where targeted efforts are most needed. Recognising heterogeneity is significant in policy design, as one-size-fits-all approaches

may fail to address contextual differences between urban and rural communities (Daniell et al., 2017). Employing quantitative and district-level data, this study aims to generate evidence supporting more tailored, equity-focused literacy interventions in Tanzania (Sanchez-Tapia & Rafique, 2020). It aligns with Sustainable Development Goal 4, to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (United Nations, 2023).

Despite Tanzania's commendable progress in expanding access to primary education, adult literacy remains a persistent and uneven challenge, particularly in rural areas. National data indicate significant disparities in literacy rates between urban and rural districts, which undermine inclusive development efforts and reinforce cycles of poverty and marginalisation (URT, 2021). While literacy is widely recognised as a foundational tool for human development, enabling individuals to participate effectively in economic, social, and political life (UNESCO, 2022), many adults in rural Tanzania continue to lack basic reading and writing skills. To address this gap, the Government of Tanzania introduced the ICBAE programme, designed to deliver flexible, community-rooted, and functional literacy training. Although ICBAE centres are intended to bridge the literacy divide, especially in underserved areas, there is limited empirical evidence assessing their effectiveness, particularly in the context of heterogeneity across districts. Questions remain as to whether the presence, number, and enrolment levels of ICBAE centres significantly influence adult literacy outcomes, and whether their impact varies between urban and rural settings.

Moreover, existing studies have often overlooked the influence of structural and demographic factors, such as population size, the educational attainment of the broader community, and the prevalence of vulnerable learners, on literacy outcomes. Without disaggregated, district-level analysis, it is difficult to design targeted and equitable interventions. A one-size-fits-all approach may miss critical nuances, especially in a country marked by diverse geographical, social, and economic conditions. This study, therefore, seeks to fill this gap by examining the determinants of adult literacy across Tanzanian districts, with a specific focus on the heterogeneity effect of ICBAE centres in rural areas. Through a systematic analysis of both structural and programmatic variables, the study aims to provide policymakers, educators, and development partners with actionable insights for achieving Sustainable Development Goal 4, which ensures inclusive, equitable, and quality education for all.

Determinants of Adult Literacy in Tanzania

Adult literacy, commonly defined as the ability of individuals aged 15 years and above to read and write with understanding in any language, remains a critical indicator of

both human capital development and social inclusion (URT, 2022). Numerous empirical studies have examined the determinants of adult literacy, highlighting the influence of both structural and programmatic factors. In this study, the determinants of adult literacy in Tanzania are analysed through six key explanatory variables: population size, educational attainment, ICBAE enrolment, the number of ICBAE centres, rural–urban classification, and the proportion of vulnerable pupils.

Population size is hypothesised to influence adult literacy outcomes by affecting both the demand for and the strain on adult education services (Zimmerman et al., 2015). Empirical studies suggest that larger population clusters often generate higher demand for educational services but may also experience congestion effects, whereby existing infrastructure becomes insufficient to meet local needs (Zhao, 2019). For instance, Ainsworth and Filmer (2006) found that in Sub-Saharan African countries, densely populated areas are frequently under-resourced, exacerbating inequalities in access to adult learning opportunities. Nevertheless, large populations can also facilitate economies of scale in programme delivery, thereby improving efficiency in service provision (Isenberg & Onyemah, 2016). In addition, the general educational attainment of a population is a strong predictor of adult literacy, as it reflects both the cumulative impact of formal education systems and the intergenerational transmission of knowledge (Kim, 2018). Desjardins (2015) highlights the role of household educational background in shaping adult learners' motivation and capacity to engage in literacy programmes. In the Tanzanian context, high rates of primary and secondary school completion have been positively associated with adult literacy participation, as reported in the UNESCO Global Education Monitoring Report (Fute et al., 2023b; UIS, 2022). Moreover, intergenerational effects are well-documented, with evidence showing that parents with higher education levels are more likely to engage in or support adult learning initiatives (Dauenhauer et al., 2018).

The ICBAE programme reflects both community engagement and the reach of functional literacy interventions in Tanzania (Mwamkinga, 2023). According to the MoEST (2020), ICBAE centres recorded increased participation in districts where adult literacy initiatives were integrated with livelihoods and civic education. An empirical evaluation by Rwegelera (2014) demonstrated that ICBAE enrolment was significantly associated with improved literacy competencies among adults, particularly in rural communities. Furthermore, studies from comparable African contexts such as Ethiopia and Uganda have confirmed that targeted, localised, and participatory literacy enrolment initiatives significantly enhance learning outcomes (Belzer & Pickard, 2020). The availability of ICBAE centres within a district serves as a spatial proxy for access to adult learning opportunities. Geographical accessibility has consistently emerged as

a strong determinant of adult literacy outcomes (Varghese & Wachen, 2016). In Tanzania, empirical analysis by Galabawa and Ndalichako (2002) revealed that proximity to adult education facilities positively influences participation rates, especially in underserved areas. Similarly, the URT Education Sector Performance Review (2021) identified notable spatial disparities in ICBAE centre distribution, with remote districts experiencing lower coverage and correspondingly lower literacy levels. These findings are consistent with global evidence, including reports by UNESCO (2016) and Alabdali et al. (2023), which emphasise that the density and accessibility of learning centres are critical enablers of adult literacy.

Geographic classification plays a critical role in shaping literacy disparities (Mishra et al., 2023). Urban areas generally offer better access to infrastructure, information, and institutional support, thereby fostering more favourable educational outcomes (UNESCO, 2023b). Empirical findings by Agyekum (2023) indicate that rural residents in East Africa face numerous barriers to adult learning, including transportation difficulties, inadequate facilities, and limited programme diversity. In Tanzania, Ndijuye and Beatus (2024) found that rural–urban divides significantly contribute to differences in both access to and the quality of adult education programmes, primarily due to unequal public investment and administrative capacity. Moreover, the presence of vulnerabilities such as poverty, orphanhood, and disability can severely restrict participation in adult education and hinder literacy acquisition (Gal et al., 2020). Evidence from UNICEF (2022b) in Tanzania shows that individuals from vulnerable populations consistently experience lower educational outcomes throughout the life course. Osgood et al. (2010) found that children from disadvantaged households are less likely to transition into formal schooling and adult learning, a trend that continues into adulthood. Similarly, Ogawa and Nishimura (2013) argue that to be equitable and effective, educational policies must explicitly address socio-economic disparities in literacy access and outcomes.

Underlying Theory

This study is guided by human capital theory, as articulated by Schultz (1961) and Becker (1964), which emphasises the role of education and skill development in enhancing individuals' productivity, earnings, and overall economic potential. Within this framework, literacy, particularly adult literacy, is recognised as a fundamental component of human capital, enabling individuals to access employment opportunities, improve health outcomes, and participate more fully in social and civic life (Black et al., 2013). Participation in adult education programmes, such as Tanzania's ICBAE initiative, is therefore viewed as a remedial or second-chance investment in human capital, especially for individuals who missed out on formal

schooling earlier in life. In the context of this study, human capital theory provides a valuable lens for analysing the determinants of adult literacy (Marginson, 2019). The dependent variable, adult literacy rate, can be seen as a cumulative outcome of prior investments in human capital. In contrast, the selected independent variables function either as enablers or constraints to such investment (Lim et al., 2018). For instance, while larger populations may benefit from economies of scale in education service delivery, they can also strain infrastructure and dilute the quality and accessibility of adult learning programmes (World Bank, 2023b). Through anchoring this study within the human capital theory framework, the analysis gains both conceptual clarity and policy relevance. Adult literacy emerges not only as a developmental outcome but also as a strategic input for inclusive growth and human development (Post, 2016). Interpreting the dynamics of adult literacy through this theoretical lens highlights the importance of equitable and context-sensitive expansion of ICBAE services, particularly in Tanzania's rural districts, thereby reinforcing the case for sustained investment in adult education.

Methodology

The study adopts a quantitative research approach to present its findings. It uses quantitative methods to collect objective, numerical data and examine the factors affecting literacy rates in Tanzania. It employs statistical techniques to interpret the study's results.

The study employed a cross-sectional survey design for the 2022 data from surveys gathering information regarding adult education and socio-economic profiles of the districts and regions of mainland Tanzania. This predictive study intends to illuminate the underlying attributes of the adult literacy rate in Tanzania. The study examines the moderating effect of the rural-urban divide to shed light on the extent to which local contexts, including regions and districts, are critical factors to consider when implementing programmes for adult education. The study utilised statistical records from all 26 regions and 183 administrative districts of local governments of mainland Tanzania for the 2022 surveys. The authors considered the whole sample criteria to mitigate the issue of sampling bias that would arise from selecting a few regions, which would result in a small sample size.

The study utilised secondary data from various national surveys conducted in 2022, which document statistics on adult education as well as socio-economic profiles of regions and districts in mainland Tanzania. The dataset consisted of literacy rates, the number of pupils living in vulnerable environments, district population sizes, regional

wealth indices, primary education attainment, enrolments in basic literacy, and the number of ICBAE centres in the administrative districts of local governments.

Literacy rate: This proxy measures the percentage of a population that can read and write in Kiswahili, English, or both Kiswahili and English, or in any other language(s). This study utilizes data on the adult literacy rate from the 2022 Population and Housing Census (PHC), which considers persons aged 15 years and above who can read and write in Kiswahili, English, or both Kiswahili and English, or in any other language(s). The proxy uses the percentages of adults aged 15 years and above with basic literacy in the languages outlined in the preceding text. It utilises data disaggregated at the district level of local governments, as identified by the 2022 PHC. The literacy rate data is the dependent variable of the study.

Pupils living in vulnerable conditions: This is the percentage of pupils studying in primary schools in standard I–VII who live in vulnerable environments. The parameter is a composition of several variables, including pupils from families with poor income, pupils living or passing through wild animal areas, pupils using marine transport the whole period of the year and during the rainy season, pupils who are the head of the family, sick pupils for more than three months, and other aspects. The proxy is a share of all pupils enrolled in schools in 2022 to account for the rate of access to primary school as a foundation for basic literacy skills. The assumption behind the use of the 2022 data is that the same rates persisted in previous years, resulting in the current literacy rate. The parameter is the regressor as one of the variables influencing the persistence of literacy rates at present. The data is sourced from pre-primary, primary, secondary, adult, and non-formal education published yearly by school surveys documented by the President's Office, Regional Administration and Local Governments (PO-RALG) and published by the National Bureau of Statistics (NBS).

District's population size: This proxy is the number of persons living in the administrative council of local governments in Tanzania. The study considered the share of the council's population size in the region to account for the proportion of the population living in the council. The assumption for considering this proxy is that the higher the population size, the higher the demand for services such as education, which in turn influences the quality of schooling and the allocation of school resources. This partly affects better services and literacy rate, in particular. The proxy is a regressor to determine its effect on the adult literacy rate. This study employs the 2022 PHC documented by the Ministry of Planning and Finance (MoF) and published by the NBS.

The Gini coefficient: The proxy measures the distribution of wealth in the population across regions. The study considered this proxy significant as it informs the household's ability to support the learning needs of learners. The assumption is that the higher the disparity in a household's wealth ownership, the less support there is for individuals' schooling and literacy rates, as others will fail to access schooling, including adult learning programmes. This is also a regressor used to determine the effect of wealth distribution on access to schooling and learning effectiveness. The study employs the 2022 data from the Tanzania Demographic and Health Survey and Malaria Indicator Survey (TDHS-MIS), documented by the Ministries of Health (Tanzania Mainland and Zanzibar), published by NBS.

Primary education attainment*:* This proxy measures the highest level completed by an individual within the country's official education system. This study utilises data on primary education attainment, as it forms the foundation for basic literacy skills. This study utilises the 2022 PHC data, which measures the percentage of individuals' educational attainment levels. It considers individuals aged 4 years and above, as literacy rate is partly influenced by the early years of schooling. This indicator serves as the regressor to account for the relationship between parents' level of education and school access, following the assumption that higher educational attainment correlates with higher schooling and literacy rates. This study utilises the 2022 PHC, as documented by the Ministry of Planning and Finance (MoF) and published by the NBS.

Enrolments in basic literacy: This parameter accounts for the number of adults enrolled in basic literacy skills. This study considers the district's share percentage of regional enrolments in ICBAE centres to account for the effect of the number of adult participants in basic literacy skills. The number of enrolments is critical to inform access to basic literacy skills, following the assumption that the higher the enrolments, the higher the literacy rate. The parameter is the regressor as one of the variables influencing the persistence of literacy rates. The data is sourced from pre-primary, primary, secondary, adult, and non-formal education published yearly by school surveys, documented by the PO-RALG, and published by NBS.

The number of ICBAE centres*:* This feature includes the number of ICBAE centres in the district, accounting for access to literacy skills and schooling. The inclusion of this parameter in the study assumes that the establishment of more ICBAE centres will improve access to and the effective learning of basic literacy skills for adults, which will significantly contribute to improved literacy rates. The proxy is the regressor to examine the extent to which the number of ICBAE centres significantly impacts the learning of basic literacy skills. The data is sourced from pre-primary, primary,

secondary, adult, and non-formal education, published yearly by school surveys documented by PO-RALG and published by NBS.

Table 1: Summary of variables and their measurements

Variable	N	Mean	SD	Min	Max
Literacy rate	183	81.61	10.25	48.6	98.2
Percentage of pupils living in vulnerable environments	183	8.561	4.92	1.5	37
Percentage share of the population size of the district in the region	183	14.21	6.39	2.61	38
Gini coefficient of the region (wealth index)	183	39.23	7.933	15	52
Primary education attainment (4yrs and above) in the region (%)	183	75.34	7.069	50.5	82.4
District's percentage share of enrolments in basic literacy	183	14.21	24.8	0	100
Number of ICBAE centres in the district	183	11.71	22.92	0	172

Note: N = Total observations, SD = Standard Deviation, Min = Minimum score, Max = Maximum score, ICBAE = Integrated Community-Based Adult Education.

Data Analysis

The study employed Ordinary Least Squares (OLS) regression analysis to generate the results. Therefore, the following empirical strategies guided the analysis of the findings.

$$LR_{dri} = \alpha + \beta X_d + \gamma Z_r + \varepsilon_{dr} \quad [1]$$

$$LR_{dri} = \alpha + \beta X_d + \gamma Z_r + \delta [G_{dr} \cdot U_{dr}] + \varepsilon_{dr} \quad [2]$$

Where, LR_{dri} is the Literacy rate of district *d* in region *i*; X_d are regressors at the district *d* level; Z_r are the regressors at the regional *r* level, $G_{dr} \cdot U_{dr}$ is the interaction of the number of ICBAE centres and Urbanity to control for the heterogeneity effect or rurality and urbanity; ε_{rt} is an idiosyncratic error term, β, γ, and δ are coefficients, □ and is the overall intercept. The study employed robust OLS to address issues related to the adoption of cross-sectional data, including homoscedasticity, which accounts for the variability of the dependent variable. Other tests performed include linearity, multicollinearity, and normality.

Results and Discussion

The Determinants of Literacy Rate

The study examined the determinants of the adult literacy rate in mainland Tanzanian regions. The authors aimed to elucidate the attributes that affect the learning effectiveness of adults, which limit their intentions to fulfil their goals. The results reveal distinct aspects regarding the contribution of district and regional-level attributes in influencing literacy rates (Table 2).

Table 2: The determinants of adult literacy rates

Variables	1	2
Percentage of pupils living in vulnerable environments	-0.926***	-0.809***
	(0.183)	(0.189)
Percentage share of the population size of the district in the region	-0.178**	-0.208**
	(0.086)	(0.088)
Gini coefficient of the region (wealth index)	-0.0178	-0.0476
	(0.088)	(0.085)
Primary education attainment of individuals 4 years and above in the region (%)	-0.584***	-0.484***
	(0.084)	(0.097)
District's percentage share of enrolments in basic literacy	-0.0408	-0.0286
	(0.025)	(0.029)
ICBAExUrban		0.0372
		(0.213)
ICBAE Centres urban baseline		-0.00590
		(0.026)
ICBAE Centres Rural Baseline		7.800***
		(1.941)
N	183	183
R^2	0.4	0.43

Note: ICBAE = Integrated Community-Based Adult Education, N = Total observations, R^2 = R-squared, Robust standard errors in parentheses

* p<0.10, ** p<0.05, *** p<0.01

Table 2 presents the results on the determinants of adult literacy rates. As indicated in the Table (column 1), vulnerable living environments lower literacy rate by 0.93 points. The results suggest that vulnerable living environments are a critical factor affecting the literacy rate of individuals. The findings are similar to those of a study by Pillay (2017), suggesting that vulnerable living environments hinder the acquisition of basic literacy skills among learners, partly due to their irregular access to schooling. The marginal effect is high, indicating that illiteracy rates persisting in the country are largely contributed to by limited access to schooling for individuals from families with low incomes, constraints to access schools due to environmental challenges, and persistence of illness for some members of the family, as also noted by Gal et al. (2020). Moreover, the results indicate that increases in population size in the district lower the literacy rate by 0.18 points.

The results suggest that an increase in population hinders adequate provision of education, partly due to the failure of educational institutions to offer quality training, as also noted by Zhao (2019). The findings suggest that the provision of education suffers from a lack of quality training, particularly in the early years of schooling, and specifically in basic literacy skills. This may be attributed to overcrowded classrooms

in schools, which limit trainers' ability to facilitate effective training (see Ainsworth & Filmer, 2006). Moreover, the results indicate that primary education attainment declines adult literacy rates by 0.6 points. Thus, increases in the number of individuals with primary education as the highest level of education lower adults' literacy rates. The findings may suggest the persistence of primary school leavers who graduate with limited basic literacy skills, as also noted by Smith-Greenaway (2015). Nevertheless, the results indicate that the effect of enrolments in basic literacy skills is ambiguous, suggesting that adult education may have a lesser effect in accounting for improved literacy status. This may be attributed to several factors, including inadequate facilities and limited programme diversity, as observed by Agyekum (2023). Similarly, the effect of wealth distribution is unlikely to influence adult literacy. This may be caused by subsidies in the provision of public schooling, as access to the early years of schooling is freely offered. Thus, the effect of the illiteracy rate of adults may be caused by systemic factors rather than adult literacy-based programmes.

The Heterogeneity Effect of ICBAE Centres in Rural Areas

The study examined the effect of ICBAE centres in influencing adult literacy rates in Tanzania's mainland administrative councils. This study hypothesised that the number of ICBAE centres partly determines the literacy rate due to contextual attributes of rurality and urbanity. Column 2 (Table 2) shows the results on the heterogeneity effects of ICBAE centres in rural areas on the determinants of adult literacy rates. The results show that pupils living in vulnerable environments have a lower adult literacy rate by 0.81 due to the establishment of ICBAE centres in rural areas. The rate is lower than 0.93 of the previous models (column 1). The results suggest that the establishment of ICBAE centres in rural areas reduces the illiteracy rate among adults, underscoring the need to enhance the provision of functional literacy programmes in underserved areas. The findings are consistent with Galabawa and Ndalichako (2002), suggesting a positive influence of adult participation rates in functional literacy due to proximity to adult education facilities. Nevertheless, the results indicate that population size is detrimental to adult literacy, as the establishment of ICBAE centres in rural areas increases the illiteracy rate by 0.20 points.

The findings enlighten the persistent increase in the adult illiteracy rate in rural areas as the population increases. Several attributes may contribute to this relationship, including the lack of sufficient resources for providing quality training, which leads to an increased number of individuals lacking basic literacy skills (Ainsworth & Filmer, 2006; Zhao, 2019). Moreover, the moderating effect of ICBAE centres on primary education attainment decreases literacy rate by 0.48 points, which is comparatively lower than the previous model (column 1), which decreases literacy rate by 0.58 points.

The findings suggest that primary education attainment, when moderated by ICBAE centres, improves the literacy rate in rural areas, partly due to increased school access in these areas and support for schooling, as suggested in similar studies (see Belzer & Pickard, 2020; Rwegelera, 2014). Nevertheless, the impact of ICBAE centres in urban areas is improbable, suggesting that urban ICBAE centres have little effect in improving adult literacy rates. This is partly attributed to favourable educational outcomes in urban areas, as suggested by UNESCO (2023b).

The baseline results indicate that ICBAE centres in rural areas have a significant impact on the adult literacy rate. This relationship is illustrated by the predictive margins, as shown in Figure 1. As illustrated in the figure, the effect of ICBAE centres in urban areas is improbable, but it appears plausible at very low numbers of ICBAE centres. The rural-urban divide explains this relationship, as urban areas tend to have fewer challenges to schooling, leading to a higher adult literacy rate (see Ndijuye & Beatus, 2024). On the contrary, the impact of ICBAE centres in rural areas is significant throughout, with narrow predictive margins suggesting that adult literacy rates have a significant impact in rural areas. This is a result of an increase in participation in literacy programmes due to enrolment programmes similar to those revealed by Belzer and Pickard (2020).

Conclusion

The study highlights the determinants of the adult literacy rate in mainland Tanzania, focusing on socio-economic attributes and programmatic dimensions of adult education that influence the adult literacy rate. The findings from this study suggest that pupils living in vulnerable environments have intergenerational effects on adult literacy, increasing the number of illiterates. Thus, persistence of families with low incomes, the school access trade-off due to environmental challenges, and persistence of illness for pupils are critical factors influencing the illiteracy of adults. However, the establishment of ICBAE centres lowers the rate at which pupils living in vulnerable environments exacerbate the illiteracy of adults. Moreover, the increase in population size in districts tends to lower the literacy rate of adults. The impact is intensified by establishing ICBAE centres in rural areas, highlighting systemic challenges facing the rural population's education, such as inadequate resources for effective learning, exacerbated by increased population growth. Moreover, primary education attainment does not offer incentives for improved adult literacy rates, highlighting the possibility of the persistence of adults who graduated with low basic literacy skills. However, the ICBAE centres lessen the effects, highlighting the importance of functional literacy in rural areas. The impact of ICBAE centres in urban areas appears to be minimal, partly due to contextual factors favouring urban schooling. The findings underscore the

importance of enhancing adult literacy in mainland Tanzania through a comprehensive strategy. This should aim to address socio-economic disparities and strengthen community-based educational initiatives, particularly in rural and vulnerable regions.

Recommendations

Adult literacy is a critical foundation for individual empowerment and national development, making it imperative to implement targeted interventions that address the root causes of illiteracy in mainland Tanzania. To improve adult literacy in mainland Tanzania, it is essential to strengthen and expand ICBAE centres in rural and vulnerable areas where their impact is most significant. Addressing socio-economic barriers such as poverty, illness, and limited school access for children can help break the intergenerational cycle of illiteracy. Additionally, enhancing the quality of primary education to ensure functional literacy skills are acquired will prevent the persistence of adult illiteracy despite formal school completion.

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The Influence of Integrated Community-Based Education Post Functional Literacy Programmes on Economic Growth of Tanzanian Regions

Patroba E. Mgonya & Regina V. Mukama, National Institute of Transport and Shemeli M. Magambo, Institute of Adult Education

Email: patroba.mgonya@nit.ac.tz & regina.vicent@nit.ac.tz and *shemeli.magambo@iae.ac.tz*

Abstract

Post-functional literacy programmes equip adults with skills that enhance productivity, support income generation, and help break the cycle of poverty. Based on human capital theory, which links education and skill development to individual and economic growth, this study examines their role in regional economic development in Tanzania. These programmes are implemented through Integrated Community-Based Adult Education (ICBAE) and include Income Generating Activities (IGA) and extension activities. Using cross-sectional time series data (2019–2023) from national surveys and regional profiles, the study assesses their impact across the regions of mainland Tanzania. The findings reveal that ICBAE programmes make a significant contribution to regional economic growth, supporting the theory of human capital. However, the moderating effects of vocational and life skills, while theoretically important for enhancing self-employment and programme sustainability, appear statistically insignificant in this context. The study recommends expanding and strengthening post-functional literacy programmes across districts to maximise economic benefits.

Key words: Community-based education, post-functional literacy, economic growth, Tanzania

Introduction

The emphasis on post-functional literacy in a global society is partly attributed to the growing demand for inclusive education. The move aligns with Sustainable Development Goal (SDG) Target 4.4, which emphasises the need to increase the number of youths and adults with relevant skills for employment, decent jobs, and entrepreneurship (UNESCO, 2018). The targets of SDG 4, among others, aim to increase global literacy, as this serves several advantages, including the enhancement of sustainable development through public participation in diverse economic matters (Lopez-Claros et al., 2020). More importantly, Target 4.7 of SDG 4 calls for inclusive and equitable quality education as well as promoting lifelong learning opportunities for all. This overarching target entails promoting the knowledge and skills necessary to achieve sustainable development, including, among others, sustainable lifestyles, human rights, gender equality, global citizenship, and contributing to sustainable

development (Lockhart, 2018). Thus, functional and post-functional adult education literacy programmes have been a global agenda for sustainable development across diverse communities following their accrued benefits in many aspects.

The continued embracing of the philosophy behind adult education is a result of its benefits across diverse attributes. Adult education programmes are considered significant in promoting transversal and generic skills such as social, communication, and analytical skills, which are crucial for the empowerment of adults socially and economically (European Association for the Education of Adults [EAEA], 2018). According to Nwizu and Avoseh (2023), adult education programmes make a substantial contribution to economic development and the empowerment of women in Africa. Experience drawn from Zambia shows that non-formal adult education programmes contribute to increased economic growth following adults' participation in financial, basic, and functional literacy (Alexander et al., 2021). However, these advantages are often threatened by numerous challenges across parts of the continent. Elyakubu et al. (2024) cite several challenges that threaten adults' opportunities to enjoy the benefits of post-functional literacy programmes, including psychological prejudice, sociocultural, and economic problems. Other significant challenges include poverty (Nwizu & Avoseh, 2023), inadequate funding, lack of mobilisation, poor remuneration to facilitators, and poor accessibility (Ali, 2021). Thus, despite the success of adult education post-functional programmes in promoting socio-economic development, the programmes are facing several significant challenges that threaten their sustainability.

Tanzania's experience in implementing adult education programmes is diverse. Among the notable programmes for adult education is the Integrated Community-Based Adult Education (ICBAE), which offers functional and post-functional literacy skills (UNESCO, 2011). At its inception in the 2000s, the programmes were channelled through various centres, including Folk Development Colleges (FDCs) and Vocational Training Centres (VTCs), offering both short and outreach courses (UNESCO, 2011). Recently, ICBAE caters to individuals aged 19 years, offering vocational training and non-formal secondary education through Open and Distance Learning (ODL), which encompasses the basic and post-literacy components of Income-Generating Activities (IGA) and extension services (President's Office - Regional Administration and Local Government [PO-RALG], 2022). Participation in ICBAE indicates that the majority of learners enrol in IGA, followed by Extension activities and vocational skills, whereas more females are engaged in IGAs (Ministry of Education, Science and Technology [MoEST], 2018; PO-RALG, 2022, 2023). In 2022, the registered ICBAE centres numbered 2,158, but declined to 1,851 in 2023

(PO-RALG, 2022, 2023). Enrolments in ICBAE centres accounted for 200,810 (2019), 299,234 (2020), 254,820 (2021), 244,098 (2022), and 215,324 (2023), demonstrating a declining trend (PO-RALG, 2019, 2020, 2022, 2023). Despite a declining trend, enrolments in ICBAE centres persist for all programmes, including IGAs and extension services. Thus, this study aims to shed light on the effect of existing programmes in ICBAE on the economic growth of mainland Tanzania's regions. The focus is on the programmes that enrol the majority of participants, namely income-generating and extension activities. It extends the analysis to the moderating role of vocational and life skills, which offer knowledge and skills that focus on addressing both technical and personal demands of participants, which are significant for ventures' sustainability.

Integrated community-based adult education programmes

Integrated Community-Based Adult Education (ICBAE) programmes are comprehensive, locally driven learning initiatives that aim to address the practical social, cultural, and economic needs of adults (Merriam & Bierema, 2014). They are non-formal educational approaches that combine literacy and practical skills to empower adults to improve their livelihoods, participate in their communities, and promote sustainable development (PO-RALG, 2018). They are lifelong learning programmes aiming at developing autonomy and a sense of responsibility in people and communities to deal with changes and transformations taking place in the economy (EAEA, 2010). These programmes are diverse, encompassing income-generating and extension activities, as well as vocational and life skills development. These attributes are significant for adult learners beyond their personal lives but are impactful for their local community, businesses, and the local economy (Leese & Bentley, 2020). As such, ICBAE programmes are impactful for strengthening economic growth in many communities and remain a fundamental weapon to alleviate poverty among adults.

Income-generating activities and economic growth

Income-Generating Activities (IGA) significantly contribute to economic growth in multiple ways. IGAs have the potential to boost household income by engaging in different production ventures, such as small-scale farming, retail enterprises, or services, which are essential for creating jobs and encouraging entrepreneurship (Gealnew & Urkato, 2018). IGAs, therefore, promote economic growth by enabling participants to enhance their productivity through their involvement in economic ventures, which in turn strengthens local markets, increases tax revenues, and stimulates demand for goods and services. The role of IGAs is partly attributed to the

shift of communities from subsistence-level activities to more profitable market-oriented ventures, leading to increased efficiency and innovation (Wang et al., 2023). However, these accrued benefits partly rely on supporting IGA participants with financial incentives, skills training, and the creation of enabling environments for full participation in IGAs. Evidence suggests a link between adult education, income-generating activities, and economic growth. Leese and Bentley (2020) believe that adult education enables individuals to increase their earnings, thereby enhancing profitability and contributing to the country's economic growth. IGAs are also considered significant in raising revenues, which in turn have raised individuals' household spending levels and savings (Gealnew & Urkato, 2018). As such, IGAs not only uplift individuals' income but also significantly contribute to the economic growth of communities. However, these advantages are partly offset by local customs that allow certain groups to participate in IGAs (Alemu et al., 2022), as well as inadequate funding to facilitate and support effective and sustainable IGAs (Noah et al., 2021).

The moderating effect of vocational and life skills on IGAs

Vocational skills play a vital role in the relationship between IGA and economic growth across different attributes. Vocational skills allow individuals to improve the quality of their products and services through value-added features, effective resource management, and adapting to changing market demands (Bhatt et al., 2024; Osman & Speer, 2025). These benefits give participants an edge, enabling them to compete in the market with high-quality products, which in turn increases productivity and profitability. Vocational skills are essential for post-functional literacy programmes because they offer technical abilities that enhance decision-making, planning, and communication skills necessary for successful entrepreneurship and small business management (Arif et al., 2023). Individuals with post-functional literacy vocational skills can better understand technical instructions, manage financial records, interpret market trends, and adopt innovations more efficiently (Bhatt et al., 2024). The literature on the relationship between IGA, vocational skills, and economic growth presents various experiences. Gautam (2023) considers that vocational training enables individuals to grow economically and enhances the achievement of sustainable development following their contribution to economic empowerment, which eventually leads to economic prosperity. Similarly, vocational training is considered a potential for bridging the gap between technologies and awareness. This alignment enhances the impact of vocational education on economic outcomes, promoting more resilient and diversified economic growth, particularly in developing regions (Kansotia et al., 2023). Nevertheless, Kibitanyi and Ismail (2024) highlight a mismatch between skills learned in vocational training and those used in self-employment, as participants

often switch to other ventures, which partly results from curricula that influence the skills acquired and their application in the workforce. Additionally, Choudhury et al. (2024) consider socio-economic and demographic complexities in the provision of vocational training as one of the compounding challenges for individuals to participate in IGAs. Thus, functional literacy alone may not be sufficient for meaningful economic participation and growth unless technical skills are supported through vocational training.

Life skills are crucial in income-generating activities, playing a critical role in enhancing outcome-based productivity and economic growth. Life skills, such as financial literacy, communication, and problem-solving, are essential for entrepreneurial development, as they equip individuals with the skills to plan, manage, and sustain their entrepreneurial ventures more effectively (Hao et al., 2023). The inclusion of life skills in IGA programmes increases participants' resilience, adaptability, and capacity to make informed economic choices (Arif et al., 2023; Salian & Kumar, 2023). Life skills are a valuable asset for IGA participants, as they remain stable even in challenging times, such as those characterised by fluctuating economic environments (Steptoe & Wardle, 2017). Such skills enable individuals from marginalised communities to navigate the complexities of markets, negotiate better terms, and avoid exploitation. Hanushek and Woessmann (2008) enlighten that life skills are critical in enhancing the quality of economic institutions, as the relationship between life skills and economic growth is positive. Pokharel (2024) confirms that life skills improve the incomes and life standards of women engaged in IGAs. Thus, the integration of life skills into IGA interventions enhances their impact, transforming them from short-term economic boosts into long-term drivers of inclusive and sustainable economic growth. However, the effect of life skills in IGA may be constrained by numerous threats, including the complexity of the markets and advances in entrepreneurial technologies, as older entrepreneurs may not adopt the changes easily (Iza, 2020). On the other hand, the effect of life skills for IGA participants may be constrained by limited resource mobilisation and other financial and marketing-related problems occurring while conducting IGAs (Dhake & Narkhede, 2019), as well as personal factors such as entrepreneurial identity (Stenholm et al., 2024).

Extension activities and economic growth

Post-functional literacy extension activities have a significant impact on economic growth in diverse ways. Extension activities are of various models, including agricultural demonstrations, vocational training, entrepreneurship workshops, and technology transfer programmes. Through extension activities, individuals are enhanced with technical skills related to their business ventures in practical terms

(Danso-Abbeam et al., 2018). These programmes help individual participants to apply newly acquired knowledge and skills to real-world economic activities. This transition from literacy to productivity enables individuals to improve agricultural practices and manage small businesses more effectively, as well as adopt innovations that increase income and efficiency, thereby contributing to increased productivity and economic growth (Swanson, 2006). The benefits of extension activities are reflected in diverse contexts, especially in rural and underserved areas, where post-functional literacy learners often engage in subsistence farming and informal trades, as they translate abstract knowledge into practical skills (Raji et al., 2024). Individuals tend to become economically active and respond to market demands, resulting in increased household income and economic growth. Extension activities, therefore, underscore the importance of integrating extension services into post-literacy programmes as a strategy for sustainable economic growth. Evenson (2001) enlightens that extension programmes have high returns to investments, leading to actual economic growth. These accrued benefits of extension activities are partly driven by market-driven strategies, which tend to focus on value-added enterprises (Swanson, 2006). According to Zaichenko and Kononenko (2025), extension activities ensure the economic security of small and medium enterprises through the provision of high-quality accounting, analytical support, and promotion of digital competencies to participants. However, extension activities may be constrained by several attributes, including differing needs of participants and market-related constraints (Maulu et al., 2021), as well as changes in national policies for extension programmes (Swanson, 2006). Thus, participants in extension services are building blocks for economic growth provided that their ventures operate in a market-driven environment with limited challenges.

The moderating effect of vocational and life skills in extension activities

Vocational skills have a significant moderating effect on the impact of extension activities in promoting economic growth, particularly in post-functional literacy settings. Extension activities provide individuals with information and guidance, including improved farming techniques and small enterprise management. In contrast, vocational skills offer an opportunity to grasp the potential of real-world economic ventures available in their local contexts (Adda & Dustmann, 2023). Thus, the combination of extension activities and vocational skills enhances productivity and self-reliance, leading to more sustainable and scalable economic outcomes. More importantly, vocational skills enhance the absorptive capacity of post-literacy learners, making them more responsive to innovations and market opportunities introduced through extension programmes (Schulz et al., 2023). This is a result of acquiring

technical competencies through the adoption of new practices, product quality improvements, and access to new markets. This, in turn, boosts individual income levels and contributes to broader economic growth by strengthening local value chains and increasing employment opportunities (Shukla et al., 2024). Therefore, vocational skills amplify the economic impact of extension activities, serving as a vital moderator in translating post-functional literacy into tangible, long-term economic growth. Kim's (2023) study suggests that vocational skills training has a significant impact on ventures of high-income households, partly due to their ability to invest in IGAs that generate profits, highlighting the effect of socio-economic profiles on the prosperity of IGAs. The skills are considered important components of human capital for increasing income and narrowing income inequality gaps (Hao et al., 2023). Nevertheless, McGrath and Yamada (2023) identify several factors that hinder the effectiveness of vocational skills training for impactful business ventures, including labour market demands for skills education and the mismatch between the skills demanded and the actual lives of the people. Another challenge in the compounding effect of vocational training on extension activities is the differing socio-economic profiles of the participants (Kim, 2023). As such, the worthiness of vocational training in extension activities is influenced by numerous attributes.

Life skills significantly moderate the effectiveness of extension activities in driving economic growth, particularly among post-functional literacy learners. While extension activities offer technical knowledge and practical guidance, such as improved agricultural practices, business management, or health education, life skills such as communication, decision-making, critical thinking, and emotional resilience enable individuals to absorb, apply, and sustain this knowledge effectively (Winarsunu et al., 2023). Post-literacy learners, especially those from marginalised or disadvantaged backgrounds, often face barriers beyond technical knowledge, such as low confidence or poor negotiation abilities. Life skills help individuals overcome these obstacles, empowering them to participate more actively in local economies, engage in group-based initiatives such as cooperatives, and advocate for their interests (Salian & Kumar, 2023). Evidence across diverse contexts illuminates that life skills moderate the impact of extension activities through valuable and strategic investments. According to Jalius et al. (2019), life skills training boosts investment decisions of individuals, including women who tend to be marginalised in economic activities, as it has the potential to awaken individuals to participate in small and medium-scale enterprises. Furthermore, life skills are impactful and enable individuals, especially women, to participate in sectors and fields of their choice (Pokharel, 2024). This is partly attributed to increased consciousness, emotional stability, determination, control, and optimism (Steptoe & Wardle, 2017). However, the effect of life skills on

extension activities may be a result of several attributes such as accessibility, affordability, training quality, and socio-economic factors (Sharma, 2023), as well as skills deficits, especially for developing countries (Hanushek & Woessmann, 2008).

Theoretical Underpinnings of the Study

This study is based on Human Capital Theory, which suggests that investing in education, skills, and knowledge improves individuals' productivity and promotes economic growth (Altinok & Aydemir, 2017). In this framework, post-functional literacy programmes go beyond basic reading and writing to include practical, vocational, and life skills tailored to adult learners, especially in under-resourced or rural areas. By providing individuals with usable skills in fields such as agriculture, trade, or health, these programmes strengthen human capital and support the shift from dependency to productivity, thereby encouraging inclusive development and reducing poverty (Black et al., 2013). Integral to adequate post-functional literacy are Income Generating Activities (IGAs) and extension services that bring learning into practical use by helping participants apply new skills in real economic situations (Gealnew & Urkato, 2018). IGAs enable learners to launch small businesses or enhance existing livelihoods, while extension activities offer continuous support, technical assistance, and market access. These elements, together, establish a sustainable approach to human capital development, with literacy serving as the foundation for lifelong learning, self-employment, and local economic development (Hao et al., 2023). This collabouration offers a crucial theoretical foundation for the study, underscoring the significance of adult education in driving social and economic transformation (Post, 2016). Therefore, this theoretical framework highlights the transformative potential of integrated literacy and livelihood programmes in driving community-level development.

Materials and Methods

The study employs a quantitative research approach to organise its findings. It uses quantitative methods to gather objective, numerical data and analyse the relationships between key study variables. It applies statistical techniques to ensure accurate interpretation and generalisability of the results.

The study employed a time series cross-sectional design characterised by panel data from five waves spanning 2019 to 2023. Thus, this causality study observed the changes in the implementation of ICBAE post-functional literacy programmes across multiple time units and their influence on economic growth. The design effectively tracks how changes in post-functional programmes, especially income-generating and extension activities, impact economic growth over time. It also considers the

moderating effects of vocational and life skills to assess their impact on economic growth in the mainland regions of Tanzania.

The study utilised statistical records from all 26 regions of mainland Tanzania, spanning five waves from 2019 to 2023, to obtain a total of 130 observations. Thus, the study utilised the entire sample size of regions to mitigate the issue of sampling bias that would arise from selecting a few regions, which would result in a small sample size.

The study utilised secondary data from various national surveys, which document statistics on adult education as well as socio-economic profiles of regions in mainland Tanzania. The data comprised regional GDPs, IGA, extension activities, vocational skills, life skills, the regional Wealth Index, the number of ICBAE centres, working-age populations, and the employment statuses of regions.

The study utilised regional GDPs for the five years of analysis as a measure of economic growth. Its inclusion is based on the fact that it allows for tracking changes in economic performance across different years. GDP reflects the increases or declines in economic activities, including income-generating and extension activities, which add value to the productivity of individual residents of the regions, also accounting for the measure of economic growth. GDP uses standardised measures proposed by international organisations, such as the World Bank and the International Monetary Fund (IMF), to inform the country's economic policies. This study considers this parameter as a dependent variable, using the percentage share of the total GDP of the regions of the five waves as the key measure of economic growth. The regional GDPs are considered significant for this study, based on economic surveys documented by the Ministry of Finance and Planning, published by the National Bureau of Statistics.

The study used enrolments in income-generating and extension activities at ICBAE centres as the independent variables. The authors calibrated the percentage share of enrolments in income-generating and extension activities as measures of participants' participation in production sectors. This is because enrolees in income-generating and extension activities take shorter periods, typically one to several months, to start businesses and contribute to productivity. The authors assume that enrolments in income-generating and extension activities are partly associated with participants' perceived opportunities for learning; hence, they start businesses at early stages of enrolment or graduation, especially for specific programmes in service-based business ventures. The authors adopted income-generating and extension activities enrolment statistics from surveys on Formal, Non-Formal, and Adult Education, which were documented and published by the Ministry of the President's Office, Regional Administration, and Local Governments (PO-RALG).

The study used enrolments in vocational and life skills at ICBAE centres as moderating variables. The authors calibrated the percentage share of enrolments in vocational and life skills as measures of income-generating and extension activities, as well as participants' technical skills in managing business ventures across various sectors. The assumption is that vocational and life skills equip individuals with the business and information management capacities necessary for the sustainability of ventures. Thus, these skills are crucial for strengthening income-generating and extension activities. The authors adopted vocational and life skills enrolment statistics from surveys on Formal, Non-Formal, and Adult Education, documented and published by the Ministry of the President's Office, Regional Administration, and Local Governments (PO-RALG).

The socio-economic profiles of the regions serve as control variables that mediate the effect of income-generating and extension activities on economic growth. This study included the region's Gini coefficient (wealth index), which is relevant because adults' self-employment across various productive sectors partly relies on income distribution, as individuals' ability to start businesses depends on their financial capacity, which in turn is influenced by savings and access to loans. On the other hand, individuals' enrolments and participation in post-functional literacy programmes will depend on the number of community-based training centres available in their locality. As such, the productivity of adults, which is enhanced by training in income-generating and extension activities, is partly affected by the number of ICBAE training centres available. Another significant control variable is the percentage of the working-age population available in the region. This is critical as it informs the amount of labour force participation in the production sectors. Moreover, the study controlled for the percentage of employment available in the region, as the productivity of individuals in various sectors of the economy depends on the number of individuals employed across multiple sectors.

Table 1: Summary of variables and their measurements

Variable	N	Mean	SD	Min	Max
Percentage share of regional GDP	130	20.00	1.82	16.33	24.82
Percentage share of regional enrolments in extension activities	130	20.00	14.03	0	95.83
Percentage share of regional enrolments in income-generating activities	130	20.00	11.00	0	49.45
Percentage share of regional enrolments in vocational skills	130	18.46	18.72	0	100
Percentage share of regional enrolments in life skills	130	18.46	16.85	0	100
Gini Coefficient of the region (wealth index)	130	44	12.32	8	70
Number of community-based training centres	130	77.53	73.98	0	279
Percentage of the working-age population of the region	130	51.99	4.51	45.5	66.3
Percentage of employment status of the working-age population	130	20.00	2.43	15.11	27.33

Note: N = Number of observations, SD = Standard Deviation, Max = Maximum score, Min = Minimum score, GDP = Gross Domestic Product

The study employed Pooled Ordinary Least Squares (OLS) regression analysis to generate the results. Therefore, the following empirical strategies guided the analysis of the findings.

$$GDP_{rit} = \square + \beta X_{rit} + \gamma R_{it} + \lambda SES_{rit} + \varepsilon_{dt} \quad [1]$$

$$GPS_{sdt} = \square + \beta(X_{rit} \cdot RU_{drt}) + \gamma R_{it} + \lambda SES_{rit} + \varepsilon_{dt} \quad [2]$$

Where, GDP_{rit} is the Gross Domestic Product of region *i* in year *t*; X_{rit} are income-generating and extension activities enrolees in region *r*, in year *t*; SES_{rit} denotes Social Economic Status of district *d* in year *t*, ε_{rt} is an idiosyncratic error term, β, γ, and λ are coefficients, $\square$ and is the overall intercept. RU_{sidt} represents district-specific contexts for being either rural or urban.

The authors checked the presence of fixed and random effects in the models to obtain valid results. The authors estimated the F-tests to test the presence of fixed effects, as well as the Breusch-Pagan Lagrange Multiplier (LM) test for the presence of random effects. Thus, the authors adopted the Pooled OLS due to the absence of fixed and random effects parameters in the tested models. This may have been a result of the short time dimension (5 years) and the omission of time-invariant variables (regions), leading to the problem of Omitted Variable Bias (OVB). The non-random selection of regions may have caused violation of the random effects model due to considerations of the entire sample (26 regions) of mainland Tanzania.

Results and Discussion

The Effect of Income Generating Activities on GDP

The study examined the impact of income-generating activities on enhancing the economic growth of mainland Tanzania's regions. The authors aimed to uncover the extent to which income-generating activities had accrued benefits for the participants. Moreover, the study intended to examine the moderating effect of vocational and life skills on the improvement of individuals' earnings and national income. The results portray distinct aspects of the role of income-generating activities on economic growth (Table 1).

Table 1: The effect of income-generating activities on GDP

Variables	1	2	3
IGA	0.0500***	0.0407***	0.0393**
	(0.0120)	(0.015)	(0.0153)
IGA x Vocational skills		0.0005	
		(0.0004)	
IGA x Life skills			0.0006
			(0.0005)
N	130	130	130
R^2	0.2	0.2	0.2

Note: N = Total observations, IGA = Income Generating Activities, R^2 = R-Squared. Robust standard errors in parentheses.

$p<0.10$, ** $p<0.05$, *** $p<0.01$

Table 1 presents the results on the effect of income-generating activities on the economic growth of Tanzania's mainland regions. Column 1 of the table presents the main effects of IGA, column 2 presents the moderating effects of vocational skills, and column 3 presents the moderating effects of life skills. The results show that IGAs boost regional GDPs by 0.05 points, indicating that increased IGA provisions in regions improve the economic productivity of participants. These findings align with Gealnew and Urkato's (2018) study, which also reports productivity gains among IGA participants resulting from increased engagement in economic activities. The impact of IGAs can also be linked to individuals' ability to apply knowledge and skills across different areas, such as entrepreneurship and modernised agricultural production through skills development (Wang et al., 2023). Moreover, Leese and Bentley (2020) argue that adult education programmes boost economic growth by increasing adults' earnings, which stem from profits gained in diverse economic activities. Nevertheless, the moderating effect of vocational skills is ambiguous, suggesting that the provision of technical skills acquired by individuals in ICBAE programmes has little impact on

productivity. As shown in column 2 of the table, vocational skills lower the effect of IGA on inducing economic growth to 0.04 points of the region's GDP. This may be attributed to the diversification of income sources among IGA participants, resulting in high production costs in business ventures, as also observed by Choudhury et al. (2024). Other challenges include the mismatch between skills learned in vocational training and those needed in the labour market, as noted by Kibitanyi and Ismail (2024). The results also indicate that the moderating effect of life skills is unlikely, and the impact of IGA on economic growth drops to 0.04 points.

These findings therefore imply that there are few benefits from IGAs after individuals participate in life skills programmes. This is surprising, since there could be additional increases in GDP from the moderating effect of life skills in IGAs, as individuals would benefit from better communication, adaptability, self-confidence, and problem-solving skills. Life skills are essential in strengthening IGAs because they help individuals manage, sustain, and improve their economic development (Arif et al., 2023; Salian & Kumar, 2023). Therefore, the impact on GDP, attributable to the moderating influence of life skills within Income-Generating Activities (IGAs), can be partially attributed to various factors. These factors include a lack of initial capital, limited access to markets, a small proportion of IGA participants involved in economic activities, and low literacy and basic skills levels. Several factors contribute to this pattern of relationship, including the complexities of the market (Dhake & Narkhede, 2019; Iza, 2020; Shukla et al., 2024).

The Effect of Extension Activities on GDP

This study investigated the impact of extension activities on economic growth across regions in mainland Tanzania. It aims to elucidate the benefits participants gain from these activities and examines how vocational and life skills moderate the effect of extension activities on improvements in individual earnings and overall national income. The results highlight different ways extension activities support economic growth (see Table 2).

Table 2: The effect of extension activities on GDP

Variables	1	2	3
EXA	0.0258**	0.0238**	0.0247**
	(0.0104)	(0.0115)	(0.0111)
EXA x Vocational Skills		0.0003	
		(0.0004)	
EXA x Life Skills			-0.0001
			(0.0005)
N	130	130	130
R^2	0.1	0.2	0.1

Note: EXA= Extension Activities, VS = Vocational Skills, LS = Life Skills. Robust standard errors in parentheses

p<0.10, ** p<0.05, *** p<0.01

Table 2 presents the effect of extension activities on the economic growth of regions in mainland Tanzania. Column 1 presents the main effects, column 2 presents the moderating effect of vocational skills, and column 3 presents the moderating effect of life skills. The results indicate that extension services increase the GDP of the regions by 0.03 points. The results suggest that extension activities lead to productivity gains for individuals participating in various economic ventures. The results are similar to those of a study by Swanson (2006) and Evenson (2001), which assert an increase in income and efficiency among small and medium-sized businesses, thereby contributing to economic growth. This may indicate that training offered by government and non-government agencies in the economic sectors, such as agriculture and entrepreneurship, contributes significantly to economic growth in regions. The positive effect of extension services on economic growth may be attributed to advisory services provided by experts in economic ventures and the sharing of techniques and practices among individual producers in their respective regions (Zaichenko & Kononenko, 2025). Practices such as the use of improved seeds and fertilisers for farmers, as well as value-added services for Small and Medium-Scale Enterprises (SMEs) in respective regions, may have contributed to the gains observed in GDPs, as also noted by Raji et al. (2024). The results indicate that the moderating effect of vocational skills on extension services has an improbable impact on economic growth.

As shown in column 2 (Table 2), vocational skills slightly lowered the effect of extension services on economic growth to 0.02 points. This is unexpected, as the moderating effect of vocational skills would have strengthened economic growth by promoting the absorption and adoption of innovations introduced by extension agents, leading to higher productivity as noted in previous studies (see Adda & Dustmann, 2023; Danso-Abbeam et al., 2018; Raji et al., 2024). Nevertheless, this

relationship may be partly attributed to the low adoption of skills by extension beneficiaries caused by financial constraints or skill mismatch (Maulu et al., 2021; McGrath & Yamada, 2023). Similarly, the moderating effect of life skills is unlikely to have a significant impact on the relationship between extension activities and economic growth. As indicated in column 3 (Table 2), the impact of life skills on extension activities resulted in regions sustaining economic growth at a 0.03-point increase, similar to the average effects observed in column 1. Thus, the moderating effect of life skills is unlikely to impact economic growth due to the implementation of extension activities. This may suggest that life skills programmes, such as problem-solving and financial literacy, have little effect on inducing economic growth among beneficiaries of extension activities. This may be a result of several factors, including limited training and financial support, as well as low psychosocial readiness for risk-taking, which can lead to stagnant enterprises as indicated by studies in the field (see Hanushek & Woessmann, 2008; Sharma, 2023).

Conclusion

The study highlights the significance of post-functional literacy programmes in improving the economic growth of Tanzania's mainland regions, particularly through income-generating and extension activities. The findings from this study enlighten that both income-generating and extension activities significantly increase economic growth at the individual and community levels. Thus, adults' participation in post-functional literacy programmes, which are directly related to job creation and entrepreneurial capacities, enhances productivity and, in turn, the economic growth of the regions. The moderating effects of vocational and life skills slightly lower the impact of income-generating and extension activities on economic growth. This suggests that the technical skills gained in vocational and life skills have little impact on enabling adult learners who participate in income-generating and extension activities to increase their productivity and contribute to economic growth. As such, the findings highlight the impact of training and programme implementation effectiveness on post-functional literacy, helping adult learners achieve sustainable development. This study, therefore, underscores the importance of strengthening the implementation of post-functional literacy programmes in Tanzanian ICBAE centres, as it is crucial for enhancing adult learners' productivity and regional economic growth, despite the limited impact of vocational and life skills training on income-generating and extension activities.

Recommendations

Income-generating and extension activities are crucial as they drive individual and community economic growth. The study recommends that policymakers and education stakeholders enhance the design and delivery of post-functional literacy programmes at ICBAE centres to support these activities, which have a direct impact on regional growth. The curriculum should include practical, context-specific entrepreneurial training that goes beyond general vocational and life skills, enabling adult learners to acquire applicable skills for enhanced productivity. Additionally, monitoring and evaluation systems should be implemented to assess programme effectiveness and adapt training to meet learners' and the local economy's evolving needs.

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Assessment of Socioeconomic and Cultural Barriers to Girls' Re-entry into Education through the SEQUIP-AEP Programme in Tanzania

Amina Abubakar & Baraka Kionywaki, Institute of Adult Education

Email: amiabu83@yahoo.com & basaki2007@yahoo.com

Abstract

The SEQUIP-AEP programme in Tanzania was designed to offer a second chance for girls who dropped out of school due to early pregnancy and social pressures. While the programme has successfully re-enrolled many girls, a notable number still fail to complete their education. This study, conducted across five diverse regions, used mixed methods to explore the socioeconomic and cultural barriers affecting girls' re-entry and retention. Findings reveal that financial challenges, such as a lack of transport and learning materials, contribute to irregular attendance and dropout. Social stigma, domestic responsibilities, and entrenched cultural norms, especially in rural areas, further hinder participation. These barriers reduce girls' motivation and self-esteem, creating hostile learning environments. The study concludes that SEQUIP-AEP's effectiveness is limited by these persistent challenges. A holistic, context-sensitive approach is needed one that goes beyond access to education and addresses emotional, social, and economic support to ensure sustained participation and successful completion.

Key words: Re-entry, Barriers, Retention and Socioeconomic

Introduction

Education is universally recognised as a fundamental human right and a cornerstone for sustainable development. In Tanzania, efforts to expand access to education have led to the establishment of alternative pathways such as the Secondary Education Quality Improvement Programme through Alternative Education Pathway (SEQUIP-AEP). This initiative was designed to re-engage adolescent girls who had dropped out of formal secondary education due to various reasons, including early pregnancies, financial hardship, or socio-cultural pressures. Despite its noble intentions, the programme continues to experience high dropout rates, raising critical questions about the factors that hinder sustained participation. In this context, managing dropout within SEQUIP-AEP requires multifaceted interventions that address different causes of dropout. In other words, interventions that address the socio-economic and cultural barriers that contribute dropout of girls.

According to Global Citizen (2019) and UN Women (2024), girls' education worldwide is hindered by a range of socio-cultural and economic barriers, including poverty, child marriage, and period stigma. Traditional gender roles often dictate that

girls prioritise domestic responsibilities over schooling, while early marriage and teenage pregnancy continue to disrupt their educational trajectories. Poverty remains a significant barrier, as many families struggle to afford school-related expenses such as uniforms, books, and transportation. Additionally, long distances to schools, especially in rural areas, discourage regular attendance. A critical yet often overlooked issue is the lack of access to sanitary pads during menstruation, which leads many girls to miss school due to discomfort, stigma, or inadequate facilities. These overlapping challenges not only limit girls' educational opportunities but also perpetuate cycles of inequality and poverty.

In Tanzania, the situation reflects these global trends. According to statistics from 2017, approximately 60,000 students dropped out of secondary school, with around 5,500 cases attributed to pregnancy. More recent data from the Basic Education Statistics in Tanzania (BEST, 2020) indicates that the dropout rate in both government and non-government formal secondary schools stood at 4.2% of total enrolment. The leading cause of dropout was truancy, accounting for 91.6% of cases, followed by pregnancy at 5.5%, and death at 0.7%. Notably, dropout rates are highest in the lower secondary grades, with Form I contributing 33.2% and Form II 39.8% of the total dropout figures. These statistics underscore the urgent need for targeted interventions that address both the structural and cultural barriers to girls' education. Solutions must include comprehensive sexual and reproductive health education, improved access to menstrual hygiene products, community sensitisation on the value of girls' education, and stronger enforcement of policies that protect girls from early marriage and exploitation.

According to UNICEF (2007), as cited by Grace (2010), the global figure for out-of-school children is estimated to be 121 million, out of which 65 million (approximately 53.8%) were girls, and over 80 percent of these girls live in sub-Saharan Africa. Without education, a young girl is more likely to be married early, to face poverty and to depend on others for survival. Many studies revealed that girls from poor families are more likely to drop out of school due to a combination of economic, social and cultural factors. Some drop out due to a lack of basic resources, including uniforms, books, and other scholastic materials. Others need to stay home in order to take care of their children, instead of continuing with education due to early marriage or teenage motherhood.

Previous research has consistently highlighted the multifaceted nature of school dropout among girls in Tanzania, revealing a complex interplay of socio-economic, cultural, and structural factors. For instance, Msafiri and Lianyu (2022) found that early marriage, female genital mutilation (FGM), and overwhelming household

responsibilities significantly contribute to girls' disengagement from education, particularly in rural regions such as Mara. These practices not only violate girls' rights but also curtail their educational aspirations at a young age. Similarly, Komba (2015) emphasised that financial constraints, long distances to school, and lack of parental support are major barriers to girls' educational continuity in Mbogwe district. The burden of poverty often forces families to prioritise immediate survival over long-term investment in girls' education.

Complementary findings by Mtengeti et al. (2019) revealed that girls from pastoralist communities face additional challenges, including mobility-related disruptions and cultural norms that discourage formal schooling. Moreover, Elias et al. (2024) observed that girls from low-income households are frequently pressured into informal labour or domestic work, further limiting their time and energy for academic engagement. These studies collectively underscore the persistent and overlapping socio-economic and cultural challenges that disproportionately affect female learners across Tanzania. Addressing these barriers requires a holistic and context-sensitive approach that integrates financial support, community sensitisation, and gender-responsive education policies.

In Tanzania, Komba (2015) found that many girls are forced to leave school due to the inability to afford necessities such as uniforms, books, and transportation. Although these costs may appear minimal, they become insurmountable for families living below the poverty line, especially in rural and marginalised communities. Elias et al. (2024) further observed that girls from low-income households often face pressure to engage in informal labour or domestic work to supplement family income. This not only reduces their time and energy for schooling but also reinforces the perception that girls' education is a luxury rather than a right. The cumulative effect of financial strain and labour demands leads to absenteeism, poor academic performance, and eventual dropout. To counter this, education systems must adopt inclusive financing strategies such as fee waivers, provision of school materials, and transport subsidies while also addressing the socio-cultural norms that undervalue girls' education.

In Kenya, Ngware et al. (2013) emphasised that economic hardship often drives girls into transactional sexual relationships, commonly referred to as "survival sex." In urban slums and remote rural areas, where poverty is widespread and opportunities are limited, young girls may seek financial support from older men in exchange for sexual favours. These relationships are frequently unequal and exploitative, exposing girls to early pregnancies, sexually transmitted infections, and emotional abuse. The consequences are severe; many girls are forced to drop out of school, cutting short

their education and limiting their prospects. Addressing this issue requires a multifaceted approach, including access to quality education, economic empowerment programmes, community awareness, and stronger protection mechanisms to safeguard vulnerable girls from exploitation.

Moreover, Grant & Hallman (2008) in Malawi demonstrated that conditional cash transfers significantly reduced dropout rates among girls, proving that financial support can be a powerful retention tool. By alleviating the immediate financial pressures faced by families, these programmes enabled girls to remain in school longer, thereby improving their educational outcomes and prospects. The study also highlighted how such interventions can delay early marriages and reduce engagement in transactional sex, which are often driven by economic desperation. These findings suggest that SEQUIP-AEP must integrate robust and sustainable financial aid mechanisms such as scholarships, stipends, and school feeding programmes to effectively address economic barriers. Without such support, vulnerable girls may continue to face insurmountable challenges that hinder their access to education, perpetuating cycles of poverty and gender inequality. Cultural expectations deeply influence girls' educational outcomes. In many Tanzanian communities, education is not prioritised for girls beyond the primary level. Msafiri & Lianyu (2022) found that early marriage is often seen as a rite of passage, with girls being withdrawn from school once they reach puberty. This is compounded by beliefs that educated girls are less "marriageable," a perception that discourages families from investing in their education.

In Ethiopia, Girma & Kedir (2005) observed that entrenched gender norms significantly restrict girls' mobility and autonomy, making it difficult for them to attend school regularly and participate fully in academic life. These limitations are often compounded by societal expectations that prioritise boys' education over girls', thereby reinforcing intergenerational cycles of inequality and disempowerment. Similarly, UNESCO (2015) reported that in several African countries, girls are expected to shoulder the burden of domestic chores before and after school tasks, such as cooking, cleaning, fetching water, and caring for siblings. This dual responsibility not only leads to chronic fatigue and reduced concentration but also undermines girls' ability to perform academically and engage meaningfully in their education. In many cases, girls arrive at school late, miss classes, or struggle to complete homework, not due to lack of motivation or ability, but because of overwhelming household demands and rigid gender roles. To dismantle these structural barriers, a multifaceted approach is essential. This includes shifting cultural attitudes through sustained community engagement, implementing gender-sensitive

curricula, and enacting policies that promote shared domestic responsibilities within households. Moreover, schools must be equipped to support girls through flexible scheduling, mentorship programmes, and safe spaces that affirm their right to learn. Without these deliberate interventions, the promise of universal education will remain elusive for millions of girls across the continent.

In Tanzania, Mkumbo (2012) emphasised that stigma surrounding teenage pregnancy leads to profound social exclusion, both within the family and the school environment. Girls who return to school after childbirth often face overt and subtle forms of discrimination from peers, teachers, and even school administrators. This hostile atmosphere undermines their confidence, erodes their motivation, and creates psychological barriers to learning. Many are labelled as "bad examples," isolated during group activities, or subjected to moral judgment that disregards their right to education and dignity. Such treatment not only violates their fundamental rights but also perpetuates cycles of shame and dropout. Similar findings were reported by Bhana et al. (2010) in South Africa, where teenage mothers experienced institutional neglect and emotional isolation upon re-entering school. The study highlighted how punitive attitudes from educators and lack of support services contributed to low retention rates among adolescent mothers. Likewise, Atuyambe et al. (2005) in Uganda found that young mothers often faced rejection from both their families and communities, which further compounded their vulnerability and limited their educational aspirations. To foster inclusive learning environments, schools must adopt clear reintegration policies, train educators on gender sensitivity, and provide psychosocial support for young mothers. Community-level interventions are equally vital to challenge harmful stereotypes and promote a culture of empathy, resilience, and second chances. These insights suggest that SEQUIP-AEP must go beyond academic support and actively challenge harmful cultural narratives through community sensitisation, gender-responsive pedagogy, and targeted support systems for adolescent mothers. Only through a holistic and rights-based approach can education systems truly accommodate the needs of all learners, regardless of their circumstances.

This study, therefore, seeks to explore the underlying socio-economic and cultural barriers influencing school dropout among girls enrolled in the SEQUIP-AEP programme. It critically examines how poverty, gender norms, and household responsibilities intersect to limit girls' educational opportunities. Additionally, the study assesses the effectiveness of existing support mechanisms such as financial aid, psychosocial services, and reintegration policies in retaining students and preventing further disengagement. By grounding the analysis in both empirical evidence and contextual realities, the study aims to generate actionable insights that can inform

policy and practice. Ultimately, it seeks to contribute to the development of inclusive and gender-responsive education strategies that enhance learning outcomes and promote equity for marginalised girls in Tanzania.

Methodology

This study employed a qualitative approach to explore the issue of school dropout in depth. The choice of this method was driven by the need to capture the social, cultural, and personal dimensions of the phenomenon, which cannot be adequately understood through numerical data alone. Through in-depth interviews and narrative accounts from adolescent girls, facilitators, and programme coordinators, the research uncovered the lived experiences and contextual factors contributing to dropout. However, limited use of quantitative methods was incorporated to provide supporting background information, such as enrolment figures and attendance records, thereby complementing the qualitative findings. As Creswell and Plano Clark (2018) highlight, qualitative methods are particularly valuable in educational research where complex social realities require nuanced, narrative-based exploration.

The study was conducted in selected SEQUIP-AEP learning centres across Tanzania**,** where the programme is being implemented under the supervision of the Institute of Adult Education**.** The study was conducted across five regions: Mara, Singida, Tanga, Iringa, and Dar es Salaam, strategically selected to reflect diverse geographic, cultural, and socioeconomic contexts. It covered only 20 SEQUIP-AEP learning centres out of 191. A purposive sample of 120 participants was selected, including 60 girls currently or formerly enrolled in the SEQUIP-AEP programme, 30 parents or guardians, and 30 education stakeholders such as teachers, programme coordinators, and education officers. The sample was carefully selected to ensure a balanced representation of stakeholders directly and indirectly involved in the reintegration process. According to Kothari (2004), an adequate sample size should be large enough to allow for meaningful analysis while remaining manageable within the scope of the study. The inclusion of multiple respondent categories allowed for triangulation of data and enriched the validity of the findings.

This study employed a mixed-methods approach to collect both qualitative and quantitative data from participants across the selected SEQUIP-AEP learning centres. The use of multiple data collection methods was guided by the need to capture diverse perspectives and ensure the reliability and depth of findings. As Cohen et al. (2018) emphasise, no single method can fully capture the complexity of social realities, and triangulation enhances the credibility of research outcomes. Semi-structured interviews were conducted with adolescent girls, facilitators, centre coordinators, parents, and community leaders. In addition, focus group discussions (FGDs) were organised with groups of learners and parents to encourage dialogue and uncover

shared experiences. Finally, document reviews were conducted to analyse enrolment records, students' attendance, and programme reports.

This study employed both qualitative and quantitative data analysis techniques to interpret findings from the diverse participant groups. The mixed-methods approach was chosen to ensure a comprehensive understanding of the socio-cultural, economic, and institutional factors influencing girls' reintegration into education through the SEQUIP-AEP programme. By combining numerical data with narrative insights, the study was able to capture both the scale of the challenges and the lived experiences behind them. As Cohen, Manion & Morrison (2018) emphasise, integrating multiple forms of analysis enhances the validity and depth of educational research, especially when dealing with complex social phenomena.

Quantitative data, including percentages extracted from tables on barriers, support indicators, and learner outcomes, were analysed using descriptive statistical techniques. This process involved calculating frequencies, percentages, and identifying comparative trends across different regions and participant categories. Such statistical summaries were essential in pinpointing the most widespread socio-economic and cultural challenges as reported by respondents. For example, the analysis revealed that a lack of financial resources to cover basic needs such as transportation and minor school-related expenses was a major barrier in many areas. Descriptive statistics provided a clear and concise way to interpret large volumes of data, making it easier to visualise patterns and disparities among different groups. This method also facilitated comparisons between regions, allowing the study to highlight areas where support systems were either strong or lacking. The findings helped to identify priority areas for intervention and informed recommendations for policy and programmatic improvements. The use of descriptive statistics aligns with the guidance of Kothari (2004), who advocates for this approach in social science research due to its effectiveness in summarising complex datasets. By presenting data in an accessible format, researchers can communicate key insights more effectively to policymakers, educators, and other stakeholders, thereby enhancing the impact and relevance of the study.

Qualitative data from interviews and focus group discussions were analysed thematically. This process involved transcribing responses, coding recurring ideas, and grouping them into major themes such as stigma, early marriage, parental support, and institutional adequacy. Thematic analysis allowed the researcher to uncover patterns in how participants described their experiences, perceptions, and challenges. For instance, many girls expressed feelings of shame and rejection, which were consistently linked to community attitudes. This method followed the framework proposed by

Braun & Clarke (2006), which is widely used for identifying, analysing, and reporting patterns within qualitative data. The iterative nature of this analysis ensured that emerging themes were refined and validated throughout the research process.

To enhance reliability and credibility, triangulation was applied by comparing findings across different data sources, interviews, FGDs, observations, and document reviews. This cross-verification helped to confirm the consistency of responses and reduce bias. For example, the lack of teaching materials reported by learners was also observed during site visits and confirmed in programme records. Triangulation strengthens the trustworthiness of the study by ensuring that conclusions are not based on a single source of information. This approach is supported by CAMFED Tanzania's Data for Excellence model (2024), which emphasises collabourative and context-sensitive data interpretation to dismantle barriers to girls' education. Ultimately, the analysis was guided by the study's objectives and research questions, ensuring that all findings were relevant, actionable, and grounded in both empirical evidence and lived realities.

Results and Discussion

This section presents a comprehensive analysis of the study's results, structured around five key themes that emerged from the data. These themes reflect the most salient patterns and insights derived from both quantitative and qualitative responses, offering a nuanced understanding of Socioeconomic and Cultural Barriers to Girls' Re-entry into School through the SEQUIP-AEP Programme in Tanzania.

Socio-Economic Barriers

The findings of the study revealed that socio-economic barriers were the most frequently cited barrier to girls' retention in the SEQUIP-AEP programme. Although the programme is tuition-free, indirect costs related to transport, scholastic learning materials and personal hygiene products remain unaffordable for many families. Poverty within families was observed as a barrier to some girls' re-entry into school. Some Parents may not afford daily fare. Findings revealed that some students have missed classes just because of transport money. Out of the 60 girls surveyed, 42 (70%) reported that financial constraints directly affected their ability to attend classes regularly. This challenge was especially pronounced in rural regions like Singida and Mara, where household incomes are low and economic opportunities are limited. One student said that:

> I missed classes for a whole week or some days because I didn't have money for transport. My parents are unable to pay the transport fare every day. When they don't have money to give me as fare, I have to stay home.

This point was supported by another student who remarked that:

> Sometimes I walk more than 5 kilometres to the learning centre because my parents are poor, they don't have money to pay the transport fare daily. This situation discouraged me from going to school daily. Even if I don't have money for food, I stay home

This quote reflects the harsh reality faced by many girls who, despite being deeply motivated to pursue their education, are constrained by circumstances beyond their control. It highlights the intersection of poverty and access to education, where basic needs such as transportation and food become insurmountable barriers. The long distance to school not only causes physical exhaustion but also affects attendance and concentration in class. The lack of financial support from families, often due to widespread economic hardship, forces girls to make difficult choices between survival and schooling. This situation is further exacerbated in rural areas, where infrastructure is limited, and support systems are weak or non-existent. Rugimbana and Mwila (2023), in their study on school dropout among girls in Temeke Municipality, Tanzania, found that poverty, long distances to school, and lack of sanitary pads were among the leading causes of dropout, particularly in underserved communities. Such testimonies underscore the urgent need for targeted interventions, including transport subsidies, school feeding programmes, and community-based support networks, to ensure that no girl is left behind simply because of her socio-economic status.

Furthermore, responses from parents and guardians also concluded that the socio-economic barriers play a strong role in girls' re-entry into the SEQUP-AEP programme. Through interviews, 22 out of 30 (73%) admitted that they struggled to support their daughters with basic school-related needs. Some parents expressed guilt, while others felt helpless. One guardian from Tanga explained that:

> We want our daughters to study, but we have to choose between buying food for the family and buying books. It's not that we don't value education; we do. But when survival is at stake, education becomes a luxury we cannot afford. Sometimes we feel helpless watching our children stay home, not because they lack ambition, but because we lack the means to support them. If there were more support from the government or community, like free learning materials or school meals, maybe our daughters wouldn't have to choose between hunger and hope

This response offers a powerful insight into the lived realities of families navigating extreme poverty while trying to support their daughters' education. It underscores the difficult trade-offs that low-income households are forced to make, where basic survival needs such as food take precedence over long-term investments like schooling. The statement reflects a deep appreciation for education, yet reveals how structural inequalities and economic hardship render that aspiration unattainable. This testimony highlights the concept of "opportunity cost" in education, where the cost of sending a child to school is not just financial, but also emotional and practical. It

illustrates how poverty is not merely a lack of income, but a multidimensional barrier that affects decision-making, access to resources, and future planning. The mention of helplessness suggests a psychological toll on parents who are aware of the consequences but feel powerless to change them.

From a policy perspective, this quote reinforces the urgent need for pro-poor educational interventions such as the provision of free learning materials, school feeding programmes, and conditional cash transfers. A study by UNESCO (2018) supports this view, noting that school feeding initiatives and financial support schemes significantly improve attendance and retention rates among girls in low-income households. It also calls for community-based support systems that can buffer the effects of poverty and ensure that girls are not forced to choose between hunger and education. Addressing these barriers is essential for achieving inclusive and equitable education, as envisioned in Sustainable Development Goal 4.

It was further revealed that inadequate hygiene facilities lead girls' students to have irregular attendance in the classroom. This was observed through focus group discussions with students. Thus, 20 % of respondents pointed out that inadequate hygiene facilities prevent girls from managing their menstrual health with dignity, which results in inconsistent attendance to studying, which might result in drop out. The girls pointed out that they feared embarrassment during their monthly periods due to a lack of sanitary towels /pads, so they are sometimes forced to miss school for several days or even a week. This situation affects their academic performance and increases the risk of dropout. One girl student pointed out that:

> I stopped going to school during my monthly periods because I was afraid, I might stain my dress. I didn't have access to sanitary pads, and the fear of embarrassment made me stay home. Sometimes I would miss several days each month, which affected my performance and made it hard to keep up with lessons

This kind of testimony highlights the urgent need for menstrual health support in AEP Learning centres, including access to sanitary products, private washrooms, and education to reduce stigma. These findings were supported by Ngales (2005) points out that in Ethiopia, female students were often absent in class during menstruation, and frequent absence led them to drop out of school. The study revealed that inadequate hygiene facilities in AEP learning centres are among of factors contributing to irregular attendance and eventual dropout among girls, particularly during menstruation.

Furthermore, responses from teachers collected through questionnaires, alongside insights from interviews with Centre coordinators and community stakeholders, revealed that socio-economic constraints are a major factor contributing to dropout

among girls enrolled in secondary education through the SEQUIP-AEP programme. Teachers consistently reported that girls from impoverished households struggle to afford essential learning materials such as pens, exercise books, and school uniforms. For those living far from learning centres, the inability to pay for daily bus fare further compounds the challenge, often resulting in irregular attendance or complete withdrawal. One teacher interviewed stated,

> "It's heartbreaking to see a student eager to learn but unable to participate because she doesn't have a notebook or even a pen. Some girls come to school without breakfast and walk long distances. Eventually, they stop coming not because they don't care, but because they feel ashamed and defeated."

This testimony highlights the emotional toll that financial hardship imposes on learners, manifesting in feelings of embarrassment, low self-esteem, and disengagement from classroom activities. These findings underscore the multidimensional nature of poverty not just as a lack of income, but as a barrier that affects access, participation, and psychological well-being. The emotional distress linked to material deprivation often leads to absenteeism, diminished academic performance, and ultimately, dropout. Supporting this perspective, UNESCO (2021) emphasises that indirect costs such as transportation, school supplies, and meals remain significant deterrents to girls' education in sub-Saharan Africa, even when tuition fees are waived. These findings call for urgent policy attention to expand support mechanisms, including the provision of free learning materials, transport subsidies, and psychosocial support, to ensure that girls from disadvantaged backgrounds can remain in school and thrive.

These findings are consistent with Grant & Hallman (2008), who found that in Malawi, economic vulnerability significantly increased dropout rates among adolescent girls. Their study revealed that girls from low-income households were more likely to leave school early due to the inability to afford basic educational necessities such as uniforms, books, and examination fees. In many cases, these girls were also expected to contribute to household income through informal labour or caregiving responsibilities, further limiting their time and energy for academic engagement. The pressure to marry early, often as a strategy to reduce financial burden on the family, was also identified as a contributing factor to school discontinuation.

Similarly, Komba (2015) in Tanzania highlighted that poverty and lack of parental financial support were key contributors to school dropout, especially in rural and underserved communities. His research emphasised that when families are faced with economic hardship, girls' education is often deprioritised in favour of immediate survival needs. Parents may choose to invest in boys' education, perceiving it as more economically rewarding, while girls are expected to stay home and assist with domestic

chores or prepare for early marriage. The absence of safety nets such as bursaries, school feeding programmes, and transport subsidies exacerbates the situation, leaving many girls with no viable path to continue their education.

Based on these findings and discussion, the study concluded that most girls who return to secondary school through the SEQUIP-AEP programme and subsequently drop out again do so primarily due to socio-economic constraints at the family level. Many girls are unable to afford essential scholastic materials such as pens, exercise books, uniforms, and other basic learning supplies. Others struggle to attend classes regularly because they lack transport fare, especially those living far from AEP learning centres. Additionally, inadequate sanitation facilities, particularly during menstruation, pose a significant barrier to consistent attendance and participation. To address these challenges, SEQUIP-AEP must integrate financial support mechanisms into its framework. Providing transport stipends, learning kits, and menstrual hygiene products could significantly reduce dropout rates and improve retention.

These recommendations are strongly supported by findings from the World Bank (2020), which emphasise that targeted financial interventions such as cash transfers, provision of school supplies, and menstrual health support have a measurable impact on reducing dropout rates and improving educational outcomes for girls in low-income settings. The report highlights that when families receive financial assistance or when schools provide essential materials and hygiene products, girls are more likely to attend regularly, participate actively, and complete their education. Such support not only alleviates the direct costs of schooling but also addresses indirect barriers like stigma, absenteeism during menstruation, and low self-esteem caused by material deprivation

Domestic Responsibilities

Another critical barrier observed was the need to work for family income**,** cited by 30% of respondents. Many girls are compelled to engage in petty trade, domestic labour, or farming to support their families. This economic pressure often conflicts with school schedules, leading to absentee or irregular attendance. This situation affected not only their learning performance in the classroom, even their retention and completion rates.

Domestic responsibilities were identified as a major barrier to girls' consistent participation in SEQUIP-AEP. In many households, girls are expected to perform a wide range of chores, including farming, cooking, cleaning, fetching water, and caring for younger siblings. These tasks often conflict with study schedules, leaving little time or energy for academic engagement. Among the girls interviewed, 36 (60%) cited

domestic duties as a reason for missing classes or struggling to concentrate. Financial hardships compel parents to assign domestic responsibilities or income-generating tasks to daughters, further limiting their time for school (Plan International, 2013). These socioeconomic barriers rooted in poverty intersect with cultural norms, making it difficult for parents to support girls' re-entry into school after dropout" (FAWE, 2015).

The burden of household work was particularly heavy in rural areas, where traditional gender roles are deeply entrenched. Girls are often viewed as caregivers and homemakers, regardless of their age or educational aspirations. One girl from Mara shared,

> "I wake up at 5 a.m. to cook and clean before going to class. By the time I get there, I'm already tired. Sometimes I haven't even had breakfast, but I still go because I want to learn. It's hard to concentrate when your body is exhausted, and your mind is worried about chores waiting at home. I wish I had more time and support to focus on my studies like other students."

This daily routine not only affects academic performance but also reinforces the deeply rooted belief that education is secondary to domestic obligations, especially for girls. The burden of household chores such as cooking, cleaning, fetching water, and caring for siblings often falls disproportionately on girls, leaving them physically exhausted and mentally distracted by the time they reach the classroom. This imbalance limits their ability to concentrate, participate actively, and perform well academically. This finding highlights the intersection of gender norms and educational access. It shows how cultural expectations can subtly undermine girls' learning opportunities, even when families claim to value education. These attitudes contribute to a cycle where girls internalise the belief that their academic success is less important than fulfilling traditional roles.

Leach et al. (2003) strongly support these findings by demonstrating how entrenched gender roles within households directly impact girls' educational access and performance. Their research shows that domestic responsibilities, often considered culturally appropriate for girls, consume significant time and energy, leaving little room for academic focus. This aligns with the current study's observation that girls enrolled in SEQUIP-AEP face daily routines that prioritise household chores over learning, resulting in fatigue, absenteeism, and reduced classroom engagement.

Sommer et al. (2020) argue that unpaid domestic labour disproportionately affects girls' educational outcomes in sub-Saharan Africa. Their findings align with this study, emphasising the need for community sensitisation and parental engagement. SEQUIP-AEP should incorporate awareness campaigns that promote shared household responsibilities and emphasise the long-term value of girls' education.

Generally, the study findings revealed that household responsibilities pose significant barriers to girls' re-entry and sustained participation in the SEQUIP-AEP programme. Many girls reported being expected to contribute to household income through petty trade or domestic labour, which often conflicted with their study schedules and reduced their ability to attend classes regularly. The researcher also observed that girls who were young mothers faced additional challenges, as they lacked adequate support from parents or guardians and were solely responsible for childcare. This dual burden of parenting and household duties negatively impacted their academic engagement and frequently led to irregular attendance or eventual dropout.

These findings are strongly supported by Plan International (2013), which emphasises that in low-income households, parents are more likely to retain daughters at home to assist with domestic chores or income-generating activities rather than sending them to school. The report highlights that such practices are rooted in economic necessity and gendered expectations, both of which undermine girls' educational opportunities. This evidence reinforces the need for targeted interventions that address not only financial barriers but also the socio-cultural norms that deprioritise girls' education in favour of household labour.

Social Stigma and Psychological Impact

Study findings revealed that beyond material barriers, girls who returned to school through the SEQUIP-AEP programme experienced social stigma from peers and the community that discouraged attendance as well as psychological impacts such as low self-esteem, guilt and frustration. Social stigma was a powerful deterrent to girls' re-entry and retention in education. Girls who returned to school after pregnancy often faced judgment and exclusion from peers, teachers, and community members. This stigma manifested in subtle ways, such as being ignored in group activities or overt hostility, including verbal abuse. Of the girls surveyed, 33 (55%) reported experiencing stigma that affected their willingness to continue attending classes. The psychological impact of this stigma was profound. Many girls described feelings of shame, isolation, and anxiety. One girl from Singida shared,

> "Some people say I'm a bad example. Even some teachers don't treat me the same. They look at me differently, as if I don't deserve to be in class. It hurts because I'm trying my best to learn and change my life. Just because I made mistakes or have a child doesn't mean I don't care about my future. I wish people could see my potential instead of judging my past."

This response reveals the profound impact of stigma and discrimination on girls who re-enter education through alternative pathways such as SEQUIP-AEP. The statement, *"Some people say I'm a bad example. Even some teachers don't treat me the same,"*

reflects not only social judgment but also institutional bias that undermines the confidence and motivation of vulnerable learners, particularly young mothers or girls who have experienced early pregnancy. This kind of marginalisation within the school environment can lead to emotional distress, low self-esteem, and a diminished sense of belonging. When educators, who are meant to be sources of support and encouragement, become agents of exclusion, the learning space becomes psychologically unsafe. Such experiences may result in absenteeism, disengagement, or even dropout, despite the learner's determination to continue her education.

From a gender and equity perspective, this testimony highlights the urgent need for teacher sensitisation and inclusive school policies that protect and empower all learners, regardless of their background. It also calls for psychosocial support services within AEP centres to help girls navigate stigma and rebuild their self-worth. Supporting this view, studies such as those by Unterhalter et al. (2014) emphasise that social acceptance and emotional safety are critical components of successful re-entry programmes for girls in sub-Saharan Africa. Ultimately, addressing these attitudinal barriers is just as important as removing financial and logistical obstacles. A truly inclusive education system must foster dignity, respect, and equal treatment for every learner.

Parents and guardians also noted the negative attitudes within their communities. Some feared that allowing their daughters to return to school would attract gossip or damage the family's reputation. A parent (father) from Singida explained,

> People talk all the time. They say my daughter should stay home and raise her child, that she has no place in school anymore. It's hard to ignore those voices, especially when they come from neighbours, relatives, or even people we respect. But I know she wants to learn, and I believe she deserves a second chance. Still, the pressure from the community makes it difficult for us as a family to fully support her without fear of judgment."

This response adds emotional nuance and highlights the tension between personal belief and societal pressure. It reveals the internal conflict faced by parents who genuinely wish to support their daughters' education but are constrained by the fear of community judgment and cultural expectations. The father's words reflect a broader social reality in which re-entry into education for young mothers is not only a personal journey but also a communal negotiation. The stigma attached to early pregnancy and motherhood often overshadows a girl's potential and desire to learn, making reintegration into school a socially sensitive issue.

This testimony underscores the importance of community sensitisation and awareness campaigns aimed at shifting harmful narratives and promoting inclusive attitudes. It also points to the need for school environments that actively protect and affirm the

dignity of all learners, regardless of their background. Supporting this perspective, studies such as those by Chigona & Chetty (2008) emphasise that social acceptance and family support are critical for the success of teenage mothers returning to school. Without addressing these attitudinal barriers, educational programmes risk reinforcing exclusion rather than fostering empowerment.

Furthermore, teachers admitted that they were not always equipped to handle the emotional and psychosocial needs of returning students, particularly girls who had experienced early pregnancy or prolonged absence from formal schooling. Several educators acknowledged that unconscious bias, limited exposure to inclusive pedagogies, and a lack of specialised training contributed to the problem. One newly recruited teacher from Dar es Salaam stated,

> "We need guidance on how to support these girls. It's not easy. Sometimes we want to help, but we don't know how to approach their situation without making them feel uncomfortable."

This candid reflection illustrates the challenges teachers face in creating safe and supportive learning environments for vulnerable learners. This gap in professional development highlights the urgent need for continuous capacity-building initiatives that equip the new teachers with the skills to respond empathetically and effectively to the diverse needs of students. Inclusive education practices such as trauma-informed teaching, gender-sensitive approaches, and psychosocial support are essential to ensure that all learners feel valued and understood. Supporting this observation, UNESCO (2015) emphasises that teacher training is a cornerstone of inclusive education. Their report advocates for continuous professional development that addresses not only curriculum delivery but also the emotional and social dimensions of learning, especially for marginalised groups. Without such training, well-intentioned educators may inadvertently reinforce exclusion, undermining the goals of re-entry programmes like SEQUIP-AEP.

Human Rights Watch (2018) documented similar findings in East Africa, where stigma against adolescent mothers was a key factor in educational exclusion. Their report emphasised the importance of psychosocial support and community education in reducing stigma and promoting reintegration. To combat stigma, SEQUIP-AEP programme must strengthen counselling services and train educators in inclusive practices. Peer mentorship and support groups can also help girls rebuild confidence and navigate social challenges.

The findings reveal a multifaceted challenge in supporting girls' re-entry into education through the SEQUIP-AEP programme. Teachers openly admitted that they lacked the training and resources to address the emotional and psychosocial needs of

returning learners, particularly young mothers. This gap in professional development often leads to unintentional bias and exclusion, undermining the goals of inclusive education. Parents, too, expressed concern over community stigma, fearing that allowing their daughters to return to school could damage the family's reputation. These social pressures create an environment where girls struggle to feel accepted and valued. Supporting these findings, Chigona and Chetty (2008) emphasise that teenage mothers in South Africa often face judgmental attitudes from both educators and communities, which negatively affect their reintegration into school. Their study highlights the importance of emotional support, teacher training, and community sensitisation in ensuring that re-entry programmes are truly inclusive and effective.

Therefore, for SEQUIP-AEP to fulfil its mission, it must go beyond academic access and address the social and emotional dimensions of learning. This includes equipping teachers with gender-sensitive training, engaging communities in awareness campaigns, and creating safe spaces where every learner, regardless of background, can thrive. Only through such holistic efforts can we dismantle the barriers that continue to hold girls back from realising their full educational potential.

Cultural barriers

The study found that cultural practices and gender norms play a substantial role in influencing girls' dropout from studies. Cultural expectations and gender roles were cited by both students, teachers and coordinators as significant barriers. Early marriage**,** stigma after pregnancy and domestic responsibilities were frequently mentioned. Teachers reported that some parents discouraged their daughters from continuing education, believing it was unnecessary after childbirth or that it conflicted with traditional roles. One dropout girl from the Mara region explained:

> "After I gave birth, people in my village said I should stay home and take care of the baby. They laughed when I tried to go back to school. Some even said I was wasting my time, that no one would take me seriously anymore. It was painful, but I didn't give up. I want to prove that being a mother doesn't mean the end of my dreams. I still have goals, and education is the key to changing my future."

This point is supported by one girl from Iringa who shared that;

> "My uncle said I should stop wasting time and get married. He thinks school is no longer useful for me. He told me that education won't help a girl like me, especially now that I've had a child. It made me feel like my dreams didn't matter anymore. But I still believe I have a future beyond marriage. I want to learn, to build a better life for myself and my child, even if others don't see the value in it."

This response illustrates how family influence, especially from male relatives, can reinforce the belief that a girl's value lies in domestic roles rather than academic achievement or personal development. Such attitudes are not isolated. They are part of a broader cultural narrative that prioritises marriage and caregiving over education for girls, especially in rural and low-income settings. Supporting this observation, Mensch et al. (2001) found that in many sub-Saharan African communities, early marriage and childbearing are often viewed as the natural progression for girls, while education is seen as secondary or even irrelevant once a girl becomes a mother. Their study highlights how these perceptions contribute to low re-entry rates and high dropout rates among adolescent mothers.

This testimony also underscores the emotional toll of being dismissed and undervalued by close family members. It reveals the internal conflict faced by girls who aspire to continue their education but are pressured to conform to traditional roles. As a researcher, these points to the urgent need for community-level interventions that challenge harmful gender norms and promote the value of girls' education even after motherhood. Programmes like SEQUIP-AEP must not only provide academic access but also engage families and communities in reshaping attitudes that limit girls' potential.

(UNESCO, 2015) highlights that in many African contexts, and Tanzania in particular, parents often perceive educating girls as less valuable than educating boys. This perception stems from the belief that daughters will eventually marry and join another household, making any investment in their education seem like a "waste." Such cultural attitudes contribute significantly to low school enrolment, early dropout, and limited re-entry opportunities for girls, especially those who have experienced early pregnancy or motherhood.

On the other hand, Programme coordinators noted that cultural resistance was one of the most difficult challenges to overcome. Even when girls were motivated to learn, external pressure often led them to abandon their studies. A coordinator from Mara stated,

> "We've lost students to marriage. It's heartbreaking. You see them full of potential, bright, curious, eager to learn and then suddenly they're gone. It's not just a loss for the school, it's a loss for the community and for their future. We try to encourage them to stay, but the pressure from families and traditions is overwhelming. Sometimes, it feels like we're fighting a battle we can't win."

These cases underscore the persistent tension between cultural expectations and girls' educational aspirations. The study revealed that in many communities, deeply rooted cultural beliefs such as the notion that girls are destined to marry and join another household intersect with economic hardship, compounding the barriers to re-entry

into education. In contexts of poverty, families often prioritize immediate survival over long-term investment in education, especially for daughters whose future contributions are perceived to benefit other households. Consequently, girls are frequently retained at home to assist with domestic chores or engage in income-generating activities, significantly diminishing their chances of returning to school. This intersection of gender norms and economic vulnerability highlights the urgent need for holistic interventions that address both cultural attitudes and material constraints. Without confronting these entrenched beliefs and offering targeted support such as community sensitization, financial assistance, and flexible learning options efforts to reintegrate girls into education risk being ineffective. Sustainable change requires a multi-layered approach that empowers families to value girls' education and enables girls to pursue their academic goals without fear of stigma or economic exclusion.

Community attitudes often stigmatise girls who attempt to return to school after pregnancy, labelling them as "bad examples" to other students (Plan International, 2012). This form of social exclusion is deeply rooted in gender norms that promote the belief that girls should focus on caregiving and domestic responsibilities rather than pursuing formal education (FAWE, 2015). Such expectations not only limit girls' opportunities but also reinforce the idea that motherhood and marriage mark the end of a girl's academic journey.

Responses from Parents showed that there are some parents who supported their daughters' education, as they believe that education is key to success. Other parents believed that marriage was a more secure path than education. One parent from Tanga explained,

> "Education is good, but marriage brings stability. That's what people in my family believe. They say a girl's future is more secure when she has a husband to provide for her, not when she's chasing books and certificates. Sometimes I wonder if they're right, because the pressure is strong. But deep down, I know education can also bring independence, confidence, and choices. I want both stability and knowledge, but it feels like I'm being forced to choose one over the other."

This perception underscores the need for economic empowerment and awareness campaigns that promote the benefits of education. Malhotra et al. (2019) argue that early marriage is both a cause and consequence of educational dropout, particularly in rural African communities. Their research supports the findings of this study and calls for targeted interventions to delay marriage and support girls' schooling. Likewise, Msafiri & Lianyu (2022) conducted a study in Mara Region, Tanzania, and found that early marriage and societal stigma were among the leading causes of dropout among

adolescent girls. Their research emphasised that girls who became pregnant or married were often viewed as "unfit" for education, and community attitudes reinforced their exclusion. UNESCO (2015) reported that in many parts of sub-Saharan Africa, gender norms and cultural beliefs continue to undermine girls' education. The report highlighted that girls are disproportionately affected by expectations to perform domestic labour and conform to traditional roles, which limits their access to and retention in school. In Nigeria, Okeke, Nzewi, & Njoku (2012) found that patriarchal norms and early marriage were significant barriers to girls' education. Their study revealed that girls were often withdrawn from school to prepare for marriage or to avoid "moral corruption," reflecting deep-seated cultural anxieties. Similarly, Girma & Kedir (2005) in Ethiopia noted that gendered expectations restrict girls' mobility and autonomy, making it difficult for them to attend school regularly. Their findings align with the Tanzanian context, where cultural norms often dictate girls' roles and limit their educational opportunities.

Conclusion

This study concludes that although the SEQUIP-AEP programme offers a vital opportunity for girls who have dropped out of secondary education, its implementation faces significant socioeconomic and cultural barriers. Poverty, domestic responsibilities, social stigma, and cultural practices particularly those promoting early marriage, are among the key barriers confronting girls who re-enrol in the programme. These challenges are especially pronounced in rural areas, where poverty is more severe, and gender roles are more rigid, leading some girls, though not the majority, to drop out again. Re-entry into education is not merely a matter of access; it requires sustained emotional, social, and economic support. Without addressing the root causes of these barriers, SEQUIP-AEP risks falling short of its goals to empower girls and promote educational equity. Testimonies from girls, parents, and education stakeholders highlight the urgent need for a holistic and context-sensitive approach that reflects the realities of girls' lives.

Recommendations

To improve the effectiveness of the SEQUIP-AEP programme and strengthen girls' re-entry and retention in education, several key recommendations are proposed. First, the government and education stakeholders should prioritize financial support by providing transport stipends, essential learning materials such as pens and exercise books, and menstrual hygiene products to reduce indirect costs that hinder attendance. Second, psychosocial support and counselling services should be enhanced to help girls overcome stigma and build emotional resilience. Third, community engagement

should be prioritized through awareness campaigns that emphasize the value of girls' education, reduce stigma, and challenge cultural norms around early marriage, with active involvement from community leaders, parents, and teachers. Fourth, emotional and social support should be reinforced by investing in peer support groups and creating safe, inclusive school environments for girls who previously dropped out. Finally, monitoring and evaluation of re-enrolled girls' progress should be conducted through a robust system that identifies challenges early and provides timely support, while evidence from beneficiaries and education stakeholders should be used to inform policy and improve programme implementation.

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Assessment of Learning Opportunities for Girls Rejoining School via SEQUIP-AEP

Baraka Kionywaki & Amina Abubakar, Institute of Adult Education

Email: basaki2007@yahoo.com and amiabu87@yahoo.com

Abstract

Reintegrating adolescent girls into formal education in Tanzania remains a challenge due to early pregnancy, poverty, and harmful cultural norms. This study explores the role of the SEQUIP-AEP programme in providing inclusive and flexible learning opportunities for marginalised girls across seven regions. Using qualitative methods, the research reveals that SEQUIP-AEP offers transformative support through psychosocial counselling, life skills training, flexible learning models, and community engagement. Girls reported increased self-esteem, academic progress, and renewed aspirations, highlighting the programme's impact in empowering adolescent mothers and vulnerable girls. The findings demonstrate SEQUIP-AEP's effectiveness in addressing educational barriers and promoting social reintegration. To sustain these achievements, the study recommends securing long-term funding, integrating the programme into national education policies, and ensuring consistent institutional support. Strengthening community sensitisation is also crucial to challenge harmful norms and foster a more inclusive environment where girls can thrive both academically and socially, reclaiming their right to education and opportunity.

Key words: Adolescent girls, educational reintegration, marginalised learners, psychosocial emotional support, cultural barrier

Introduction

Globally, education is recognised not only as a fundamental human right but also as a powerful tool for transforming lives and driving social and economic development. However, in Tanzania, many adolescent girls continue to face significant barriers that hinder their access to continuous schooling and limit their learning opportunities. Factors such as poverty, early marriage, teenage pregnancy, and heavy household responsibilities have historically contributed to high dropout rates among girls. As noted by UNICEF (2007), "girls from poor families drop out of school due to poverty, early marriage, and teenage pregnancy," highlighting how socio-economic pressures restrict their educational pathways. Similarly, Grace (2010) argues that cultural expectations and domestic duties often curtail girls' opportunities to pursue uninterrupted learning. Historically, educational policies in Tanzania have further constrained learning opportunities by preventing adolescent mothers from returning to formal schooling, deepening their exclusion and limiting their life chances. In response to these entrenched challenges, the Government of Tanzania, in

collabouration with development partners such as the World Bank, launched the Secondary Education Quality Improvement Programme – Alternative Education Pathway (SEQUIP-AEP). This innovative initiative is specifically designed to expand inclusive, flexible, and context-sensitive learning opportunities for marginalised girls, particularly adolescent mothers and those who have dropped out of secondary school.

UNESCO (2015) emphasises that alternative education pathways provide second chances for learners excluded from the formal system, ensuring that education remains a lifelong learning opportunity. SEQUIP-AEP embodies this principle by offering a comprehensive support package that includes psychosocial emotional counselling, life skills development, and alternative learning models tailored to the unique needs of its target population. According to the World Bank (2020), flexible learning programmes are essential in addressing the specific challenges faced by adolescent mothers and vulnerable girls. By creating accessible and adaptable learning opportunities, SEQUIP-AEP serves as a transformative pathway for educational re-entry, personal empowerment, and lifelong learning.

Globally and in Tanzania in particular, the reintegration of adolescent girls into education is increasingly recognised as a cornerstone of gender equity and sustainable development. Achieving inclusive and equitable access to education is central to national progress and aligns with Sustainable Development Goal 4 (SDG 4), which promotes quality education for all. Placing girls' education at the heart of global development agendas reflects a growing consensus that empowering girls through learning opportunities is essential for breaking cycles of poverty, improving health outcomes, and fostering inclusive societies. Despite policy reforms and increased advocacy for inclusive education, many adolescent mothers in Tanzania continue to face systemic and deeply rooted barriers that hinder their return to school. These barriers are not only institutional, such as restrictive re-entry policies, inadequate infrastructure, and lack of childcare support, but also social and psychological. Widespread stigma, discriminatory attitudes, and cultural norms that undervalue girls' education contribute to their marginalisation and exclusion. Reintegration, therefore, must be understood not merely as a logistical process of re-enrolment but as a transformative journey that requires holistic support systems and flexible learning opportunities tailored to the unique needs of adolescent mothers. Among the most significant contributors to school dropout among girls in Tanzania is early pregnancy, which often leads to abrupt disengagement from formal education. Without alternative pathways or supportive reintegration mechanisms, these girls are left with limited prospects for continuing their learning. Addressing this challenge demands innovative approaches that prioritise second-chance education, psychosocial and emotional

support, and community engagement, ensuring that every girl, regardless of her circumstances, has the learning opportunity to reclaim her right to learn and thrive.

The learning opportunities provided by SEQUIP-AEP are multi-dimensional, spanning educational, socioeconomic, psychosocial emotional and emotional, and policy-driven interventions. This holistic approach recognises that adolescent girls, particularly those who have dropped out due to early pregnancy, poverty, or harmful cultural norms, require more than just academic instruction to successfully reintegrate into the education system. SEQUIP-AEP offers a second chance for these girls to resume their education in a flexible and supportive environment that acknowledges their lived realities and personal responsibilities. By doing so, the programme not only facilitates re-entry into non-formal learning but also enables learners to complete their education cycle and transition to higher levels of learning, including vocational training and tertiary education. These learning opportunities are designed to be inclusive and transformative, empowering girls with the knowledge, skills, and confidence needed to reclaim their futures. The programme's emphasis on psychosocial and emotional counselling, life skills development, and community engagement ensures that girls are supported emotionally and socially, helping them overcome stigma and rebuild their self-worth. Moreover, SEQUIP-AEP aligns with national and global education goals, particularly Sustainable Development Goal 4 (SDG 4), which advocates for inclusive and equitable quality education for all.

UNESCO (2018) highlights that alternative education pathways are critical in expanding educational access for marginalised learners who would otherwise remain excluded from the formal system. Similarly, UNICEF (2019) asserts that every girl has the right to continue learning regardless of her circumstances, reinforcing the importance of programmes like SEQUIP-AEP in safeguarding educational equity. By addressing both structural and social barriers, SEQUIP-AEP creates meaningful learning opportunities that not only restore access to education but also promote long-term empowerment and social reintegration for adolescent girls across Tanzania.

Rejoining school through SEQUIP-AEP creates pathways for long-term socioeconomic transformation. The World Bank (2020) notes that education is the most powerful investment for breaking intergenerational poverty and promoting sustainable growth. By completing secondary education, girls enhance their employability, access better income opportunities and reduce their vulnerability to poverty. The SEQUIP-AEP framework provides psychosocial and emotional opportunities by restoring confidence and dignity to adolescent mothers. Human Rights Watch (2021) notes that true reintegration requires not only access to classrooms but also the dismantling of discriminatory barriers that perpetuate stigma.

Thus, reintegration also requires healing, empowerment and cultural transformation. Furthermore, by aligning with Sustainable Development Goal 4, SEQUIP-AEP ensures that Tanzania is moving towards inclusive and equitable quality education and promoting lifelong learning opportunities for all.

A growing body of research has explored the learning opportunities available to adolescent girls who re-enter education after dropping out, particularly in the Tanzanian context, where early pregnancy, poverty, and harmful cultural norms continue to undermine girls' educational attainment. Buyobe (2025) conducted a qualitative study in rural secondary schools and found that while many male teachers expressed support for girls' education, their teaching practices often lacked gender sensitivity. The study revealed that girls rejoining school faced pedagogical barriers such as limited classroom participation, teacher bias, and inadequate instructional materials. Buyobe emphasised the need for teacher training programmes that promote inclusive pedagogy and foster safe, supportive learning environments for girls returning to school.

Complementing this, the Transforming Education for Girls in Tanzania (TEGINT) project by ActionAid Tanzania provided robust baseline data across multiple regions, highlighting how community-based interventions can expand learning opportunities for marginalised girls. Through the establishment of girls' clubs, peer mentoring, and life skills education, the project created alternative spaces where girls could learn, express themselves, and build resilience. These platforms not only supported academic recovery but also empowered girls to challenge gender-based discrimination and advocate for their rights within their communities. The TEGINT findings underscore the importance of integrating psychosocial emotional support and community engagement into educational reintegration strategies.

Further, Iddy (2021) examined the disconnect between Tanzania's legal framework and its practical implementation regarding girls' right to education. Despite progressive policies aimed at promoting gender equality, the study found that pregnant schoolgirls were routinely expelled, with few mechanisms in place to facilitate their return. Iddy argued that the absence of clear reintegration pathways and institutional support perpetuates educational exclusion and deepens social stigma. The study called for comprehensive policy reforms, including the development of re-entry guidelines, school-level support systems, and legal protections to ensure that adolescent mothers can continue their education without discrimination.

Together, these studies paint a compelling picture of the multifaceted learning opportunities and persistent challenges faced by girls rejoining school in Tanzania. They highlight the need for flexible education models such as alternative learning

centres and modular curricula, which accommodate the realities of adolescent motherhood. They also stress the critical role of psychosocial emotional counselling, life skills development, and community sensitisation in fostering inclusive and empowering learning environments. Importantly, the research calls for systemic reforms that align policy with practice, ensuring that girls are not only allowed to return to school but are supported to thrive academically, socially, and emotionally.

Beyond academics, SEQUIP-AEP integrates psychosocial emotional counselling, life skills development, and mentorship to support girls holistically. This multidimensional approach not only enhances educational access but also fosters self-confidence, resilience, and a renewed sense of purpose among participants. By engaging communities and challenging harmful norms, the programme helps create a more supportive environment for girls to thrive both socially and academically.

This study, therefore, assesses the learning opportunities available to adolescent girls rejoining school through the Secondary Education Quality Improvement Programme – Alternative Education Pathway (SEQUIP-AEP). It focuses on how the programme's innovative and inclusive educational approaches contribute meaningfully to the reintegration, empowerment, and long-term development of girls who have previously been excluded from formal education systems. SEQUIP-AEP is designed to respond to the unique challenges faced by adolescent mothers and other vulnerable girls, offering flexible learning models that accommodate their personal circumstances, such as childcare responsibilities, social stigma, and economic hardship. The study highlights how the programme reignites hope, ambition, and self-worth among participants, many of whom had lost confidence in their ability to pursue education due to early pregnancy, poverty, or cultural expectations. Through its flexible and context-sensitive design, SEQUIP-AEP enables girls to re-enter the education system at their own pace, fostering a sense of ownership over their learning journey.

Methodology

This study adopted a qualitative research methodology to explore learning opportunities for girls rejoining school via the Secondary Education Quality Improvement Programme – Alternative Education Pathway (SEQUIP-AEP) in Tanzania. A qualitative approach was chosen to capture the lived experiences, perceptions, and contextual realities of adolescent girls who had dropped out of school due to early pregnancy, poverty, and harmful cultural norms. This approach is particularly effective in uncovering complex social phenomena and has been widely recommended in gender-focused educational research (Creswell & Poth, 2018). The study was conducted across six regions: Arusha, Mwanza, Pwani, Simiyu, Songwe, and

Mtwara, selected for their geographic diversity and active participation in SEQUIP-AEP. These regions represent a mix of urban and rural contexts, allowing for comparative insights into how local environments shape educational reintegration (Ministry of Education, 2022).

The target population included adolescent girls enrolled in SEQUIP-AEP centres, educators and programme facilitators, and community stakeholders such as parents and local government officials. A purposive sampling technique was used to ensure that participants had direct experience with the programme. This sampling method is particularly suitable for qualitative studies that seek depth over breadth, as supported by Patton (2015), who emphasised the importance of selecting information-rich cases. The final sample comprised 210 participants: 120 adolescent girls, 40 educators, 30 community stakeholders, and 20 regional education officers.

To collect data, the study employed multiple methods to ensure triangulation and richness. Semi-structured interviews were conducted with adolescent girls and educators to explore individual experiences and perceptions. This method allows for flexibility while maintaining a consistent structure, and has been endorsed by Kvale and Brinkmann (2009) as ideal for capturing personal narratives in educational settings. Focus Group Discussions (FGDs) were used to gather collective insights from groups of 6–8 girls in each sampled AEP learning centre in the region. FGDs are particularly effective in generating peer-driven dialogue and revealing shared challenges, a technique supported by Johnson (2023), who noted that FGDs empower marginalised voices and foster mutual reflection among participants. Questionnaires were administered to educators and community stakeholders to gather both qualitative and quantitative data on societal attitudes, cultural norms, and support mechanisms. This mixed-method tool was validated by HakiElimu (2020), who found that combining open and closed questions enhances the reliability of community-based educational research.

In addition to primary data, the study incorporated document review to analyse SEQUIP-AEP policy materials, regional implementation reports, and national education statistics. Reviewing official documents provided a contextual framework and helped align field data with policy intentions, a strategy recommended by UNESCO (2023) for evaluating education programmes. Observational visits to SEQUIP-AEP centres were also conducted to assess the physical learning environment, teaching practices, and student engagement. Observational data added a layer of authenticity and allowed researchers to witness programme dynamics firsthand, echoing the guidance of Krueger and Casey (2015) on the value of field immersion in qualitative studies.

The study population included adolescent girls enrolled in SEQUIP-AEP centres, educators, programme facilitators, community stakeholders, and regional education officers. Data were collected from seven diverse regions: Arusha, Mwanza, Pwani, Simiyu, Songwe, and Mtwara, selected for their geographic, socio-economic, and cultural variation, as well as their active participation in SEQUIP-AEP. A purposive sampling technique was used to ensure that participants had direct experience with the programme, resulting in a total sample size of 210 individuals: 120 adolescent girls, 40 educators, 30 community stakeholders, and 20 education officers.

Table 1: Composition of Sample Size

Participant Category	Number of Participants	Percentage (%)	Description
Adolescent Girls	120	57.1%	Girls enrolled in SEQUIP-AEP centres who dropped out due to early pregnancy.
Educators	40	19.0%	Coordinators and facilitators delivering SEQUIP-AEP content and support services.
Community Stakeholders	30	14.3%	Parents, religious leaders, and local influencers engaged in girls' reintegration.
Education Officers	20	9.5%	Regional and district-level officials overseeing SEQUIP-AEP implementation.
Total	210	100%	All participants were selected through purposive sampling for direct programme insight.

Source: Field Data, 2025

The data collected in this study were analysed using thematic analysis, a qualitative method that enables researchers to identify, analyse, and report patterns (themes) within data. This approach was chosen for its flexibility and depth, allowing for the exploration of complex social and emotional experiences of adolescent girls participating in the SEQUIP-AEP programme. Thematic analysis is particularly effective in studies involving vulnerable populations, as it facilitates the interpretation of subjective narratives while preserving the authenticity of participants' voices (Braun & Clarke, 2006).

After data collection, all interviews and focus group discussions were transcribed verbatim to ensure accuracy and completeness. Transcripts were then reviewed multiple times to familiarize the researchers with the content and context. Initial coding was conducted manually, where meaningful segments of text were labelled based on recurring ideas, emotions, and experiences. These codes were then grouped into broader categories, which formed the basis for emerging themes. For instance, statements related to emotional healing, confidence-building, and trauma recovery were grouped under the theme of psychosocial emotional support. Similarly,

discussions around practical skills, decision-making, and financial literacy were categorised under life skills development.

Focus group data were particularly rich in revealing shared experiences and collective insights. The interactive nature of FGDs allowed participants to build on each other's responses, highlighting common challenges and aspirations. This method also helped uncover subtle social dynamics, such as peer influence and community attitudes, which might not have surfaced in individual interviews. Juma (2023) supports the use of FGDs in gender-focused research, noting that they foster mutual reflection and empower marginalised voices.

Questionnaire data were analysed using descriptive statistics to identify trends in community perceptions and educator responses. While the study was primarily qualitative, the inclusion of closed-ended questions allowed for quantification of certain variables, such as the percentage of stakeholders who support girls' re-entry into school or the frequency of stigma-related incidents. These quantitative insights complemented the qualitative findings and added robustness to the analysis (HakiElimu, 2020).

Triangulation was employed to enhance the credibility and validity of the findings. By comparing data across different sources, interviews, FGDs, questionnaires, and document reviews, the researchers were able to confirm recurring themes and identify discrepancies. Observational data from SEQUIP-AEP centres further enriched the analysis by providing contextual evidence of programme implementation, classroom dynamics, and student engagement. Patton (2015) emphasises that triangulation strengthens qualitative research by reducing bias and increasing interpretive confidence

Results and Discussion

The findings of this study revealed that the Secondary Education Quality Improvement Programme – Alternative Education Pathway (SEQUIP-AEP) has had a transformative impact on the reintegration of adolescent girls into formal education across the six regions studied: Arusha, Mwanza, Pwani, Simiyu, Songwe, and Mtwara. Through thematic analysis of data collected via semi-structured interviews, focus group discussions (FGDs), and questionnaires, four dominant themes emerged: psychosocial emotional support, life skills development, flexible learning models, and community engagement.

Psychosocial Emotional Support: Restoring Dignity, Rebuilding Identity, and Rekindling Hope

The findings from the study revealed that Psychosocial emotional support was not just a component of the SEQUIP-AEP programme; it was its emotional backbone, the silent force that enabled adolescent girls to begin healing from the trauma of early pregnancy, social rejection, and educational exclusion. Across all six regions studied, Arusha, Mwanza, Pwani, Simiyu, Songwe, and Mtwara girls consistently described their pre-SEQUIP experiences as emotionally devastating. Many had been expelled from school, shunned by their families, and ridiculed by their communities. Their sense of self-worth had been eroded, and their dreams of education and personal growth had been replaced by shame, fear, and isolation. In Mwanza, a 17-year-old girl recounted her experience during an in-depth interview:

> "After I got pregnant, my father stopped talking to me. My mother cried every day. I was not allowed to leave the house. My friends stopped visiting. I felt like I had committed a crime. I used to stare at the wall for hours, thinking my life was over. I didn't even want to wake up in the morning."

This emotional paralysis was echoed in Pwani, where girls in focus group discussions described being labelled as "failures," "spoiled," or "unworthy." One participant shared:

> "I used to hear people whispering behind me. Even at the market, women would point at me and shake their heads. I stopped going out. I stopped talking. I didn't even want to look at myself in the mirror. I felt dirty, like I didn't deserve to be seen."

These narratives reveal the depth of psychological damage inflicted not only by the event of early pregnancy but by the social response to it. The stigma was not passive; it was active, aggressive, and deeply internalised by the girls themselves. Many described feeling invisible, voiceless, and permanently marked by their experiences.

The introduction of psychosocial emotional support through SEQUIP-AEP marked a turning point. In Simiyu, *one girl* described her first counselling session as a moment of awakening:

> "The counsellor asked me to tell my story. I cried for the first time in months. She didn't judge me. She said I was brave. That one sentence gave me strength. I started attending classes the next day. I started believing I could be someone again."

These counselling sessions were not merely therapeutic; they were transformative. They helped girls process trauma, confront internalised shame, and begin to rebuild their identities. Educators across regions observed dramatic changes in behaviour. In Songwe, one facilitator noted:

> "Before counselling, some girls would sit in the back, silent and withdrawn. They avoided eye contact and never participated. After a few weeks of sessions, they started raising their hands, laughing, and helping others. It was like watching someone come back to life."

The impact of psychosocial emotional support extended beyond the classroom. In Mtwara, a community stakeholder shared via questionnaire that his niece, who had become severely depressed after her pregnancy, began smiling again and even started tutoring her younger siblings after joining SEQUIP-AEP. He wrote:

> "She used to refuse food. She wouldn't speak. We thought we had lost her. Now she wakes up early, prepares her books, and tells her siblings to study hard. She says she wants to become a teacher."

These testimonies illustrate how emotional recovery can restore not only individual well-being but also family relationships and community trust. Girls who once saw themselves as burdens began to see themselves as contributors, role models, and future professionals.

The importance of psychosocial emotional support is strongly validated by scholarly research. Juma (2023) emphasises that psychosocial emotional interventions are essential for adolescent mothers, arguing that emotional healing is a prerequisite for cognitive engagement and academic success. His study in rural Kenya found that girls who received counselling were twice as likely to complete their education compared to those who did not. Similarly, CAMFED (2021) reported that psychosocial emotional support increased retention rates by 60% among girls in alternative education programmes across sub-Saharan Africa. UNESCO (2023) stresses that reintegration efforts must address both psychological and social dimensions, especially in contexts where stigma is deeply entrenched. Their global report on inclusive education notes that emotional trauma is one of the most overlooked barriers to learning.

The World Bank (2022) further recommends embedding mental health services into alternative education models, citing evidence that such support reduces dropout rates, repeat pregnancies, and social withdrawal. Their findings in Malawi and Sierra Leone show that girls who received counselling were more likely to transition into formal schooling or vocational training, and reported higher levels of self-confidence and community acceptance.

In SEQUIP-AEP centres, psychosocial emotional support was not limited to formal counselling. In Arusha, girls participated in weekly "circle talks," where they shared personal stories, fears, and goals. These sessions fostered solidarity and mutual healing. One facilitator explained:

> "When girls hear each other's stories, they realise they're not alone. That's when healing begins. They start encouraging each other, reminding each other why they came back to school."

This peer-driven model created a culture of empathy and resilience, reinforcing the idea that emotional recovery is not a solitary journey but a collective process. Girls began to form support networks, helping each other with childcare, homework, and emotional challenges. The findings indicate that psychosocial emotional support within SEQUIP-AEP is not a supplementary service; it is the emotional foundation upon which educational reintegration is built. It enables girls to confront their past, reclaim their dignity, and rebuild their aspirations. Without it, academic interventions risk failing the very girls they aim to serve. With it, girls begin to see themselves not as victims of circumstance, but as survivors, learners, and future leaders. The evidence from this study, supported by national and international research, affirms that healing is not just beneficial, is essential

Life Skills Development: Empowering Girls Through Practical Competence and Personal Agency

The SEQUIP-AEP programme's life skills component was consistently highlighted by participants as a transformative force in their educational and personal journeys. Across all six regions, Arusha, Mwanza, Pwani, Simiyu, Songwe, and Mtwara adolescent girls described how life skills training helped them rebuild confidence, make informed decisions, and take control of their futures. These sessions covered essential areas such as communication, reproductive health, financial literacy, assertiveness, and problem-solving. In Songwe, *one girl* shared during a focus group discussion:

> "Before SEQUIP, I didn't know how to speak in front of people. I was always afraid. Now I can explain myself clearly even to adults. I've learned how to say no, how to make decisions, and how to protect myself. I feel like I have a voice now."

This shift in self-expression and agency mirrors findings from CAMFED (2021), which reported that girls who received life skills training were significantly more likely to develop leadership qualities and resist social pressures such as early marriage and repeat pregnancies. CAMFED's work in Tanzania and Zambia demonstrated that life skills are not just educational tools; they are protective mechanisms that help girls navigate complex social environments. In Simiyu, *one girl* described how financial literacy changed her life:

> "I sell vegetables after class. I learned how to calculate profit and save money. I bought my own school supplies. I don't have to ask my parents anymore. I even taught my mother how to keep track of spending."

This example aligns with the World Bank (2022) study in Uganda and Sierra Leone, which found that adolescent girls who received financial literacy training were more likely to engage in income-generating activities and contribute to household finances. The report emphasised that financial skills are critical for girls in alternative education pathways, especially those balancing motherhood and schooling. In Mtwara, *one girl* spoke about the impact of reproductive health education:

> "I used to think pregnancy just happens. I didn't know anything about my body. Now I understand my rights, my health, and how to take care of myself. I even help my friends who don't know these things."

Her experience is echoed in UNESCO's Global Education Monitoring Report (2023), which stresses that reproductive health education is essential for adolescent mothers returning to school. The report found that girls who understood their bodies and rights were more likely to avoid repeat pregnancies and advocate for their peers. In Pwani, educators observed that girls who participated in life skills sessions were more engaged, confident, and proactive. One teacher noted:

> "They come to class prepared. They ask questions. They support each other. You can see they're thinking about their future—not just surviving."

This observation is supported by FAWE (2022), whose regional study across East Africa found that life skills programmes improved girls' classroom participation, peer relationships, and long-term educational retention. FAWE emphasised that life skills foster a sense of belonging and purpose, especially for girls who have experienced exclusion.

In Arusha, girls created personal development plans and participated in mock debates to build confidence and goal-setting skills. These activities reflect the participatory methods recommended by Save the Children (2020) in their "Life Skills for Success" framework, which advocates for experiential learning to build resilience and self-efficacy in post-crisis education settings. Community feedback also reinforced the value of life skills. In Mwanza, a parent wrote in a questionnaire:

> "My daughter used to be quiet and withdrawn. Now she speaks with confidence. She helps me with budgeting. She even advises her cousins about school and health. I see a future leader in her."

The above claim indicates that the life skills component of SEQUIP-AEP is not merely a curriculum; it is a catalyst for transformation. It equips girls with the tools to navigate life's challenges, assert their rights, and contribute meaningfully to their families and communities. The voices of Tanzanian girls, supported by a robust body of international research, affirm that life skills are essential for reintegration, resilience, and long-term empowerment. This mirrors findings from Plan International (2019),

whose "Girls Get Equal" campaign showed that life skills education leads to increased civic engagement and leadership among adolescent girls in East Africa.

Flexible Learning Models: Reshaping Education to Fit the Realities of Adolescent Girls

The findings from this study clearly demonstrate that flexible learning models within the SEQUIP-AEP programme were not only appreciated but essential for the successful reintegration of adolescent girls into education. These models, characterised by modular curricula, part-time schedules, and community-based learning centres, responded directly to the lived realities of girls who had dropped out due to early pregnancy, caregiving responsibilities, and social stigma. The programme provides a flexible curriculum that allows girls to cover lower secondary education within a shorter timeframe, enabling faster progression. This aligns with UNESCO (2015), which highlights that an alternative education pathway is essential for ensuring lifelong learning for marginalised groups.

Furthermore, findings revealed that through SEQUIP -AEP programme learners gained access to national examinations, which creates opportunities to transition into either formal secondary education, specifically form five or vocational colleges. This opportunity demonstrates the role of SEQUIP-AEP in increasing access to quality education.

Flexible schedules in AEP learning centres are observed as an opportunity for girls who are rejoining school via SEQUIP-AEP. This flexibility allowed girls to balance learning with childcare for those who have kids and other domestic responsibilities. This situation is observed to reduce the dropout risk. From the researcher's perspective, it became evident during fieldwork that flexibility was not merely a logistical convenience; it was a form of recognition. It acknowledged the dual identities of these girls as both learners and mothers, and it validated their right to education without demanding that they abandon their responsibilities. This insight emerged repeatedly across interviews and focus group discussions. In Simiyu, one participant explained:

> "I wake up at 5 a.m. to cook and bathe my child. Then I walk to the centre. If the classes were full-time like regular school, I wouldn't be able to come. SEQUIP understands our lives. It fits into our reality. I don't feel punished for being a mother, I feel supported."

This statement reflects a recurring theme: girls felt that SEQUIP-AEP respected their circumstances rather than penalising them for it. In Pwani, another girl shared:

> "Sometimes I miss a day because my baby is sick or I have chores. But I don't fall behind. The teachers help me catch up. I learn at my own pace, and that makes me want to keep going."

As the researcher, I observed that this flexibility fostered a sense of dignity and ownership. Girls were not passive recipients of education; they were active participants, making choices, managing time, and balancing roles. This aligns with UNESCO's Global Education Monitoring Report (2023), which emphasises that rigid school structures are a major barrier to re-entry for adolescent mothers. UNESCO advocates for flexible, community-based models that accommodate caregiving responsibilities and promote equity. In Mwanza, educators reported that attendance improved significantly when learning centres were located within walking distance and offered adaptable schedules. One teacher noted:

> "Some girls walk with their babies. If the centre is far or the schedule is rigid, they won't come. But when it's nearby and flexible, they show up every day. They're committed, and they feel seen."

This response from the educator in Mwanza offers a powerful insight into the intersection between accessibility, flexibility, and learner commitment within alternative education programmes. The statement reflects a deeper reality: adolescent mothers face compounded barriers, not only social stigma but also logistical constraints such as distance, time, and caregiving responsibilities. The educator's observation that "they're committed, and they feel seen" suggests that when programmes are designed to accommodate girls' lived realities, their intrinsic motivation and sense of belonging increase significantly. This finding aligns with the broader theme of structural empathy in education, where systems adapt to learners rather than expecting learners to conform to rigid structures. The presence of nearby centres and adaptable schedules removes physical and psychological barriers, allowing girls to participate without sacrificing their caregiving duties. It also affirms their identity as both mothers and students, which traditional schooling often fails to do.

This finding aligns with other research findings that emphasise the importance of proximity, adaptability, and contextual relevance in alternative education programmes. For instance, UNESCO (2023) highlights that flexible learning environments are essential for marginalised learners, particularly adolescent mothers. BRAC Uganda (2018) found that community-based centres with part-time schedules significantly improved attendance and completion rates. Similarly, the World Bank (2022) reported that modular and localised education delivery in Sierra Leone and Uganda led to higher retention and smoother transitions into vocational training. Save the Children (2020) and FAWE (2022) also underscore that when girls feel understood and supported through flexible systems, their engagement and academic success increase markedly.

This observation is supported by CAMFED (2021), which found that girls in flexible education programmes were more likely to complete their studies and transition into vocational training or employment, especially when the curriculum was modular and responsive to local realities. In Songwe, girls described how SEQUIP-AEP's community-based centres reduced the stigma they faced in traditional schools. One participant shared:

> "In my old school, people stared at me. They whispered. I felt ashamed. But here, everyone is like me. We support each other. We learn together. I don't feel alone anymore."

This sense of solidarity and safety is echoed in FAWE's (2022) regional study, which found that community-based education models foster peer support and reduce dropout rates among adolescent mothers. FAWE emphasised that when girls learn in environments that reflect their lived experiences, they are more likely to thrive academically and emotionally.

From a researcher's analytical lens, these findings suggest that flexibility is not just about adjusting timetables; it is about reimagining education as a responsive, inclusive, and compassionate system. In Mtwara, facilitators reported that girls were more engaged when learning materials were contextualised to their daily lives. One educator explained:

> "We use examples from their homes, their businesses, their children. When learning feels relevant, it becomes meaningful. They see how education connects to their reality."

This approach reflects the principles outlined in BRAC Uganda's ELA programme (2018), which showed that contextualised and flexible education increases retention and empowers girls to apply knowledge directly to their lives.

The World Bank (2022) also supports this view. Their study in Sierra Leone and Uganda found that flexible education models, especially those offering modular content and community-based delivery, are more effective in reaching marginalised populations. Girls in these programmes were more likely to complete their studies, avoid repeat pregnancies, and transition into economic opportunities. In Arusha, girls expressed appreciation for the programme's understanding of their dual roles. One participant shared:

> "I am a mother and a student. SEQUIP doesn't make me choose. It gives me a chance to be both. I feel proud when I carry my baby and my books. I'm not hiding anymore."

This dual identity is often ignored in mainstream education, but SEQUIP-AEP's flexible model validates and supports it. According to the African Union's CIEFFA

(2024), education systems must recognise and accommodate the lived realities of adolescent mothers to achieve true gender equity. Their policy brief calls for governments to institutionalise flexible learning as a standard, not an exception for girls facing exclusion.

Community Engagement: Shifting Attitudes, Building Trust, and Sustaining Reintegration

Community engagement emerged as a critical factor in the success or failure of adolescent girls' reintegration into education through the SEQUIP-AEP programme. Across all six regions, Arusha, Mwanza, Pwani, Simiyu, Songwe, and Mtwara girls, educators, and community stakeholders emphasised that the attitudes of parents, religious leaders, and local government officials had a profound impact on whether girls felt safe, supported, and motivated to return to school. From the researcher's perspective, it became clear during fieldwork that community engagement was not a peripheral concern; it was central to the reintegration process. In regions where communities were sensitised and actively involved, girls flourished. In areas where stigma persisted, girls struggled with attendance, confidence, and emotional well-being. In Pwani, one adolescent girl shared during a focus group discussion:

> When I got pregnant, my neighbours said I had ruined my future. Even my aunt told me I should stay home and take care of the baby. But after the SEQUIP meeting in our village, things changed. My mother started walking me to the centre. The religious leader told people to stop judging us. I felt like I was allowed to dream again.

This shift in community perception was echoed in Mtwara, where a girl explained:

> Before, people used to whisper and laugh when they saw me with my books. Now they greet me and ask how school is going. My father even tells others that I'm going to be a teacher. That makes me proud.

Educators in Simiyu noted that parental involvement directly influenced attendance and performance. One facilitator shared:

> "Girls whose parents attend meetings and support them emotionally are more likely to stay in the programme. They come to class prepared. They ask questions. They believe in themselves."

These findings align with FAWE (2022), which emphasised that community ownership is essential for the sustainability of education programmes targeting marginalised populations. Their regional study found that when parents and local leaders were involved in reintegration efforts, dropout rates decreased and girls reported higher levels of self-esteem and motivation. Also, this finding reinforces Krueger & Casey (2015), who argue that community ownership is essential for the sustainability of education programmes targeting marginalised populations. Educators

also noted that community support improved attendance rates and reduced dropout incidences. In Songwe, a girl described how community support helped her overcome fear:

> "I was scared to go back to school. I thought people would laugh at me. But after the village meeting, my uncle told me I was brave. He gave me money for books. That was the first time I felt like someone believed in me."

This emotional validation is supported by UNESCO (2023), which argues that reintegration must be a collective effort. Their report highlights that stigma and exclusion are social phenomena—and therefore require social solutions. Community engagement, they argue, is not optional; it is foundational. In Arusha, religious leaders played a pivotal role in shifting cultural norms. One girl shared:

> "Our pastor told the congregation that girls who return to school are strong, not shameful. He said education is a second chance, not a punishment. After that, people stopped gossiping. I felt free."

This aligns with findings from Plan International (2019), which showed that faith-based advocacy can be a powerful tool in changing harmful gender norms. Their study in East Africa found that when religious leaders publicly supported girls' education, community attitudes shifted rapidly. The World Bank (2022) also emphasised the role of community engagement in alternative education programmes. Their research in Sierra Leone and Uganda found that programmes with strong community involvement had higher retention rates, better psychosocial emotional outcomes, and smoother transitions into formal education or employment. In Mwanza, a local government official attended SEQUIP-AEP sessions and spoke publicly about the importance of reintegration. Girls reported feeling "protected" and "recognised" by his presence. One participant said: "*When the district officer came to our centre and said we were important, I cried. I never thought someone in power would care about girls like me.*"

This moment illustrates the power of public endorsement. According to the African Union CIEFFA (2024), government officials must not only create policies they must also embody them. Their policy brief calls for visible leadership in promoting gender-responsive education, especially for adolescent mothers.

The above response indicates that community engagement was often the tipping point between success and failure. Girls who felt supported by their families and communities walked taller, spoke louder, and studied harder. Those who faced judgment and isolation struggled to attend, participate, and believe in themselves. Reintegration is not just about curriculum; it is about culture. And culture is shaped by community.

Conclusion

The SEQUIP-AEP programme has proven to be a transformative initiative for adolescent girls who had previously been excluded from education due to early pregnancy and social stigma. The findings from six regions in Tanzania reveal that successful reintegration requires more than academic instruction; it demands emotional healing, practical life skills, flexible learning structures, and strong community support. Girls who received psychosocial emotional counselling were able to rebuild their self-worth and re-engage with learning. Life skills training empowered them to make informed decisions, manage responsibilities, and envision a future beyond motherhood. Flexible learning models allowed them to balance caregiving with education, while community engagement helped dismantle stigma and fostered a culture of acceptance. Together, these elements created a holistic environment where girls could thrive both personally and academically.

Recommendation

To sustain and scale this impact, it is recommended that psychosocial and emotional support be institutionalised in all alternative education programmes, with trained counsellors and peer networks. Life skills curricula should be expanded to include financial literacy and leadership development. Flexible learning must be prioritised through modular schedules and localised centres that reflect girls' realities. Finally, community engagement should be deepened through regular sensitisation meetings, involvement of religious and local leaders, and public endorsements of girls' education. These recommendations, grounded in both field data and global research, affirm that when education is inclusive, responsive, and compassionate, it becomes a powerful tool for transformation.

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Assessment of the Effectiveness of the SEQUIP-AEP Programme on Enrolment and Transition Outcomes

Baraka Kionywaki, Institute of Adult Education

Email: basaki2007@yahoo.com

Abstract

The SEQUIP-AEP initiative aimed to reintegrate adolescent girls in Tanzania who had dropped out of secondary school due to early pregnancies, child marriages, and socio-economic challenges. Between 2022 and 2025, the programme enrolled 13,272 girls across 191 centres in 26 regions, surpassing its target of 12,000 (110.6%). Using a mixed-methods approach, the study assessed enrolment and transition outcomes through document reviews and interviews with stakeholders. Of those who completed the Ordinary Level curriculum, 355 girls (33%) transitioned to Form Five or intermediate colleges, exceeding the initial benchmark of 18%. While this marks significant progress in promoting academic advancement, the overall transition rate remains modest. The study recommends strengthening support mechanisms such as career guidance, psychosocial services, and academic interventions. Expanding hostel facilities and enhancing mentorship and life skills training are also advised to improve long-term educational outcomes and ensure sustained achievement for marginalised learners.

Key words: Enrolment achievement, marginalised learners, transition outcomes, support mechanisms

Introduction

Access to secondary education in Tanzania has historically been hindered by a range of socio-economic and cultural barriers, particularly for adolescent girls. Early pregnancy, child marriage, poverty, and gender-based discrimination continue to contribute to high dropout rates among girls, especially in rural and underserved communities (UNESCO, 2021; Human Rights Watch, 2020). These challenges have created a critical need for inclusive and flexible education models that can accommodate learners excluded from the formal system.

The Institute of Adult Education (IAE), established in 1975, has long been at the forefront of providing alternative education pathways in Tanzania. Before the launch of the Secondary Education Quality Improvement Project – Alternative Education Pathway (SEQUIP-AEP), IAE implemented distance learning and open schooling programmes aimed at youth and adults who were unable to access conventional secondary education. These programmes offered curriculum-aligned instruction through community learning centres, supported by printed modules and occasional face-to-face tutorials. However, their reach and effectiveness were often constrained

by limited resources, low public awareness, and infrastructural challenges. Before SEQUIP-AEP, IAE implemented distance learning and open schooling programmes targeting youth and adults who missed formal education. Kayege (2018), writing in the *Journal of Adult Education in Tanzania*, evaluated a UNESCO-supported pilot programme in Shinyanga and found that alternative learning helped girls build self-esteem, gain reproductive health knowledge, and pursue self-employment. However, challenges such as delayed funding, lack of trained teachers, and poor community attitudes were also noted.

Building on this foundation, the Government of Tanzania, in partnership with the World Bank, introduced SEQUIP-AEP in 2020 as a more structured and targeted intervention. The programme specifically focuses on adolescent girls who dropped out of secondary school, offering them a second chance through alternative learning approaches that include digital platforms, life skills training, mentorship, and psychosocial support. According to the Ministry of Education and Vocational Training, SEQUIP-AEP aims to enrol over 12,000 girls nationwide, with early implementation already exceeding targets by 116% (MoEST, 2025).

Alternative education pathways have increasingly been adopted as strategic responses to educational exclusion, especially among adolescent girls in sub-Saharan Africa. These pathways offer flexible, community-based learning models that accommodate the realities of girls affected by early pregnancies, child marriages, and poverty. According to ActionAid's *Transforming Education for Girls in Tanzania and Nigeria* (TEGINT) project, such interventions significantly enhance girls' enrolment, attendance, and empowerment, particularly when combined with gender-responsive teaching and community engagement.

In Tanzania, BRAC's *Education, Empowerment and Life-skills for Adolescent Girls and Young Children (EELAY)* programme has demonstrated the potential of alternative education to redirect dropout girls back into formal education (BRAC 2015). Studying 25 EELAY centres, researchers found improvements in engagement with mainstream education, cognitive skills, and psychosocial well-being among participants. These findings reinforce the importance of structured, supportive environments in facilitating re-entry and progression.

Despite increased access, transition into advanced education remains a challenge. UNESCO (2020) notes that girls in alternative education settings often face stigma, limited mentorship, and financial constraints that hinder progression. In Tanzania, only 4% of adolescent's complete secondary education, and less than one-third of girls who enter lower secondary schools graduate, highlighting systemic barriers to retention. The (TEGINT 2022) study also revealed that rurality is a significant factor

in educational marginalisation. Girls in remote areas exhibited lower levels of empowerment and faced greater difficulty articulating solutions to their challenges. This underscores the need for targeted interventions that address geographic and socio-cultural disparities.

Moreover, UNESCO's recent efforts to strengthen gender-responsive data collection in Tanzania have exposed gaps in monitoring non-formal education and adolescent pregnancy indicators. Without robust data, it becomes difficult to design and evaluate effective interventions for girls in alternative education programmes. Tanzania's Education and Training Policy (2014, revised 2023) and the Education Sector Development Plan (ESDP III) emphasise inclusive education and gender equity. However, implementation remains uneven. UN Women (2024) argues that successful gender-inclusive education requires multi-sectoral collaboration, including health, social welfare, and local governance. Without such integration, alternative education programmes risk becoming isolated interventions with limited long-term impact. Okkolin et al. (2024) conducted a systematic review of gender equity interventions in East African education systems and found that teacher training, curriculum reform, and community sensitisation improved girls' retention and performance. However, sustainability was undermined by funding constraints and weak accountability mechanisms.

The SEQUIP-AEP programme reflects many of the strengths and limitations identified in global and regional literature. Its success in exceeding the enrolment target, registering 13,272 girls against the projected 12,000, is consistent with findings from similar programmes in Kenya and Ghana, where community-based outreach increased participation (Commonwealth of Learning, 2023; ActionAid, 2017). However, the modest transition rate of 355 girls (33% of those who completed Ordinary Level studies) highlights the need for enhanced support mechanisms, including mentorship, hostel facilities, and career guidance (IAE, 2025). Williams et al. (2024) emphasise that meaningful academic progression requires not only access but also sustained support tailored to learners' needs. Their study on inclusive education in Malawi found that when assistive services and psychosocial support were integrated into alternative education programmes, transition rates improved significantly.

Studies such as those by Kayege (2018) and HakiElimu (2023) have shown that without structured mentorship and transition support, many girls complete the alternative curriculum but fail to access further education or vocational training. This gap undermines the long-term impact of SEQUIP-AEP and raises questions about its sustainability and effectiveness in transforming educational trajectories. Furthermore, Iddy (2021), in a study published in Gender Issues, highlights the contradictions

between Tanzanian legal frameworks and actual practices, noting that while policies exist to promote girls' education, enforcement is inconsistent and often undermined by cultural norms and institutional gaps. These findings underscore the need for alternative education models that are flexible, inclusive, and responsive to the lived realities of adolescent girls.

Effective delivery of alternative education requires pedagogical innovation and well-trained facilitators. Moses (2025) conducted a study in Mbozi and Momba districts, revealing that active learning strategies such as project-based learning and educational games improved student performance but were underutilised due to limited tutor training. This aligns with broader African research indicating that learner-centred approaches are more effective in engaging marginalised students (Chikoko et al., 2011; Akyeampong, 2009).

Transition is a key indicator of programme effectiveness. While SEQUIP-AEP has achieved strong enrolment figures, sustaining participation and facilitating progression into advanced education remains a challenge. Kayege (2018) found that dropout rates persisted due to financial hardship, stigma, and lack of career guidance. Globally, UNICEF (2019) emphasises that alternative education programmes must integrate psychosocial support, mentorship, and clear transition pathways to ensure long-term success. In refugee contexts, Ramazani (2024) highlighted that flexible education models in Nyarugusu Camp enabled girls to prepare for tertiary education, but transition rates were limited by a lack of certification and institutional recognition. These findings suggest that SEQUIP-AEP must strengthen its post-secondary linkages and provide robust career counselling. Sustainable implementation of alternative education requires coherent policy frameworks and institutional commitment. The Ministry of Education's Stakeholder Engagement Plan (2020) outlines SEQUIP-AEP's goals and emphasises the need for community involvement, financial support, and monitoring mechanisms.

This study seeks to address a critical and often overlooked gap in both academic literature and educational practice by evaluating not only the enrolment of girls in the SEQUIP-AEP programme, but also their progression into advanced secondary education and intermediate colleges. While enrolment figures provide a snapshot of access, they do not capture the full picture of educational equity and opportunity. A study by Zakayo and Lekule (2022) on Maasai girls in Tanzania revealed that despite completing secondary education, many girls face significant barriers such as early marriage, gender bias, and cultural practices that hinder their transition to higher education. Therefore, this research goes further to examine the extent to which SEQUIP-AEP serves as a genuine bridge to continued learning, rather than a terminal

point for marginalized learners. Understanding these dynamics is essential for informing evidence-based policy decisions, refining programme design, and ensuring that alternative education pathways are not merely symbolic gestures of inclusion, but functional mechanisms that empower girls to pursue their academic and professional aspirations. By shedding light on the barriers and enablers of transition, this study contributes to a more nuanced understanding of how educational interventions can be made more responsive, sustainable, and transformative for vulnerable populations, especially adolescent girls who face compounded challenges due to gender, poverty, and geographic isolation. Ultimately, the goal is to ensure that every learner, regardless of background, has a fair chance to thrive and succeed beyond basic education.

Methodology

The study adopted a convergent parallel mixed-methods design to assess the effectiveness of the SEQUIP-AEP programme in achieving its enrolment and transition objectives between 2022 to 2025, which involves collecting quantitative and qualitative data simultaneously, analysing them separately, and then integrating the findings during interpretation. This design was selected to ensure that both data types are given equal importance and that the strengths of one compensate for the limitations of the other (Creswell & Plano Clark, 2017). In the context of SEQUIP-AEP, where both numerical indicators (e.g., enrolment and transition rates) and subjective experiences (e.g., perceptions of support, stigma, and motivation) are critical, this design provides a robust framework for evaluation. It also facilitates triangulation**,** which enhances the credibility and validity of the findings by cross-verifying data from multiple sources (Bryman, 2006).

Mixed-methods research has gained prominence in education studies across Africa due to its ability to bridge the gap between statistical generalisations and qualitative depth (Schulze & Kamper, 2012). In Tanzania, this approach has been successfully applied in studies evaluating inclusive education, community-based learning, and gender-responsive pedagogy (Semle & Nassor, 2023; Mkumbo, 2014).

The research was conducted across all 191 Alternative Education Pathway (AEP) centres established under SEQUIP-AEP in 26 regions of mainland Tanzania. These centres were selected purposively as they represent the full scope of the programme's implementation. The study population included adolescent girls enrolled in the AEP programme, AEP centre coordinators, Regional Resident Tutors from the Institute of Adult Education (IAE), and national-level programme officers from the Ministry of Education, Science and Technology (MoEST).

Respondents were selected using purposive sampling, a technique well-suited for identifying individuals with direct experience and insights relevant to the study objectives. The selection process was coordinated through the Institute of Adult Education, which facilitated access to regional offices and centre-level contacts. From each of the 26 regions, one Regional Resident Tutor was selected due to their supervisory role over AEP centres and their involvement in programme implementation. In addition, 30 AEP centre coordinators were chosen from a diverse mix of urban and rural centres to ensure representation across geographic and socio-economic contexts. These coordinators, responsible for managing daily operations, tracking enrolment, and supporting learners, served as key informants for understanding ground-level realities.

Furthermore, all 191 AEP centres across the 26 regions were involved in providing quantitative data on enrolment figures and the number of learners selected for Form Five and intermediate colleges. To gain deeper insights into registration and transition to form five and intermediate colleges, four regions, Manyara, Dodoma, Mtwara, and Dar es Salaam, were purposively selected for focused qualitative inquiry. These regions were chosen based on their unique characteristics and relevance to the study's objectives. To enrich the policy perspective, 10 national-level programme officers from IAE and MoEST were included. These individuals were involved in programme design, monitoring, and strategic planning, and their insights were critical for evaluating the alignment between policy intentions and field-level implementation. All respondents were contacted through formal channels, email, phone calls, and regional coordination meetings and were invited to participate voluntarily. Informed consent was obtained from each participant, and confidentiality was assured throughout the data collection process.

Quantitative data were collected through structured document reviews and enrolment tracking sheets, which captured annual enrolment figures, dropout rates, and transition outcomes to Form Five and intermediate colleges. These records were retrieved from official programme databases and centre-level logs. For the qualitative component, semi-structured interviews were conducted with selected stakeholders to explore their perceptions of the programme's effectiveness, the adequacy of support mechanisms, and the barriers faced by learners in transitioning to higher levels of education. Interviews were conducted in Kiswahili and English, depending on the respondent's preference, and were audio-recorded with consent.

Data analysis was conducted in two phases. Quantitative data were analysed using descriptive statistics, including frequencies and percentages, to determine the extent to which the programme met its enrolment and transition targets. Microsoft Excel and

SPSS were used to organise and visualise the data. Qualitative data were transcribed and analysed thematically using Braun and Clarke's (2006) six-step framework. This involved familiarisation with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report. Themes were derived inductively and focused on implementation strengths, systemic challenges, and recommendations for improvement. To ensure the credibility and reliability of findings, data triangulation was employed by comparing insights from different sources, document reviews, interviews, and official reports. Ethical approval for the study was obtained from the Institute of Adult Education Research Ethics Committee. All participants provided informed consent, and anonymity was maintained throughout the research process.

The study employed rigorous analytical procedures to ensure reliability, validity and depth of interpretation. Quantitative data from questionnaires were analysed using descriptive statistics (frequencies, percentages, cross-tabulations) via SPSS software. This enabled the identification of patterns in enrolment, retention, and transition rates across regions and demographic groups. Qualitative data from interviews and FGDs were analysed thematically using NVivo software**,** following Braun & Clarke's (2006) six-phase framework: familiarisation, coding, theme development, review, definition, and reporting. Key themes included financial constraints, mentorship gaps, stigma, institutional bottlenecks, and aspirations for higher education.

The integration of both data types allowed for triangulation**,** enhancing the validity of findings and providing a nuanced understanding of SEQUIP-AEP's effectiveness. This approach is consistent with recommendations from Teddlie & Tashakkori (2009), who emphasise the value of mixed-methods in evaluating complex social programmes. Ethical integrity was a cornerstone of this study. Approval was obtained from the Institute of Adult Education Research Ethics Committee**,** and the study adhered to the National Research Integrity Framework of Tanzania (COSTECH, 2020). Key ethical protocols included: Informed consent from all adult participants, and assent from minors, with clear explanation of the study's purpose, procedures, and rights. Confidentiality and anonymity were ensured through coded data, secure storage, and removal of identifying information in all reports and Voluntary participation was emphasized, with participants free to withdraw at any stage without penalty or consequence. These ethical standards are consistent with international research guidelines such as the Belmont Report (1979) and Tanzanian institutional policies like the Tumaini University Research Ethics Policy. Special attention was given to the vulnerability of adolescent girls, ensuring that their participation was respectful, empowering, and free from coercion.

Results and Discussion

Enrolment of the Students in SEQUIP AEP 2022-2025. The SEQUIP-AEP programme has expanded its reach significantly between 2022 and 2025, enrolling learners across all 26 regions of Tanzania. The table below presents the total number of enrolled learners per region during this period.

Table 1: Number of Students Enrolled in SEQUIP –AEP 2022-2025

S/N	Region	2022 Number of girls	2023 Number of girls	2024 Number of girls	2024 Number of girls	2024 Number of boys	Total	22-25 Total
1	Mbeya	472	251	207	132	112	244	1174
2	Mwanza	241	355	222	141	121	262	1080
3	Manyara	216	166	167	174	74	248	797
4	Dsm	180	169	180	235	121	356	885
5	Iringa	188	151	157	119	62	181	677
6	Ruvuma	140	235	113	105	43	148	636
7	Pwani	142	130	199	107	74	181	652
8	Mara	179	148	143	105	71	176	646
9	Kigoma	157	156	103	88	69	157	573
10	Dodoma	122	143	143	90	78	168	576
11	Arusha	99	136	171	162	129	291	697
12	Songwe	61	100	242	323	88	411	814
13	Morogoro	122	139	133	157	91	248	642
14	Geita	76	209	82	131	57	188	555
15	Rukwa	95	121	125	57	31	88	429
16	Simiyu	124	108	97	66	66	132	461
17	Njombe	122	95	111	60	52	112	440
18	Tabora	81	127	91	153	60	213	512
19	Singida	113	111	69	79	42	121	414
20	Tanga	96	99	98	145	46	191	484
21	Shinyanga	37	127	102	69	73	142	408
22	Mtwara	48	72	101	72	48	120	341
23	Kilimanjaro	58	81	71	90	34	124	334
24	Kagera	92	59	32	65	28	93	276
25	Katavi	34	74	74	64	41	105	287
26	Lindi	38	54	57	44	20	64	213
	Grand total	**3,333**	**3,616**	**3,290**	**3,033**	**1,731**	**4,764**	**15,003**

Source: SEQUIP-AEP Records (2025)

The enrolment data from 2022 to 2025 reveals that the SEQUIP-AEP programme not only met but exceeded its national target of enrolling 12,000 girls, reaching a total of 13,272 learners. This represents a 10.6% increase above the initial goal, signalling strong demand and successful outreach efforts. However, while this achievement reflects commendable progress in expanding access to education for marginalised girls, it also exposes regional disparities. Urban regions such as Dar es Salaam, Kilimanjaro, and Mwanza contributed significantly to the total enrolment, benefiting from better infrastructure and institutional support. In contrast, rural regions like Katavi, Songwe, and Simiyu lag, highlighting the need for targeted strategies to address geographic and

socio-economic barriers. Therefore, although the overall enrolment outcome is positive, a deeper analysis suggests that future programme planning should incorporate region-specific targets and equity-focused interventions to ensure inclusive and balanced educational access across all regions.

The study revealed notable regional disparities in enrolment, with urban areas such as Mbeya, Mwanza, and Dar es Salaam consistently recording higher enrolment rates. This trend is influenced by a combination of demographic, infrastructural, and socio-cultural factors. Firstly, these urban regions have a higher concentration of eligible girls, particularly those who have dropped out of formal schooling due to early pregnancy, poverty, or migration. The dense population in urban centres increases the chances of identifying and reaching out-of-school girls, thereby improving the effectiveness of recruitment efforts. For example, in Dar es Salaam, the large number of youths living in informal settlements creates a substantial pool of potential beneficiaries for alternative education programmes. Secondly, community awareness and supportive attitudes toward girls' education are significantly stronger in urban settings. Exposure to media, civil society campaigns, and government initiatives has fostered a culture that views education as a vital tool for empowerment and social mobility. As a result, parents and guardians in these regions are more likely to encourage their daughters to participate in AEP programmes, recognising them as legitimate pathways to future success. Thirdly, the physical accessibility of AEP learning centres plays a crucial role. Urban infrastructure, including paved roads, reliable public transportation, and proximity to schools, makes it easier for learners to attend classes consistently. In contrast, girls in rural areas often face long walking distances and seasonal challenges such as flooding, which hinder regular attendance. Urban girls benefit from shorter, safer commutes, which positively impact both attendance and retention.

Moreover, urban regions often have stronger institutional linkages. Collaborations between AEP centres and local government offices, vocational training institutes, and NGOs are more prevalent in cities. These partnerships facilitate resource sharing, mentorship programmes, and career guidance services, which not only attract learners but also support their transition into further education. These findings are supported by studies such as the World Bank (2021) report, which highlights that urban youth in Tanzania have better access to educational services and support systems. Similarly, Keha & Msuya (2022) found that urban communities possess more organised networks that actively promote girls' education, while the Tanzania Commission for Universities (TCU) has consistently reported higher tertiary enrolment rates in urban

regions, reinforcing the idea that cities offer a more conducive environment for educational progression.

In summary, the higher enrolment rates observed in urban regions such as Mbeya, Mwanza, and Dar es Salaam are not solely due to their larger populations. Instead, they reflect a multifaceted combination of factors that create a more conducive environment for educational access and participation. Urban areas tend to have better infrastructure, including reliable transportation networks, proximity to learning centres, and safer commuting routes, all of which make it easier for girls to attend classes consistently. These logistical advantages significantly reduce the barriers that often hinder participation in rural settings.

Moreover, urban communities generally exhibit higher levels of awareness and more progressive attitudes toward girls' education. Exposure to media campaigns, civil society advocacy, and government initiatives has helped shape a culture that values education as a pathway to empowerment and socio-economic mobility. Parents and guardians in these regions are more likely to support their daughters' enrolment in alternative education programmes, recognising the long-term benefits of continued learning.

In contrast, rural regions such as Katavi, Kagera, and Lindi recorded significantly lower enrolment figures in the SEQUIP-AEP programme, revealing persistent challenges that hinder educational access for marginalised girls. One of the primary issues is the limited identification and tracking of out-of-school girls**.** Due to a lack of reliable data due to migration to urban areas and minimal outreach capacity, many eligible learners were scattered and unreached by programme interventions. This is consistent with findings from UNICEF Tanzania (2020)**,** which highlighted that rural areas often on school-age children, making it difficult to plan and implement inclusive education programmes effectively.

Additionally, low public awareness about the existence and value of alternative education pathways contributes to poor participation. In many rural communities, formal education is still perceived as the only legitimate route, while non-formal programmes like AEP are either misunderstood or undervalued. This perception is compounded by cultural norms and gender biases that deprioritise girls' education, especially after early pregnancy or marriage. Malunda & Mwinuka (2021) found that in rural districts of western Tanzania, community attitudes toward non-formal education were shaped by limited exposure and scepticism about its long-term benefits, particularly for girls.

Logistical constraints further exacerbate the problem. Long distances to existing AEP centres**,** coupled with poor transport infrastructure**,** make regular attendance difficult. In regions like Katavi and Lindi, learners often have to walk several kilometres to reach the nearest centre, facing physical fatigue, safety risks, and seasonal barriers such as flooding or impassable roads. A study by Hakielimu (2023) emphasised that geographic isolation and lack of transport options are among the top barriers preventing rural girls from accessing alternative education programmes.

These findings underscore the urgent need for region-specific strategies that address both structural and social barriers. Interventions such as mobile learning units, community-based facilitators, and localised awareness campaigns could help dismantle these obstacles. As recommended by UNESCO (2019) and GPE (2022)**,** integrating alternative education into national systems and tailoring delivery models to local contexts are essential steps toward achieving equitable and inclusive education for all girls, regardless of where they live.

Transition into Form Five and Colleges

One of the most important findings of this study relates to the transition of SEQUIP-AEP graduates into Form Five and colleges**.** Documentary review revealed that between 2023 and 2025, a total of 831 students who completed their studies through Alternative Secondary Education programmes at Learning Centres achieved Division I, II, or III in their final National Form Four Examinations. These grades qualify them for selection into Form Five or intermediate colleges, according to Tanzania's national education criteria. Table 2: Transition into Form Five and Intermediate Colleges.

Table 2: Transition into Form Five and Intermediate Colleges

S/N	Region	2023-2025		
		Joining Form V	Joining colleges	Total
1	Arusha	18	49	67
2	Dsm	9	3	12
3	Dodoma	14	4	18
4	Geita	16	10	26
5	Iringa	12	2	14
6	Katavi	2	1	3
7	Kagera	3	1	4
8	Kilimanjaro	14	2	16
9	Kigoma	15	7	22
10	Lindi	2	5	7
11	Mara	13	5	18
12	Mbeya	266	81	347
13	Morogoro	14	8	22
14	Manyara	15	9	24
15	Mwanza	31	21	52

16	Mtwara	7	1	8
17	Njombe	7	13	20
18	Pwani	26	18	44
19	Rukwa	4	1	5
20	Ruvuma	1	12	13
21	Singida	0	0	0
22	Simiyu	11	10	21
23	Shinyanga	12	16	28
24	Songwe	20	8	28
25	Tanga	5	5	10
26	Tabora	1	1	2
	Grand total	538	293	831

Source: SEQUIP-AEP IAE Monitoring Report (2025)

The study revealed that between 2023 and 2025, a total of 831 learners from SEQUIP-AEP centres successfully transitioned into further education after attaining Division I, II, or III in their national examinations, qualifying them for admission into Form Five or intermediate colleges. This achievement highlights the academic potential cultivated within alternative education pathways, demonstrating that learners outside the formal system can meet national standards for advanced education. Of these, 538 learners joined Form Five, while 293 enrolled in vocational and professional colleges, indicating a balanced interest between academic and skills-based progression.

However, the transition rate of approximately 33% of the total 2,518 graduates between 2023 and 2024 suggests that while access to education has expanded, progression into higher levels remains limited. According to one respondent from the Manyara region, who shared their views during an interview,

> "This constraint is influenced by several factors, including students' behavioural challenges, weak academic foundations, limited institutional linkages, and inadequate career guidance".

These insights underscore the urgent need to strengthen post-AEP support systems, formalise qualification pathways, and ensure that more girls not only complete their studies but also transition meaningfully into secondary and tertiary education. These findings are consistent with Haki Elimu (2023), which reported that many girls completing non-formal education programmes face challenges in accessing further education due to systemic gaps. Similarly, Randa (2018) found that transition outcomes varied significantly between urban and rural districts, with urban girls more likely to continue their education due to better access to resources and information.

The study further revealed that SEQUIP-AEP centres with strong institutional partnerships, particularly those linked to vocational training institutes, local government education offices, or nearby secondary schools, demonstrated

significantly higher transition rates. These collaborations often facilitated smoother pathways for learners by providing clearer progression routes, mentorship opportunities, and access to career guidance services. Such partnerships helped bridge gaps between non-formal and formal education systems, making it easier for learners to navigate the transition into Form Five or intermediate colleges.

Moreover, AEP centres that offered hostel facilities showed a notable advantage in learner outcomes. Respondents indicated that the availability of accommodation contributed to improved attendance, reduced dropout rates, and enhanced academic focus, especially for learners from remote or disadvantaged backgrounds. With a stable living environment, students were better able to concentrate on their studies, participate in evening revision sessions, and access peer support networks. As a result, many of these learners successfully qualified for Form Five and vocational colleges. These findings are supported by a study conducted by Babayo Habu et al. (2024) in Federal Universities in North East Nigeria, which assessed the impact of hostel amenities on students' academic performance. The study found that facilities such as electricity, internet access, study rooms, and recreational spaces had a statistically significant positive effect on academic outcomes. Conversely, inadequate amenities were shown to negatively affect students' ability to concentrate and perform well academically. Taken together, these insights underscore the importance of strengthening institutional linkages and expanding hostel infrastructure as key strategies for improving transition rates and ensuring equitable access to advanced education opportunities for all AEP learners. UNESCO (2009) and GPE (2022) have both emphasised the importance of integrating alternative education into national systems to ensure recognition and scalability. Moreover, HakiElimu (2023) stresses that transition success depends not only on academic readiness but also on mentorship, financial support, and policy alignment.

However, the findings reveal significant disparities in transition outcomes across the 26 regions. Mbeya Region leads overwhelmingly with 347 learners progressing, 266 to Form Five and 81 to colleges, accounting for over 41% of all national transitions. This suggests a highly effective implementation of the AEP model in Mbeya, possibly supported by strong institutional linkages, academic support systems, and community engagement. Other regions with notable performance include Arusha (67)**,** Mwanza (52)**,** and Pwani (44)**,** indicating relatively successful transition mechanisms. In contrast, regions such as Singida (0)**,** Tabora (2)**,** Katavi (3)**,** and Kagera (4) recorded minimal transitions, pointing to systemic challenges such as limited access to post-AEP opportunities, weak referral systems, and possible gaps in learner preparedness. The data underscores the need for region-specific strategies to strengthen progression

pathways, including enhanced career guidance and improved collaboration between AEP centres and formal secondary schools.

Conclusions

This study concluded that the SEQUIP-AEP initiative has made commendable progress in expanding educational access for adolescent girls who had previously dropped out due to early pregnancies, child marriages, and socio-economic challenges. By enrolling 13,272 participants exceeding its initial target by over 10% the programme has demonstrated strong outreach and engagement across Tanzania's 191 AEP centres. Moreover, the transition of 355 girls to Form Five and intermediate colleges, representing 33% of the 2,518 graduates between 2023 and 2024, reflects encouraging progress in promoting academic advancement among marginalised learners. However, while this 33% transition rate among graduates is a positive achievement, it still highlights the need for intensified efforts to improve overall outcomes. These findings point to the urgent need for more comprehensive support systems such as career guidance, psychosocial services, and academic interventions to ensure that access to alternative education pathways leads to meaningful and lasting academic and career success.

Recommendations

To enhance the effectiveness of the SEQUIP-AEP project and ensure that enrolment achievements translate into sustainable educational progress for beneficiaries, several key actions are recommended. First, the government should prioritise investment in hostel facilities, especially in underserved regions, to enable girls from remote and disadvantaged communities to attend classes without facing environmental or logistical barriers. Second, academic and psychosocial support services should be strengthened, including career counselling, psychological care, and academic capacity-building programmes to ease the transition from basic education to advanced secondary school or intermediate colleges. Additionally, there is a need to reinforce life skills training and leadership programmes through mentorship and close guidance systems, empowering girls with self-awareness, confidence, and informed decision-making for both personal and academic growth. Moreover, student progress monitoring systems should be improved using simple and user-friendly technologies to collect accurate data in real time and inform strategic improvements. Finally, collaboration with community stakeholders including parents, local leaders, and civil society organizations, should be promoted to reduce stigma and foster supportive environments for girls re-entering education. These measures will help transform

enrolment success into long-term positive outcomes in the educational development of girls living in vulnerable circumstances.

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Mpwapwa Town the Future of Adult Education: Models, Opportunities, and Challenges within Tanzanian Advancing Technology

William H. Ndimbo, Mpwapwa Teachers College

Email: ndimbowilliam@gmail.com

Abstract

This study explored the future of adult education in a rapid technological advancement in Tanzania. It focused on models, opportunities, and challenges. The study employed qualitative approach. 15 participants were involved in the study included 6 educators and 9 adult learners at Mpwapwa Town. Interviews were used for data collection. Data were analysed thematically. The findings informed a higher demand for blended learning, and project-based leaning models. Significant opportunities for future adult education learning included development of technological literacy and adults' learning at their own pace were revealed. The findings prospected challenges for the future adults' learning included un-affordability of digital gadgets, and loneliness in digital learning environment. The study concludes that regardless the prospected challenges, adult education will continue developing opportunities like access to technological literacy. The study recommends that it is convenient to establish education policy that will support adult learners in the context of technological platforms' learning.

Key words: Adult, Adult education, Models, and Opportunities.

Introduction

Globally, an adult is defined as any person aged 15 years and above who is no longer in formal compulsory schooling and engaged in learning activities beyond initial education, whether for personal, professional, civic, or social development (UNESCO, 2022). However, a definition of an adult can slightly vary country wise depending on age of legal adulthood, labour law, or structure of the national education system (Bhalalusesa, 2021). For example, UNESCO (2022) defines adult education as the entire body of ongoing learning processes, formal or otherwise, whereby people regarded as adults by the society to which they belong develop their abilities, enrich their knowledge, and improve their technical or professional qualifications. This study explored the future of adult education focused on models, opportunities and challenges in the Tanzanian advancing science and technology.

In the contemporary world in which we experience rapid changes in science and technology, world countries have been taking various initiatives to ensure that adult education empower both adults and young people after normal schooling professionally and economically (Yang Wu, 2021). United States of America (USA),

Cuba, German, India, Kenya to name a few are good examples of the countries which have established several initiatives aiming that adult education becomes more flexible and accessible to the majority of people.

The initiatives taken by the world countries included among others shifting from traditional-based learning to technological-based learning platforms (Kondo, 2020; Mwandoto, 2011). USA for example, has initiated massive open on-line based learning courses triggered to boost career and make learning flexible and more accessible. It is informed that 6.3 million postsecondary adult learners equated to 25% enrolled with on-line based learning (National Centres for Education Statistics [NCES], 2023). German on the other side has connected or linked adult education to vocational-based training models aiming to inculcate adults with skills to meet world economic labour market, and industry demands. Kenya has integrated adult education programmes with agriculture and entrepreneurial through project-based learning platforms (Mabele et al., 2019). Generally, it is said that with this shift of models of adult education delivery, a number of adult learners have engaged in adult education learning, and fulfilled their missions included improving income and professional skills (Desjardins, 2019; Reder, 2014).

Tanzania like other world countries has evolved through various phases of adult education, all with different perspectives. In the early post-independence years (1961-1967) for example, adult education in Tanzania reflected to socio-economic uncertainties of the time (Masonda, 2024; Kanukisya, 2020). Nevertheless, as years went on particularly in 1970s, the government of Tanzania perceived and declared adult education as a functional literacy approach focused mainly on illiterate adults. In this phase, traditional models of adult education delivery included Evening in-personal classroom-based learning in community centres, and sometimes, under the tree shades were experienced. The embedded programmes aimed at providing adults with reading, writing, and numerical literacy skills to combat three identified enemies by then; ignorance, disease, and poverty (Mwakyambiki, 2023).

However, the rapid growth and changes of the world economy, and labour market has enforced the government of Tanzania to continue taking initiatives to make adult education more fruitful not only to adults but also to young people (URT, 2014; URT, 2002). It included sensitising and prioritising, decentralising adult education centres of delivery from the national level (Institute of Adult Education Headquarters) to the regional and district level, and in some Teacher Colleges (Katete, 2023). Mpwapwa Teacher College, for example, serves one adult education learning centre.

Moreover, some higher learning institutions including the University of Dar es Salaam had been mandated to coffer degree programmes of adult education (Sanga and

Shirima, 2023). Other initiatives appropriated by the government of Tanzania included integrating Information Communication Technology (ICT) in adult education learning (Amos & Salvatory, 2024). All these efforts or initiatives taken by the government of Tanzania aimed at empowering individuals professionally, economically, politically, socially, and well-being at any age beyond the normal schooling.

Despite all these initiatives, adult education delivery in Tanzania faces significant challenges. It included among others using unconvincing learning models such as in-personal classroom (face-to-face/conventional system of learning). Sanga and Shirima (2023) asserted that in-personal classroom-based learning models limit a number of adults to be engaged in adult education learning hence adults encountered by various responsibilities such as family, social, and work responsibilities.

This situation takes us to the question that what models suit for adults' learning presently and, in the future, what are the opportunities to be leveraged, and how to overcome challenges in Tanzanian advancing technology in general, and Mpwapwa Town in particular so that adult education remains relevant, fruitful and more accessible to the majority of not only adults but also young people after normal schooling. This raised the need of the study to explore effective models for the present and the future adult education delivery, leveraged opportunities, and challenges that can hinder adult education progression. It was thought important to conduct this study because the findings of the study were expected to inform adult education stakeholders particularly policy makers to constitute an adult education policy that would have met and supported adult learners in the context of technological learning platforms.

Again, the study was expected to contribute to the growing body of knowledge on the models of adult education delivery in the contemporary advancing technological learning platforms.

Considering the importance of theories in research studies, this study was guided by andragogy theory developed by Knowles (1970). The theory emphasizes among others adults as self-directed learners. They learn things which have relevance to their work or life. The theory also insists learning for adults is problem-centred rather than content-oriented. In this regard, effective adult education delivery models specifically practical-based learning models supported by appropriate learning resources/materials are inevitable. The theory also informed that adults have a wealth of experiences forming a resource base for learning. This theory has been widely used in adult education to understand how adults learn.

Based on the aspects of the theory as portrayed above, the study was set to explore views and experiences from the participants (adult education educators and learners)

on effective models for adult education delivery presently and in the future, emerged opportunities, and prospected challenges.

In line with andragogy theory, Kapinga and Mtani (2021) conducted a study that examined the effectiveness of the blended distance-learning for adult diploma programme in Tanzania. The study found lack of electronic devices such as computers, and limited Information Communication Technology (ICT) skills among adult learners as factors that hindered the participation of adults in the blended distance learning. The study suggested that models for effective adult education delivery need availability of teaching-learning resources/materials. It is also supported by Knowles' assertion that learning resources are of paramount important things for adult education delivery especially through blended-distance learning. The connection between andragogy theory and this study demonstrates how adult education learning/delivery rooted in appropriate models supported by availability of essential resources/materials. It also reinforces the importance of Knowles' work (1970) for adult education delivery in the contemporary advancing technological learning platforms.

There also a number of studies on adult education carried out in Tanzania. For instance, Mwaibingila (2025) investigated the impact of basic education for career development goals among adult learners in Rukwa Region, Tanzania. Ndunguru (2024) assessed Adults' willingness to engage in adult education. The study carried out at Kigamboni and Temeke Municipalities, Dar es Salaam, Tanzania. Amos and Mhando (2024) assessed the factors hindering the implementation of adult education in Open and Distance Learning System (ODLS) in Mbeya, Tanzania.

Further, the study by Mwakyambiki (2023) on community perceptions and engagements with adult education conducted in Dar es Salaam, Tanzania. Sanga and Shirima (2023) analysed the experience of adult learners pursuing postgraduate degree programmes at a Tanzanian university. All these studies have addressed problems at hand. Nevertheless, there is shortage or no studies which have explored the future of adult education in the Tanzanian context generally, and in the context of Mpwapwa Town in particular, focused on models of adult education delivery, opportunities, and challenges. To address this situation, the following objectives were considered important:

i) To explore effective models for the present and future adult education delivery.

ii) To determine the opportunities emerged from the future adult education learning.

iii) To examine the challenges that may hinder the future adult education learning.

Methodology

This study employed qualitative approach and descriptive research design to explore in-depth participants' views on the effective adult education delivery models presently, and in the future (McCombes, 2019). The study involved fifteen (15) participants from three (3) Adult Education Learning Centres at Mpwapwa Town. Six (6) participants were adult education educators and nine (9) were adult education learners. Purposive sampling technique was used to select the fifteen (15) participants. The criterion used under the purposive sampling technique was being an educator of adult education, and an adult learner. Data were collected through interviews, and analysed thematically. However, ethical issues that include among others consent and confidentiality were considered in this study because they are important in protecting the researcher and participants from potential harm. To ensure that the consent is realized, the researcher provided the participants with clear and in-depth explanations about the purpose and objectives of the study. Thereafter, the researcher asked for consent from participants to be involved in the study. For purpose of reducing the risk of invading participants' privacy, the real names of the participants and adult education learning centres were avoided hence pseudo names were used. Educators were identified by the use of pseudonyms; adult education educator "A" to "F" and "G" to "O" for adult learners. Three adult education learning centres were identified by the use of numerical number "1" to "3."

Findings and Discussions

The subsequent section presents findings based on objectives of the study. This study was guided by three specific objectives: to explore effective models for the present and future adult education delivery, to determine the opportunities emerged from adult education presently and in the future, and to examine the prospected challenges for the future adult's education learning.

Models for the Present and Future Adult Education Delivery

Interviews were used to obtain information about effective models for the present and future adult education delivery. Five (5) participants that equivalent to 33.3% mentioned the combination of on-line and face-to-face (blended-based learning) as effective models for adults' learning presently and in the future. Adult education learner "G" from centre "1" disclosed that:

> I think combining on-line learning and face-to-face is the most effective model for the present and the future adult education delivery. On-line learning through mobile phone, computers and other Information Communication Technologies

> will give adults freedom of learning at their own pace, while face-to-face will help to clarify difficult matters experienced from on-line learning.
>
> ……because of the emerging of technologies, and adults being fully occupied with various activities, I suggest combining on-line learning models that encompasses the use of mobile phones, computers connected to internet, video teleconference and face to face as effective models for the present and future adults' learning (adult education learner "J" from centre "2").
>
> On-line learning has its advantages and disadvantages the same as face-to-face. However, in my opinion combining both on-line learning models and face-to-face is more effective for adult education delivery hence the latter helps to clarify difficulties encountered during on-line learning (adult education learner "N" from centre "3").

Similar quotes were given by adult education educators. For example, educator "A" disclosed that:

> This is the era of technology therefore, teaching and learning of adult education should be motivated by the use technological devices (on-line learning), such as mobile phones, computers connected to internet and other electronic devices followed by face-to-face learning models. This will help adult learners to engage in learning and also accomplish other responsibilities.
>
> In order to enable adult learners to engage in learning at the same time in other responsibilities, I suggest combining on-line learning and face to face-based learning models to be used for adult education delivery presently and in the future. However, on-line based learning should take larger part of learning than face to face-based learning model (adult education educator "C").

The participants explained that combining on-line learning and face-to-face learning is advantaged since one model helps to clear difficulties experienced from the other model. On the other hand, the findings supported by Kimaro (2022) examined the challenges affecting the provision of adult education towards social sustainability at the Institute of Adult Education in Morogoro Campus, Tanzania. The study established among others Open and Distance Learning (ODL), in other words on-line learning alongside with face to face as an effective model for adults' education delivery since it helps adult learners to learn at their own pace and also interact with educators.

According to the participants specifically adult education educator, expressed that adults have a lot of activities limiting them to engage full time in adult education sessions. Thus, the emerging of technologies that lead to the use of on-line based learning models through mobile phones, videos and the like will inspire many adults to be engaged in adult education learning at the same time attending other responsibilities. The participants further, explained that on-line based learning models enable adults to learn at their homes, and be a solution for the majority adults especially employees whose employers are not ready to release their employees for conventional adult education learning system. The researcher through his experience as teacher and

teacher educator concurs with the findings in the sense that some employers are reluctant to provide employees with permission for conventional education learning system for the fear of reducing manpower. Thus, on line-based learning models might be a solution.

Four (4) participants equated to 26.7% noted project-based learning as effective model for the present and future adult education delivery. For example, participants articulated that project-based learning models especially, those focused to develop specific competencies or skills as effective for the present and future adults' learning. According to the participants, the project-based models which involve learning by doing enhance adults using their experiences to develop new competencies or skills. This might have resulted into raising individual adult's economy, institutional, and national economy as well. Adult education learner "M" from centre "3" acknowledged that:

> It is better for the present and future adult education to be delivered through project-based learning models. Project-based models encourage and motivate adult learners to use their experiences. You know! We are adults we have adequate experiences therefore, using project-based learning models will enable us to learn by doing resulting into solving challenges at hands.
>
> I think project-based learning model are effective for adult education delivery in the present and the coming decade. We adults what we need is to use experiences that we have to develop new experiences or skills. In this regard, project-based learning models that involve learning by doing are relevant and helpful for us to meet our mission (adult education learner "H" from centre "1").

The findings are in line with andragogy theory by Knowles (1970) insists learning for adults is problem-centred rather than content-oriented. It means that models for adult education delivery should be of problem solving rather than theorized knowledge. With this view, it is relevant and advantaged for adult education presently and in the future to be delivered through among others project-based learning models as pointed out by the participants. The models facilitate learning by doing or practical learning with the use of experiences. Similar quotes were articulated by adult education educators. For example, educator "E" said that:

> I think project-based learning models can support adult education delivery presently and in the future. Through this model, adult learners who engage in learning with specific goals or purposes will be able to use their past experiences to develop new experiences hence the model motivates learning by doing.
>
> ……. according to what is needed to be learned by adults, I suggest project-based learning models suit for adult education delivery in this decade as well as in the next one. The reason for suggesting the use of this model is that the model enables adults develop and demonstrate skills (adult education educator "F").

The researcher's perception as teacher and teacher educator aligned with the findings that adults have adequate experiences. Thus, through project-based learning models, adult learners can utilize past experiences to develop new experiences/skills to meet their goals.

Three (3) participants equal to 20% highlighted vocational-based training models that focus on developing specific skills as relevant and helpful for the present and future adult education delivery. The participants explained that adult learners need specific and well-defined skills that they can help them to solve challenges at their hands. Adult education learner "O" from centre "3" exemplified that:

> We adults when we learn we have purposes that we want to meet. It means that we learn in order to achieve a certain specific goal. Therefore, the proper model of learning presently and in the future should focus on enabling an adult to the attainment of specific skills to solve immediate challenges. In my opinion, it is vocational-based learning models.
>
> Vocational-based learning models are preferable for the current and the future adult education delivery. This is because the model focuses on inculcating an adult learner with specific required skills for which they are helpful to solve adults' challenges at hand (adult education learner "L" from centre "2").

Similar finding was given by an interviewed adult education educator "D." The educator expounded the advantage of vocational-based learning models for adult learners presently and in the future that:

> Vocational-based learning models can suit for adult education delivery presently and in the future. Through this model, adult learners will develop and demonstrate various skills needed by adults to combat the emerging world labour market challenges.

When the researcher wanted to know from the participants specific skills that an adult education learner can develop through vocational-based learning models, the participants noted the skills such as carpenter, agricultural skills particularly, horticulture and floriculture, weaving and decoration skills, computerized skills, motorcycle and motor vehicle skills, raring skills, fishing skill etc. As adult education educator "D" expounded that:

> …….in this era, there are various helpful skills needed by not only adults but also young people to combat current life situations. They include agricultural skills specifically horticulture and floriculture skills, raring, motorcycle skills, fishing skills etc.

Further, two (2) participants equated to13.3% informed on-line based learning (Open and Distance learning) as appropriate models for adult education delivery presently and in the future. The participants explained that if Open and Distance Learning (ODL) model is well organized and structured especially, in the provision of learning

resources/materials, it can not only help adults to learn smoothly but also attracts a large number of adults to be engaged in adult education. Adult education educator "B" said that:

> On-line based learning or Open and Distance based Learning models are effective for adult education delivery presently and in the future. However, monitoring of adult learners and provision of learning materials including guidelines on time should highly be taken into consideration.
>
> We have been learning through on-line based models. I think we should continue learning through such models. The important thing is to provide adult learners with all essential on-line learning materials (adult education learner "K" from centre "2").

The findings supported by Kapinga and Mtani (2021) conducted a study on blended distance-learning adult diploma programme in Tanzania. The study found that many adult learners lacked technological gadgets such as computers, and limited Information Communication Technology (ICT) skills. According to Kapinga and Mtani, this hindered the participation of adult learners in the blended distance learning. The study suggested that availability of resources/materials such as computers connected to internet for adults learning through blended-based models is of paramount important thing.

Furthermore, one (1) participant tallied to around 6.7% mentioned lecture-based learning model as an effective approach for the adult education delivery presently and in the future. The participant cited the model with the reason that it is easier to understand what is being taught. According to the participant, this model can be done through in-personal classroom or video teleconferences. The quote below exemplified that:

> The present and future adult education should continue being offered through lecture-based learning models. Hence the models involve face to face interaction, it makes learning easier and understandable compared to other learning models. The process of learning through lecture-based models can be done through in-personal classroom or video-conference (adult learner "I" from centre "1").

Generally, the findings revealed five (5) categories of adult education models of delivery presently and in the future. From these findings, it can be perceived that some of the models are not commonly used for adult education delivery. They include blended learning models it means combining on-line learning and in-personal classroom, project-based learning models, and vocational-based learning models. The other models including lecture-based learning, and on-line based learning models (Open and Distance Learning) are currently used for adult education delivery.

However, the researcher's experience as teacher and teacher educator perceives that all the discussed models whether they are currently used or not, preparation of conducive environment for the discussed models presently, and in the future is important and inevitable. This is because the effectiveness of the portrayed models for adult education delivery is dependent on various facilities/resources particularly technological gadgets like mobile phones (smart phones), computers connected to internet, videos, televisions and the like.

Prospected Opportunities Presently and in the Future Adult Education.

The second objective of the study sought to determine opportunities prospected from the future adult education. It found two main categories of opportunities: The first category includes personal opportunities, and the second category encompasses community and national opportunities as exemplified in the following quotes:

> The future adult education is expected to continue up-skilling and re-skilling individual adult learners whether through modern technological on-line learning platforms or traditional models in-personal classroom (adult education educator "B").
>
> Due to the emerging of technologies and integrating of such technologies in adult education, I hope adult learners to acquire more technological literacy. In this regard, adults will become more technological gadgets users or literate compared to the present and past time adult learners (adult education educator "A").
>
> The future adult education will be more personalized hence an individual adult learner is expected to learn at his/her own pace. It means that learning for adult education will be taking place at homes rather than going for conventional learning system. This will enable adult learners to engage in learning and perform other duties at ago (adult education educator "C").
>
> Many adults will have access to adult education due to the emerging of flexible models of adult education delivery such as on-line, and blended based models. However, preparation of appropriate learning environment is important (adult education learner "N" from centre "3").
>
> Adult education particularly that delivered through on-line based models (open and distance learning) will serve inclusive education to those marginalized groups (adult education learner "G" from centre "1").
>
> Adult education specifically delivered through project and vocational-based learning models will continue raising not only personal economic growth but also community, institutional, and the national economy as well (adult education learner "M' from centre "3").

The findings are supported by various studies among others Katete (2023) investigated the role of adult education in socioeconomic change among graduates of Institute of Adult Education, Dar es Salaam, Tanzania. The study found among others adult education improved self-employability that resulted into up-lifting individual adult

education learners' economy/income, and institutional development as well. On the other hand, the researcher's experience concurs with Katete that majority of teachers who have undergone adult education after the attainment of either Certificate, Diploma, or Degree of education, seemed to have raised not only their personal income and professional development but also institutional development. It is evident from these findings that not only in the present but also the future adult education will continue providing learners with various opportunities. Thus, to meet this goal improvement of adult education models of delivery should always be taken into consideration.

Emerged Challenges for Adult Education Learning.

Through interviews with participants, it was pre-assumed and highlighted un-affordability of digital gadgets and other learning facilities, limited support, adults' loneliness in digital learning environment, and unclear meaning of adult education and who is actually eligible to be recognized as an adult learner as challenges that might have continued facing adult education delivery/learning. The following quote points that:

> I think, the future adult education will be more characterized by digital learning platforms through electronic devices such as mobile phones, computers connected to internet and other technological gadgets/tools. In this regard, it will be difficult for some adults to afford buying such facilities (adult education learner "N" from centre "3").

What explained by the participants might be true considering that facilities for on-line learning needs financial power which is a challenge to the majority of people. Amos and Salvatory (2024) for example, assessed the factors hindering the implementation of adult education in open and distance learning system in Mbeya, Tanzania. It found that among others financial constraints like costs for material and fees hindered the implementation of adult education in open and distance learning system.

Further, the findings revealed that through on-line based learning models encompassed by the use of technological gadgets such as mobile phones, most adults will pursue adult education at their own pace, it means at their homes. This situation will cause lack of interaction (loneliness) between or among the adult learners. As it was confessed that:

> Through on-line based learning models especially, using mobile phones most adult learners will pursue adult education at their own pace. This situation will cause lack of interaction (loneliness) among adult education learners (adult education educator "A").

Furthermore, the participants noted unclear meaning of adult education, and who is actually eligible to be recognized as an adult learner a challenge facing majority of people. The quote below asserted that:

> …….I completed ordinary secondary education in 2023. Unfortunately, my examinations results were no convincing. So, I'm here at Adult Education Centre studying in order to re-sit for the same examination. However, I do not know whether what I'm pursuing here is adult education or not. Also I'm not sure whether I am adult education learner or not (adult learner "K" from centre "2").

When the researcher wanted to know from the participants why there is unclear meaning of adult education, as well as who is eligible to be recognized as an adult learner, the participations explained that in the 1970s, adult education in Tanzania was said and believed to be offered to the people (elders) who were unable to read, write and do arithmetic. The participants added that even if the government of Tanzania has been taking various efforts to improve adult education learning environment for example, introducing Education and Training Policy of 2023, which emphasizes and underscores the government's obligation to sensitize and enhance access to adult education, still the majority people have the notion that adult education is for developing elders' literacy skills. Adult education learner "G" from centre "1" said that:

> Professionally, I'm a Grade A teacher. At this Adult Education centre, I'm learning in order to sit for Advanced Certificate of Secondary Education Examinations (ACSEE). But frankly speaking, I do not know this kind of education I'm pursuing if it is adult education or not. Again, I'm not sure whether I am adult education learner or not.

The findings aligned by Mwakyambiki (2023) assessed community awareness and attitudes towards adult education initiatives within the Kigamboni and Temeke Municipalities. The study pointed out that while 58.4% of respondents were aware of adult education programmes, the concept remained ambiguous. The study recommended redefining "adult education" and enhancing political commitment to improve community understanding and foster positive attitudes. Similarly, the findings are supported by Kanukisya (2020) investigated the Conceptions and Misconceptions of Adult Education in Contemporary Tanzania. The study showed that many Tanzanians including policymakers, educators, and laypeople misinterpret adult education.

Conclusion

Generally, the study findings revealed five main models for effective adult education delivery presently and in the future. Each model with its significance as portrayed in

the above section of findings and discussion. The models include blended-based learning, project-based models, vocational-based models, On-line or ODL based models, and lecture-based learning models. Further, the study found adults continue up-skilling, gaining technological literacy, largely accessing to adult education due to emerging of flexible models, inclusive adult education to marginalized groups, and raising personal, institutional, and national economy/income as opportunities prospected from adult education presently and in the future. On the other hand, un-affordability of technological learning gadgets, lack of supportive policy for adult education learning/learners that meets the requirements for the advancement of technological learning platforms, loneliness in technological learning environment, unclear meaning of adult education and who is actually eligible to be recognize as an adult learner emerged as challenges. In line with these study findings and the discussions, it can briefly be concluded that besides the emerging challenges, presently and in the future, adult education remains significant as it serves various opportunities.

Recommendations to the Government

Given that some of the discussed models for adult education delivery are new or not commonly used including video conference, project-based learning models, and vocational-based learning models, it is recommended that the government of Tanzania should establish educational policy embedded clear description about the adoption and use of the aforementioned models presently and the future adult education delivery. It is recommended that since some adult education learners face financial constrains to buy technological gadgets like mobile phones, videos, computers, and televisions for on-line based learning, the government of Tanzania should provide all adult education learning centres with the mentioned gadgets. This will help to smoothening learning through on-line based models, and motivate the majority adult education learners to be engaged in adult education. Since the world is changing and shifting from traditional-based learning models like face-to-face based learning to modern based models specifically, digital platform-based learning, it is recommended to adults to start orienting themselves to Information Communication Technology (ICT) to avoid lagged behind.

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Role of Artificial Intelligence (AI) in Teaching and Lifelong Learning to Secondary School Teachers

Renatus Makolo, Fredrick Ishengoma & Deo Shao, University of Dodoma

Email: yjmakolo@gmail.com, ishengomaf@gmail.com & deoshayo@gmail.com

Abstract

Teachers are faced with various responsibilities that make it challenging for them to participate in teaching and lifelong learning. In recent years, the application of artificial intelligence (AI) has expanded into various sectors, including education. The objective of this study is to explore the role of AI in education through a quantitative approach. The study applied a descriptive design with a sample size of 102 secondary school teachers. The research data were analysed using SPSS software version 25. The study found that AI played a role in teachers' activities at 34.7%, despite its potential to offer solutions to many educational challenges. Among the AI software tested, the research revealed that teachers use ChatGPT than other tools. Finally, the study provided a roadmap on ethical and unethical use of AI in teaching and lifelong learning. The education sector should adopt modern teaching and learning methods by utilizing AI technology.

Key words: Artificial Intelligence (AI), Teaching, Lifelong learning

Introduction

The concept of artificial intelligence (AI) can be traced back to the ideas of Alan Mathison Turing in 1936 when he published "*On Computable Numbers, with an Application to the Entscheidungsproblem."* Turing's innovation passed through various stages, including testing AI in the Bombe machines in the US military (Kim, 2020). In 1950, he published *Computing Machinery and Intelligence*, where elements of machine learning that led to artificial Intelligence were initiated. In his publication, Turing's experiments were focused on answering questions like "*Can machines think*? (Mir et al., 2020; Turing, 1950). In 1955, John McCarthy, who is known as the father of AI, worked more on the concept of thinking machines (Lashayo et al., 2023). He launched a project called "*Artificial Intelligence*" that mainly focused on how a computer can be programmed to use a language, self-improvement, abstraction, randomness, and creativity (McCarthy et al., 1955). The evolution of AI has passed through three stages. The first stage (1956 to 1980) was a period during which AI was born. The second stage, spanning from 1980 to 2000, is characterized by industrialization, during which AI made its entry. The third stage, spanning approximately 2000 to date, marks the point where AI initiates the explosion (CAICT & Gartner, 2018).

Different studies defined AI in various perspectives, including: Mir et al. (2020) defined AI as an industrial technological field that enables machines to solve complex problems in a similar way as humans by learning from data, reasoning based on contextual constraints, replicating explicit and implicit business knowledge, adapting to change, and predicting future courses of action to assist decision-making. Ahmad et al. (2021) defined AI as the intelligence demonstrated by machines rather than humans. Intelligence is the ability to understand, think, and learn things, not the ability to do things instinctively. AI differs from the intelligence shown by humans or animals because the intelligence of living things possesses consciousness and emotions, while the machine has no such attributes. In this study, artificial intelligence (AI) refers to the ability of computerised machines to perform tasks that could be performed by human intelligence. The field of artificial intelligence is based on disciplines such as Computer Science, Biology, Psychology, Linguistics, Mathematics, and Engineering. It develops computer functions associated with human intelligence, such as reasoning, learning, and problem-solving.

Forms of AI include Machine Learning, Deep Learning, Natural Language Processing (NLP), and Robotics (Jatto et al., 2025). The robotic field encompasses a robot that can perform automatic or semi-automatic tasks, often in hazardous or inaccessible environments. Examples of the field that use include, but are not limited to, industrial robots, medical robots, and autonomous vehicles. NLP is the communication between computer systems and humans through natural language, enabling machines to understand, interpret, and generate human language. Among the primary functions of NLP are language translation, sentiment analysis, and machine translation. Examples of NPL include Chatbots, Virtual Assistants, and Google Translate, which uses neural machine translation to provide accurate and context-aware translations (Sharma et al., 2023; Zhou, 2024). Machine Learning (ML) is the form of AI that enables systems to learn and improve from experience without being explicitly programmed. ML algorithms use statistical techniques to analyse and draw inferences from patterns in data. Typical applications include predictive analytics and fraud detection.

In an educational context, AI is expected to transform teaching methodologies and practices of teachers. AI-powered streamlines administrative tasks and creates interactive and immersive learning environments. For instance, chatbots and virtual assistants can provide students with instant support and guidance outside of traditional classroom hours (Mwakapina, 2024). In addition, intelligent tutoring systems can deliver adaptive instructions customised to students' individual learning needs. The role of AI in education can include all intelligent tasks that both teachers and students

can perform. Examples of the tasks include, but are not limited to, tutoring, communication, analysis, assessment, supervision, and evaluation of the student (Ahmad et al., 2021). In the education context, language learning applications are among the AI that can be categorised in the form of ML.

Lifelong learning is referred to as a continuous, self-motivated pursuit of knowledge acquired in a formal, informal, and non-formal education system. This nature of learning is the continuous, voluntary, and self-motivated pursuit of knowledge for personal or professional growth. It covers the learning that occurs throughout an individual's life, from early childhood education to post-retirement learning activities (Jatto et al., 2025). Due to the rapidly changing nature of work and technological innovation, there is a need for a continuous learning process for individuals to adapt and thrive. For instance, a teacher with teaching subjects of science, art, or business can privately learn ICT skills. These skills simplify their activities, such as creating multimedia notes and managing ICT systems, including the School Information System (SIS), Employee Self-Service (ESS), and Public Employee Performance Management Information System (PEPMIS). Lifelong learning fosters personal development, enhances employability, and promotes social interaction among people (Jatto et al., 2025). AI in lifelong learning is critical because some learning takes place outside academic institutions, and AI serves as a valuable tool to supplement the assistance provided in academic settings.

Methodology

This study employed a quantitative approach to comprehensively explore the role of artificial intelligence in Secondary School Teachers and Lifelong Education. The quantitative component involved structured surveys to gather numerical data (Creswell, 2014; Pawar, 2020). The study population consisted of secondary school teachers in schools with a computer science subject. These schools were selected due to their good ICT infrastructure, including the availability of computers and the accessibility of the school's internet bundle. Respondents were teachers teaching different subjects, as every teacher is responsible for integrating AI technology into their teaching subject. Validity of the questionnaires was ensured through expert review and refinement. To ensure the reliability of the questionnaires, the test-retest technique was employed in a pilot study, whereby the research instruments were administered to secondary school teachers at a working station. The target population included 137, with a final sample size of 102 respondents. The selection of the sample was based on the Yamane formula for sample size determination of 1967, which states:

$$n = \frac{N}{1+Ne^2}$$

Where;

n = Sample Size

N=Total population and

e = Error tolerance of 0.05 (05%)

Based on the formula above, 137 tutors resulted in

$$n = \frac{137}{1 + 137 \times (0.05)^2}$$

$$n = \frac{137}{1 + 0.3425}$$

$$n = \frac{137}{1.3425}$$

$$n = 102$$

Therefore, a total of 102 participants volunteered to participate in research across their age, gender, educational background, and professional experience. During data collection, printed questionnaires and an online survey were distributed to secondary school teachers to quantify the role of AI in secondary school teaching. The survey included both closed and open-ended questions to capture a wide range of data.

Data were analysed descriptively to obtain frequencies, means, and charts through SPSS version 25. The data set in the Likert scale has been analysed in percentages to reveal the status of AI integration in teachers' activities, as adapted from Jude et al. (2014). Ethical considerations were meticulously addressed throughout the study by first receiving ethical approval from the relevant institutions. All ethics for research involving human subjects were considered, as advised by Bryman (2016). It was followed by obtaining informed consent from all participants regarding the purpose of the study. The confidentiality and anonymity of participants were maintained by using coded identifiers and secure data storage methods (Edwards-Fapohunda & Adediji, 2025).

Results

Background Characteristics of Teachers

The background characteristics of teachers involved school affiliation, sex, age, teaching subjects, and ICT background. Generally, teachers participated well in filling in their background characteristics. Table 1 summarises the teachers' background characteristics.

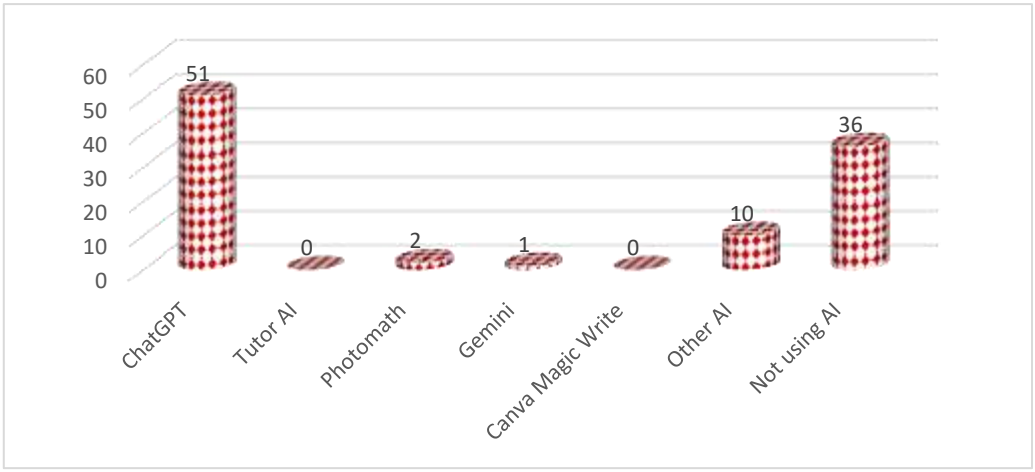
Table 1: Background Characteristics of Teachers

Items	Categories	Frequency (n)	Percentages (%)
School Participation	S 1	42	41
	S 2	60	59
Gender	Male	72	71
	Female	30	29
Age	Under 30 years	13	13
	30 to 45 years	63	62
	Above 45 years	26	25
Teaching subject	ICT	03	03
	Science	35	34
	Art	61	60
	Business	02	02
	Other	01	01
Profession in ICT	No ICT Professional	80	78
	Short Course	12	12
	Certificate	06	06
	Diploma	00	00
	Degree	04	04
	Masters	00	00
	PhD	00	00

AI Software used by Secondary School Teachers in Teaching and Lifelong Learning

The use of AI is characterized by different software depending on the nature of the activity taking place. The study analysed various AI software that have made significant contributions to the education context, as illustrated in Figure 1.

Figure 1: AI Software Used by Secondary School Teachers



The study found that most of the secondary school teachers were using ChatGPT (51%). The next group of teachers was not using any AI software (36%). Other teachers were using other AI software not included in the study's questionnaires, such as Google Translate and Grammarly. Gemini was integrated at 1%, Photomath at 2%, and no teachers (0%) appeared to use Canva Magic Write and Tutor AI**.** This suggests that teachers often rely on ChatGPT, neglecting to integrate other AI tools such as Gemini and Tutor AI. This can be caused by a lack of skills in the use of AI software, and other software requires advanced training for its use. The purpose of ChatGPT is to interact through conversation, which involves a series of questions from users and responses from the app (Pericles 'Asher, 2023). Therefore, there is a need to integrate other AI software because ChatGPT is designed to facilitate questions and follow-up questions. Integrating multiple AI software is more advantageous than integrating ChatGPT only because other AI software can perform better on certain educational activities than ChatGPT. For instance, Google LMS is suitable for classroom management, Tutor AI for intelligent tutoring, and 360Learning for a virtual 3D Classroom. The next group of teachers in magnitude does not use any AI software. This group needs support in utilizing AI software for educational purposes.

Studies have been conducted among secondary school stakeholders to assess their readiness to integrate other AI tools beyond ChatGPT. For instance, senior secondary students in Nigeria were ready to adopt and use Artificial Intelligence-based tutoring systems for learning in secondary schools (Adelana & Akinyemi, 2021). In addition, pre-service teachers were ready to adopt and use multiple AI tools for inclusive education in teaching (Adigun et al., 2025).

The Role of AI in Teaching and Lifelong Learning for Secondary School Teachers

The role of AI in teaching and lifelong learning was assessed by looking up the status of the utilisation of AI activities. Effective utilisation of AI in secondary schools involves several activities, like administrative tasks, lesson notes, online learning, students' assessment, and evaluation. Table 2 summarises teachers' activities in relation to the integration of AI.

Table 2: Role of AI in Teaching and Lifelong Learning to Secondary School Teachers

AI Role in education for secondary school teachers	SA	A	N	D	SD
I use a general AI tool like ChatGPT to generate ideas, summarize text, and create different teaching and learning materials.	42%	24%	08%	16%	10%
AI helped me manage the classroom, for example, through Moodle LMS.	03%	16%	04%	32%	45%
I utilize AI tools like Gradescope to grade essay questions and provide feedback on various aspects of writing, including structure, coherence, and grammar.	16%	34%	01%	27%	22%
I use an AI tool, eg, Eduaide, to create smart content (engaging, personalized, and effective) for teaching.	09%	21%	15%	39%	16%
I have enhanced my language skills through the teaching process by utilizing AI tools, including Google Translate and Duolingo.	20%	41%	13%	14%	12%
I always design a game through AI for use in teaching processes, eg, Quizizz	0%	03%	13%	56%	28%
AI tools like 360Learning and Engage VR enable me to utilize virtual 3D classrooms for experimental topics.	03%	02%	18%	35%	42%
AI tools have helped me improve my ICT and pedagogical skills.	25%	11%	21%	16%	27%
I use AI, eg, Gemini, to generate multimedia content, such as images and videos, to motivate learners in the teaching process.	07%	13%	05%	34%	41%
Artificial Intelligence facilitates online tutorials in my lifelong learning education.	24%	33%	06%	21%	16%
Average percentage	14.9%	19.8%	10.4%	29%	25.9%

On average, 19.8% and 14.9% of the respondents agreed and strongly agreed, respectively, that the role of AI is integrated into teaching and lifelong learning among secondary school teachers. Among teachers' activities that seemed to involve AI were online tutorials, enhancement of language skills, grading questions, and the use of ChatGPT. Other roles of AI seemed to be difficulties in integrating into teachers' activities due to the advanced ICT skills a teacher requires. Teachers rejected the role of AI in their activities at an average of 29% and 25.9%. Activities that played a less significant role in AI included the generation of multimedia content, such as videos, images, animations, and game design, to motivate learners. The role played by AI via Moodle LMS was low because only 19% of respondents were capable of these skills. In addition, AI was integrated at a level of 5% into a virtual three-dimensional (3D) classroom for abstract experiments like the solar system and the human blood system. The proportion of teachers (10.4%) did not know whether AI played a significant role or not because they had not been keen on issues of AI pedagogic integration. These findings align with Aletras (2024), who found that applications of AI, such as creating exercises, tests, lesson plans, and giving ideas for a lesson presentation for teachers, were not applicable in 67.26%.

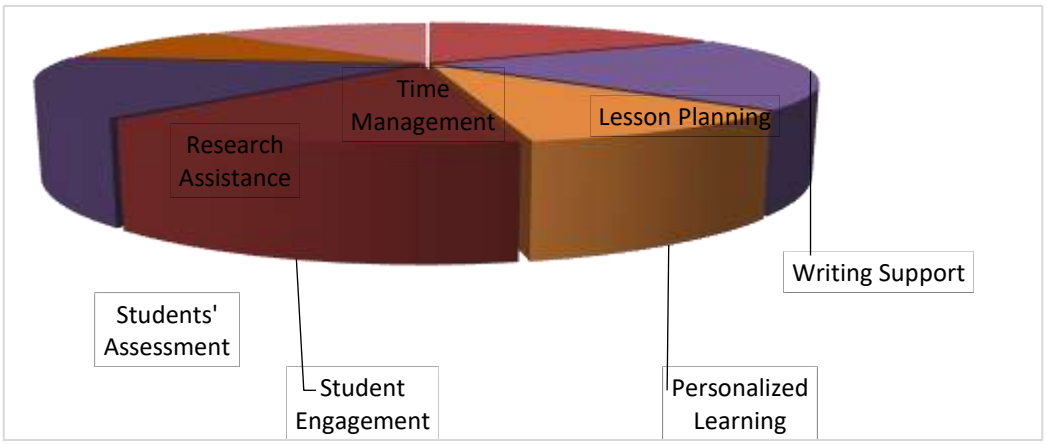
Studies have been conducted to reveal the potential of the role of AI in secondary schools. For instance, the use of AI in science education has established positive impacts on student learning outcomes. It encourages participation in the educational process, enhances comprehension of the subject, and boosts motivation in the students (Almasri, 2024). Other potentials resulting from the roles of AI in teaching and lifelong learning were offering opportunities for personalised learning experiences, instant feedback, and enhanced problem-solving skills (Ikechukwu et al., 2024). In addition, all the participants' responses (100%) were positive on AI to encourage continuous learning in teacher education (Köprülü et al., 2023). AI-powered chatbots and virtual assistants facilitate personalised learning by acting as personal tutors, offering instant feedback, answering queries, and suggesting supplementary resources based on the student's needs.

Ethical Use of AI in Teaching and Lifelong Learning to Secondary School Teachers

Although AI plays a significant role in the educational system, important ethical issues arise when integrating AI into the classroom. This study analysed activities that are ethical for secondary school teachers. One of the activities is the generation of automated lesson plans, teachers' and learners' activities, allowing teachers to focus on student engagement and interaction. In secondary school, AI can make report writing faster, more structured, and remarkably efficient, especially in administrative matters,

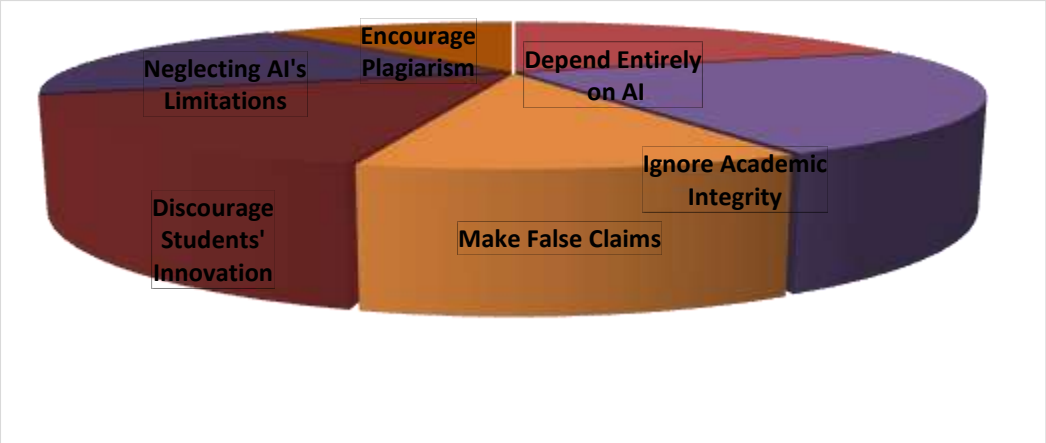
hence saving time for other teaching activities. Tutoring system analyses student data to tailor learning materials and pacing, fostering deeper engagement and more effective learning. Personalized learning through AI solves the challenges of a "one-size-fits-all" approach. For student engagement, AI generates creative prompts, thought-provoking questions, and interactive activities. Students can be assessed through designing quizzes, generating answers, and providing feedback on student work. Furthermore, AI excels in research matters for lifelong learning by exploring different perspectives on a topic and gathering information from various sources. Figure 2 summarises ethical uses of AI in teaching and lifelong learning.

Figure 2: Ethical Use of Artificial Intelligence



When AI is ethically integrated into the education system, it has been found that there has been abuse of the use of AI. Depend entirely on AI is one of the unethical issues regarding the role of AI; do not let AI replace the primary role of a teacher. The ease of use of AI-powered tools like ChatGPT could tempt teachers or students to make false claims by presenting AI-generated content as their own work. This tendency undermines the integrity of academic work as well as neglects the limitation that AI can result in false results. A teacher can discourage students from experimenting if it is not ethical in AI. Instead of banning AI from students, guide students on how to use it responsibly. In case of encouraging plagiarism, a teacher or student should not copy and paste content from AI without proper attribution. Figure 3 illustrates unethical issues a teacher should take caution to avoid the misuse of AI in teaching and lifelong learning.

Figure 3: Unethical Use of Artificial Intelligence



Ethics are very crucial in ensuring that AI is utilised without abusing it. This study highlighted what a teacher can do with AI (ethics) and what a teacher is not supposed to do (unethical) when utilising AI. In the educational system, ethical considerations regarding data privacy, algorithmic bias, and the equitable distribution of AI-enabled resources must be carefully addressed to ensure that AI technologies serve the best interests of all learners and teachers (Mwakapina, 2024). The nuanced exploration of the unethical use of AI highlights the pressing need to address and prevent cognitive detriment among users (Zhai et al., 2024).

Conclusion

The study started by examining the use of AI tools. The findings show that ChatGPT is the most frequently used tool among teachers, although a few teachers also use it. Generally, the study found that secondary education teachers have minimal familiarity with AI. The optimal use of ChatGPT is achieved by using an appropriate prompt that generates correct answers. In the case of the role played by AI in teaching and lifelong learning, AI played at 34.7%, which is below the average of 50%. Ethics toward the use of AI has been clarified to help teachers use it optimally. In advance, AI cannot replace the teacher's collaboration with AI in the implementation of teaching and learning (Fitria, 2021). The collaborations involve providing motivation and inspiration, as well as developing character, since it lacks feelings and emotions like a human being. Teachers should strive to acquire AI skills for enhanced teaching and lifelong learning.

Recommendations

To improve AI integration in secondary schools, the government should provide adequate funds for the procurement of AI facilities, the supply of AI gadgets, and the formulation of a policy that encourages the use of AI. Key issues to consider when formulating AI policy include connecting to existing policy, engaging with vendors about AI products, generating AI policy, and implementing the policy (Ross, 2024). Further measures are needed to employ technical expertise in secondary schools to handle AI gadgets effectively. Also, there should be sufficient electrical supply to power AI gadgets. Lastly, but not least, the phobia of teachers towards the use of AI-enabled devices should be avoided. Phobias can be addressed through regular training on integrating AI technology into teaching and lifelong learning among secondary school teachers.

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Preparing Tanzanian Youth for a Changing World: The Role of New Literacies and Multiliteracies in Lifelong Learning

Leonard S. Misana, Dar es Salaam University College of Education

Email: leomisana@gmail.com

ORCID: https://orcid.org/0000-0002-8542-4317

Abstract

In the rapidly changing technological world, Tanzanian youth require more than traditional academic literacy to thrive. Based on this reality, Tanzania has reformed its secondary competency-based curriculum to integrate vocational training into academic learning. In the wake of these reforms, this paper argues that the well-intentioned goal of enabling secondary school young adults to graduate with relevant skills may relatively remain unattained unless the current classroom practices are adjusted to incorporate New Literacies and Multiliteracies Pedagogy. I regard these as crucial regardless of whether the student chooses the vocational or general academic path. In making this argument, this reflective literature review paper provides an overview of the current reforms in Tanzania, the impact of the current technological advancements on youth, and the role of New Literacies and the Pedagogy of Multiliteracies, with examples from various contexts. Based on the Tanzanian context, I propose the inevitability of adapting New Literacies and Multiliteracies pedagogy in secondary education. I conclude by stressing that we need to reimagine literacy and our current pedagogical practices in Tanzanian secondary education to empower Tanzanian youth with lifelong learning skills and competency to navigate the rapidly changing world.

Key words: New Literacies, Pedagogy of Multiliteracies, Tanzanian Youth, lifelong learning

Introduction

Preparing the youth for the future is one of the most difficult tasks because the future is always unpredictable. Nevertheless, this does not mean that educators cannot prepare the youth for the future. In this paper, I argue that in the contemporary, rapidly changing technological world, Tanzanian youth require more than traditional academic literacy to thrive. Traditional academic literacy focuses on reading, writing [with pen and paper], and numeracy (Vlieghe, 2015). Usually, these abilities are considered the requisite skills one must have to survive in society. These survival skills are acquired after learning "the written textbook as a source of authority" (Cope & Kalantzis, 2015, p.7), and then through assessment demonstrating their mastery. Text in the context of this paper denotes a certain standardised curriculum that all students must learn, get promoted to the next levels, and be certified after successful schooling.

In a traditional perspective, literacy is construed as the ability to read and write (see Castles et al., 2018; Hudson et al., 2021). The teacher's main task is to enable students to [re]"produce through reading and eventually writing] the types of texts expected of them by curricular benchmarks" (Harmey, 2021, p. 419). Success in this kind of practice is determined by passing print-based exams, that is, exams based on reading and writing (Maire, 2021). Those who pass such exams get the "academic credentials" (Tan & McWilliam, 2009, p. 219). These academic credentials are then used as "academic power" to access various opportunities in the labour market (Maire, 2021, p.20). In practice, people without these credentials lack such access. This is because social mobilities into job vacancies are permitted based on the successful acquisition of traditional academic literacy. Yet, in most cases, according to Gee and Hayes (2011) academic credentials do not help students to solve real-world problems.

The traditional academic literacy imposes standardised educational practices that neglect students' varied experiences and strengths (Skerrett et al., 2018). Consequently, it overlooks other forms of literacies beyond the ability to read and write, especially those from emerging technologies, as well as students' personal experiences. Street (2009), talking about traditional literacy which he calls "the academic and schooled literacy of dominant western elites", expounds that it solely "represents only one form of literacy amongst many, just as the forms of language amongst such elites is only one dialect amongst many" (p.138). Throughout this paper, I argue against the traditional academic literacy by highlighting its limitations and then suggesting why it is important to integrate new literacies and the pedagogy of multiliteracies in the wake of educational reforms that blend academic and vocational education.

Traditional academic literacy is limited in both what it teaches and how it is taught. Addressing the anomalies in the traditionally conceived academic literacy necessitates a broader view of literacy. Literacy broadly defined requires recognising it as "a social practice" (Noreen & Iqbal, 2025, p. 68). This means understanding that "texts are created and read to serve social functions" (Purcell-Gates, 2006, p.166). Apparently, different people in their different socio-cultural contexts create and read texts for various purposes. It follows that the educational practices in which all learners must learn a single text [certain standardised curriculum] are misguided. This is so important because the focus should not only be on what people read and write, but also on what people should do with the [writing and reading] skills they are acquiring.

Today the society is plentiful with modes of communication, increasing linguistic diversities both locally and globally, which in turn shape how people make sense of what they encounter[learn] (The New London Group, 1996). These features demand a shift from traditional academic literacy to modern academic literacy. In the modern

perspective, literacy is broadly construed as 'literacies" and hence, "multiliteracies" (Hagood, 2000). This is because people in their different settings have different affordances or resources to engage with the same information in different ways and make different meanings out of it. Given these realities, educators have advocated for rethinking the ways of teaching literacy (Kalantzis, 2006; The New London Group, 1996). Here, the key argument is that in the current educational practices, literacy must be redefined beyond mere reading and writing to include teaching the youth formal aspects of digital media to help them develop a sense of digital capabilities (Vlieghe, 2015).

Recognising the fact that the current world is experiencing rapid technological advancement, which also necessitates a shift from traditional literacy to modern literacies, Tanzania has reformed its secondary competency-based curriculum to integrate vocational training into academic learning. In the wake of these reforms, this paper argues that the well-intentioned goal of enabling secondary school young adults to graduate with relevant skills may relatively remain unattained unless the current classroom practices are adjusted to incorporate New Literacies (Street, 2003, 2009) and Multiliteracies Pedagogy (Kalantzis & Cope, 2023; The New London Group, 1996).

Basically, this is a reflective literature review paper which is part of my doctoral thesis. My doctoral thesis examines the academic potential of students' out-of-school literary practices in enhancing students' learning of the secondary school competency-based curriculum. In this paper, I argue that *New Literacies* and *Multiliteracies Pedagogy* are crucial at the secondary school level, regardless of whether the student chooses the vocational or general academic path. In making this argument, I have organised this paper into various sections, such as an overview of the current reforms in Tanzania, the impact of the current technological advancements on youth, and the role of New Literacies and the Pedagogy of Multiliteracies, with examples from various contexts. Other sections include the rationale for the inevitability of adapting New Literacies and Multiliteracies pedagogy in the competency-based secondary education, and the last part is the conclusion.

Overview of the current reforms in Tanzania

Since its independence in 1961, Tanzania has made several reforms to its educational policies, such as the Education for Self-Reliance (ESR) policy of 1967; the Tanzania Education and Training Policy (TETP) of 1995; and the Education and Training Policy (ETP) of 2014.

One of the significant reforms in Tanzanian education was made in 2005 to the secondary education curriculum, whereby the teaching paradigm shifted from content-based to competency-based teaching under ETP 2014 (Ministry of Education and Vocational Training (MoEVT), 2014). This curriculum aims to provide "quality and inclusive education based on the philosophy of Education for Self-Reliance (ESR) founded in 1967 by the Father of the Nation, Mwalimu Julius Kambarage Nyerere" (Tanzania Institute of Education, 2023, p. 1). Since independence, ESR philosophy has remained the Tanzanian national philosophy of education. A brief history will serve here.

Education under the ESR philosophy aims to build an egalitarian society (Nyerere, 1967). This desire was anchored on an understanding that education inherited from the British (former coloniser) was elitist in nature; promoting intellectual arrogance in the educated who largely disrespected the uneducated majority; alienated from the societal needs; instilling the belief that all valuable knowledge was to be found in books and not in daily life experiences (Nyerere, 1967). The country required education that combined academic schooling and work (Tanganyika African National Union (TANU), 1974). In that too, primary schooling entry age was extended from the age of five or six to seven, so that after seven years of primary schooling, graduates, approximately 14-year-olds olds would be able to join the world of work (TANU, 1974).

Unfortunately, the ESR of 1967 faced several challenges, including conditions from the Structural Adjustment Programmes (SAPs) by the World Bank and International Monetary Fund in the 1980s. These included: trade liberalisation, cost-sharing of social services, the elimination of consumer and agricultural subsidies, the reduction of civil service employment, and the need to privatise various programmes, including education (Vavrus, 2003).

Responding to the above demands, the ESR policy of 1967 was replaced by the Tanzania Education and Training Policy (TETP) of 1995. This reform was also charged by the need to cope with technological changes in the 21st century (Ministry of Education and Culture, 1995). It was insisted that realising the 21st-century realities required making a curriculum review (Tanzania Institute of Education, 2007).

It was on this ground; a shift was made in 2005, from content-based to competency-based curriculum. Competence, construed as "what a secondary school learner should be able to do as the outcome of teaching and learning", required competency-based teaching (Tanzania Institute of Education, 2007, p. 13).

However, the attainment of a competency-based curriculum has remained a mere dream. Many teachers lack a clear understanding of the competency-based curriculum (Ndomondo et al., 2022); teaching practices do not consider students' cultural and linguistic diversities (Adamson et al., 2024; Adamson & Brown, 2024). From my experience, as a teacher educator in Tanzania, teacher-centred approaches are still prevalent, and there are no competency-based assessments. Also, I understand these practices are highly influenced by large class sizes and a lack of supportive facilities for competency-based teaching. Further research highlights that formal schools in Tanzania have become grounds to prepare students for potential jobs that exist outside their community (Lauwo, 2022). This way, there is a clear "cultural divide between home and school" (Lauwo, 2022, p.689). In short, many classroom practices are seen as largely divorced from students' needs because they are governed by universal standards and prescriptive practices rather than social realities (Adamson & Brown, 2024).

These challenges, alongside other emerging local and global dynamics, have prompted further structural reforms through the ETP 2014 (2023 edition) (MoEVT, 2014). As per the 2023 curriculum reform, 'compulsory basic schooling' now takes 10 years, which includes one year of pre-primary, six years of primary and four years of lower secondary education, unlike the previous seven years of primary education (MoEVT, 2014). Extending compulsory schooling has gone in tandem with recognition of vocational training as an integral part of academic schooling (MoEVT, 2014). At the secondary school level, students must choose either to place their career prospects in academic schooling or vocational education (MoEVT, 2014).

In my opinion, the current reform has extended literacy from reading, writing and numeracy to a pluralistic view that recognises that other skills beyond the 3Rs are equally important. These skills are envisioned to be promoted through the competency-based teaching approach. The goal of competency-based teaching in Tanzania is "to cater for the diversities in the needs of the learners and the society in the fast changing and growing world" (Tanzania Institute of Education, 2007, p. 8). This resonates well with the Pedagogy of Multiliteracies, which also aims to cater for the increasingly varying needs of students with dynamics in the increasingly technological changing world (The New London Group, 1996). Recognising vocational training in the academic curricula has now made the Tanzanian curriculum a multiliteracies one. In this, I suggest that the current Tanzanian basic education curriculum should not be construed as 'competency-based' but 'multi-competencies'. This is because 'competency' seems singular and inherently limiting, as in a traditional view of literacy. This argument, taken together with the reported challenges in

implementing the competency-based curriculum, supports the need to understand what the Tanzanian competency-based curriculum will look like when designed to embrace new literacies and then get implemented through the pedagogy of multiliteracies. In what follows, I provide the conceptual understanding of new literacies and the pedagogy of multiliteracies.

New Literacies and Pedagogy of Multiliteracies

The notion of new literacies is grounded on an understanding that today there are new forms of digital media, such as video games, social media, which the young adults are the major users (Gee & Hayes, 2011). In other words, the youth look at these changes as a normal thing. The emergence of new technologies not only acts as an opportunity to counteract dominant literacies but also supports new ways of learning. Gee & Hayes suggest that the advent of new forms of digital media implies the need for reconsidering the ways of helping the youth learn. In a nutshell, new literacies are usually used to refer to all literacy practices associated with the use of the internet. Since there are numerous things an individual can do with the internet, the term 'multiliteracies' seems a fair synonym.

The term 'multiliteracies' is often attributed to the New London Group ([NLG]. NLG was the group of literacy educators that convened in September 1994, in the small town of New London, New Hampshire, to discuss the future of literacy. They made two observations. First, "new communications media are reshaping the way we use language" (The New London Group, 1996, p. 64). On this, they argued that: "when technologies of meaning are changing so rapidly, there cannot be one set of standards or skills that constitute the ends of literacy learning, however taught" (The New London Group, 1996, p. 64). Their second observation was the "realities of increasing local diversity and global connectedness" (The New London Group, 1996, p. 64). This made them agree that in every country they were coming from, what students needed to learn was changing (Cope & Kalantzis, 2005). They suggested that "cultural differences and rapidly shifting communications media meant that the very nature of the subject of literacy pedagogy was changing radically" (Cope & Kalantzis, 2005, p. 5).

They used the term "multiliteracies" to suggest a shift from a single conception of literacy to its pluralistic view, relative to the contexts, purposes, tools, and skills available for making meaning (Cope & Kalantzis, 2005, p. 5). They proposed "a pedagogy of Multi-literacies" (Cope & Kalantzis, 2005, p. 5; The New London Group, 1996, p. 64).

Pedagogy of Multiliteracies encompasses four principles: situated practice, overt instruction, critical framing, and transformed practice. These were later revised into what the proponents called "knowledge processes" or "things you do to know" as: experiencing, conceptualising, analysing, and applying (Cope & Kalantzis, 2015, pp. 83-88), as detailed below.

Situated practice/experiencing is concerned with bridging students' out-of-school literacy activities they engage in their daily life with the academic literacy they are learning in school. It is concerned with using pedagogical practices that allow integrating school and daily life experiences.

Overt instruction/conceptualising involves being aware of the specialised knowledge that is usually created by experts in a specific field. Instead of just sharing those concepts, it requires learners to actively engage in forming their own concepts. Specific to Multiliteracies pedagogy, this knowledge process teaches a metalanguage of multimodal design. This means creating a specific language or vocabulary to talk about the different parts of design.

Critical framing/analysing; in an educational context, this means developing a specific type of critical thinking. In a teaching context, it either means analysing how things work or addressing power dynamics. As a principle in Pedagogy of Multiliteracies, analysis is concerned with understanding how texts function. It allows students to critique texts within social contexts, including questioning the interests of those involved in the communication process.

Transformed practice/applying entails the application of knowledge and understanding to the complex diversity of real-world situations. In the case of Multiliteracies, this means making texts and putting them to use in communicative action. It facilitates students to apply and creatively extend knowledge through the redesign of meaning and texts in their own contexts.

Since its introduction in 1996, the Pedagogy of Multiliteracies has proved an appropriate teaching approach that can address many limitations of singular literacy practices. It enhances students' active learning, embraces students' diverse cultures, and helps students form their identities (Zhang et al., 2019). It allows flexible classroom practices through which teachers reflect on the broader social and educational implications of the chosen practices (Kostouli, 2009). It can thus be regarded as a tool for empowering marginalised students. In this, I mean students from less dominant classes, such as indigenous groups whose cultural values are rarely centred when designing the national curriculum (Apple, 1993). Given the globally increasing changes such as new forms of communication, cultural diversity, rapid

changes at workplaces, and varying student identities, the pedagogy of multiliteracies is inevitable (The New London Group, 1996).

Generally, Bauer et al. (2021), have grouped research on multiliteracies into three categories: studies on how students use multimodality to understand and share ideas; studies on how students use these tools to create projects and express their own meaning; and studies which broaden the notion of schooling by looking at multiple perspectives and their various aspects. It is this third group of scholarship that I join to suggest that the Pedagogy of Multiliteracies resonates well with the principles of competency-based teaching, hence appropriate for implementing the Tanzanian lower secondary competency-based curriculum. In the section that follows, why Ne literacies and pedagogy of Multiliteracies are inevitable if the current educational reforms are to be realised in Tanzania.

Why New Literacies and Pedagogy of Multiliteracies Matter in Tanzania

Integrating New Literacies and Pedagogy of Multiliteracies aligns with national educational goals and the requisites for employability. One of the goals of education in Tanzania is to produce graduates who are competent in 21st-century skills (Tanzania Institute of Education, 2023b). Indeed, the current educational reforms in Tanzania, among other targets, aim to enhance students' employability after graduation. Elsewhere, research has proved that when secondary school students engage with new literacies tools and through the pedagogy of multiliteracies pedagogy they enhance their preparedness for the 21st c skills (Li, 2025). Eventually, this will bridge the gap between curriculum policy and actual skills development.

The current classroom practices act as a missing link. Many educational reforms fail due to their weak implementation (Cohen & Mehta, 2017). Likewise, I envision that the implementation of the current educational reforms may not be easily achieved unless classroom practices are transformed. The transformative practice I propose in this regard is the integration of new literacies and the pedagogy of multiliteracies. Hence, teacher education or teacher pedagogy must be a critical site of investment (Darling-Hammond, 2023). I understand that the current reforms embrace digital skills as crucial aspects of new literacies and the pedagogy of multiliteracies, although they might not be directly stated as new literacies and multiliteracies. However, I believe that teachers trained in old traditional academic literacy systems may not be able to integrate digital media into their educational classroom practices.

The need for equity and inclusion. According to Mosha (2006), the aim of equity is "to correct imbalances in the systems so that everyone receives a high-quality education" (p.66). As Mosha notes, in equitable educational practices, all learners are

provided with an enabling environment to give their best. As Mosha suggests, such education must move beyond merely academic achievements because doing so will eventually lead to having graduates who lack the necessary skills. In addition, Mosha notes that many African educational systems are still not designed and implemented in consonance with equity. It follows that integrating new literacies and pedagogy of multiliteracies will help empower all learners – regardless of background or chosen path [academic or vocational] to participate meaningfully in digital and civic life.

The purpose of education is to serve not just exams, but life. In other words, when young people are educated, although they obviously work hard to pass exams, they also expect to succeed in life. To this end, literacy itself must be construed in the perspective of lifelong learning. From the perspective of lifelong learning, literacy is not only a key component of the right to education, but also a public good and vital foundation of independent learning (Hanemann & McKay, 2015). While the traditional academic literacy practices are too focused on reading and writing skills for the sake of passing exams to attain academic grades, New Literacies and the pedagogy of multiliteracies will help to form literacy as a lifelong and cross-sectoral skill.

The matter of currency. This is the right time to embed new literacies and the pedagogy of multiliteracies. This inevitability is caused by the fact that the current reforms provide an ideal window for embracing digital literacies into official syllabi, teachers' schemes of work, and teacher training modules. Furthermore, today there is an increased penetration of the internet into several areas across Tanzania (Komba & Komba, 2024). This internet accessibility provides an infrastructural base which supports the integration of the pedagogy of multiliteracies and new literacies. Apparently, the prevalence of various digital media and internet access makes the focus on print media [reading and writing] as the sole purpose of education irrelevant. In practice, the youth use various digital platforms to form their personal and social identities, develop communication skills, and navigate different contexts instantaneously (Hagood, 2000).

What a Pedagogy of New Literacies and Pedagogy of Multiliteracies adds to the competence-based teaching is the focus to enable learners to become "designers of [their own] social futures" (The New London Group, 1996, p. 89). These two educational components are grounded on an understanding that different local communities have valuable knowledge and skills which deserve respect and recognition (Sanford et al., 2024). After all, much literature on the Pedagogy of multiliteracies in Africa is largely dominated by South Africa while less remains understood on the broader region (Lauwo, 2021). This paper narrows this knowledge

gap. Future research must focus on how teaching of the competency-based curriculum can be understood if implemented by centring new literacies and multiliteracies.

Conclusion and Recommendation

In this paper, I have argued against the traditional view of literacy. I construe literacy as a relevant skill to one's context and is achieved for a particular purpose. This skill is developed through "collaborative interaction with others of diverse skills, perspectives and backgrounds" (The New London Group, 1996, p. 82). Then, I argue that such skills are diverse across contexts; hence, a pluralistic view of Literacy is more relevant for valuing each skill. I see the current Tanzanian educational reforms of integrating academic learning and vocational skills as 'going back to the basics' of integrating work and schooling as envisioned in the ESR of 1967, which was lost from mid mid-1980s. Hence, I suggest that if the current secondary school education curriculum is to achieve its objectives of integrating academic and vocational learning, it must be viewed as a multi-competencies document. Taking this view will allow teaching by drawing on the ideals of new literacies and the pedagogy of multiliteracies. Applying a pedagogy of Multiliteracies to the Tanzanian [multi]competency-based curriculum contributes to efforts for making such a curriculum realise its potential.

I propose the inevitability of adapting New Literacies and Multiliteracies pedagogy in secondary education. I am worried that the anticipated reforms may not be realised if traditional teaching continues, with everything focusing on academic success. It is time to teach from a true experience of students' background, rather than assuming that if a student has failed in the academic stream, he or she will eventually find a place in any certain vocational stream available in the school premises. I suggest that a single school must have multiple vocational programmes. Therefore, we need to reimagine literacy and our current pedagogical practices in Tanzanian secondary education to empower Tanzanian youth with lifelong learning skills and competency to navigate the rapidly changing world. The Institute of Adult Education must collaborate with secondary schools. Some of the programmes that the youth join at the Institute of Adult Education after completing secondary education can be taught at the level of secondary school. This will not only lay a foundation and interests for the youth to continue into those programmes but also will avoid the regular practices of the institute of education receiving these youth as failures of secondary education.

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Enhancing Economic Outcome through Integrated Programme for Out-of-School Youth in Itigi District, Singida: Perspectives and Recommendations

Abtwalibu Salimu, Institute of Adult Education

Email: abtwalibu.salimu@iae.ac.tz

Abstract

This study explores how the Integrated Programme for Out-of-School Youths (IPOSA) can enhance economic independence and social cohesion among the youth population in Itigi District Council, Singida. Using a qualitative thematic analysis, the study analyses in-depth interviews with ten participants, including youths, parents, community leaders, and NGO representatives, to explore how the integration can address prevailing barriers. The integration incorporates vocational skills, entrepreneurship, life skills, and literacy, which participants perceive as vital for fostering personal development, achieving economic self-sufficiency, and enhancing social integration. Participants reported that these integrated approaches improve practical skills, boost self-confidence, and increase employability, while also promoting community ownership and resilience. Nonetheless, resource constraints, curriculum irrelevance, and limited institutional support pose challenges. The findings highlight the importance of implementing gender-sensitive and contextually tailored strategies that strengthen partnerships between government agencies and non-state actors. Overall, the study demonstrates that customised, integrated interventions hold substantial potential to empower out-of-school youths and promote sustainable community development.

Key words: Integrated Programme, Out-of-School Youths

Introduction

Recent years have seen an increasing recognition of the critical importance of skill integration in promoting economic empowerment and social cohesion, especially among out-of-school youth. Integrating life skills, entrepreneurship, and literacy components within adult learning programmes has emerged as a promising approach to equip learners with the practical competencies necessary for sustainable development (Chigudu, 2025). The integration serves as a strategic approach to address issues of unemployment, social marginalization and poverty. For example, developed nations, particularly in the Global North, have long prioritized comprehensive adult learning frameworks that integrate vocational skills, literacy, life skills, and entrepreneurship to enhance workforce readiness and personal development (UNESCO, 2020). Countries such as Germany, the United Kingdom, and the Nordic states have institutionalised adult education as a lifelong learning

system closely aligned with labour market demands. For example, Germany's dual vocational training model combines classroom instruction with industry-based apprenticeships, equipping youths with technical expertise and practical workplace competencies (Adejoke, 2025; Euler, 2013).

Similarly, Taofeek *et al* (2025) put forward that Scandinavian countries emphasise folk high schools and community learning centres that provide literacy and vocational training while fostering civic participation, social cohesion, and cultural enrichment (Holford & Milana, 2014). In the United States and Canada, adult education increasingly incorporates entrepreneurship, financial literacy, and digital skills to prepare youths for rapidly evolving economic conditions. Programmes under initiatives such as the U.S. Workforce Innovation and Opportunity Act (WIOA) connect adult basic education with employability training and career pathways (Belzer & Kim, 2018).

Additionally, the European Union's Lifelong Learning Strategy emphasises the integration of soft skills, critical thinking, and adaptability as essential components of employability within knowledge-based economies (European Commission, 2015). These experiences demonstrate that adopting a holistic, lifelong approach to adult learning can significantly enhance individuals' economic independence, social mobility, and civic engagement. Furthermore, they emphasise the importance of strong institutional support, government investment, and collaboration with industry stakeholders in sustaining effective adult education systems (Euler, 2013; Holford & Milana, 2014).

In South Africa, Tawiah & Setlhodi (2023) state that comprehensive adult learning frameworks have been developed to address the country's complex socio-economic challenges, including historical inequalities, high unemployment rates, and persistent skills gaps. Following the end of apartheid, the government implemented the Adult Basic Education and Training (ABET) programme as a national strategy aimed at improving literacy, numeracy, and life skills among youths who had been excluded from formal education (McKay, 2023). The ABET framework was designed not merely as a remedial measure but also as a foundation for broader socio-economic participation. Over time, the framework evolved into Adult Education and Training (AET), which now incorporates entrepreneurship, vocational training, and workplace readiness components to better align with labour market demands (*ibid*). This evolution reflects a strategic shift towards fostering active citizenship and economic empowerment through lifelong learning.

The government of the United Republic of Tanzania has made significant steps in improving literacy rates and expanding educational access for adolescents to promote

economic independence. According to the 2022 Population and Housing Census, the overall literacy rate among individuals aged five and older stands at 79.1%. However, disparities remain across different age groups and regions, particularly impacting rural youth. While the literacy rate for 15- to 19-year-olds is 88.9%, many adolescents face barriers to completing their education (NBS, 2024). In 2015, the Ministry of Education, Science, and Technology (MoEST) estimated that around 3.5 million school-aged children were out of school, with 23% of primary-aged and 41% of secondary-aged adolescents affected (MoEST, 2015).

The Institute of Adult Education (IAE), in collabouration with UNICEF, developed the Integrated Programme for Out-of-School Adolescents (IPOSA) to address the educational disparities faced by marginalised youth. This programme aligns with the National Inclusive Education Strategy (2017–2021) (IAE, 2018; MoEST, 2017–2018). IPOSA provides a flexible, inclusive, competency-based learning environment that equips youth with essential literacy, numeracy, vocational, and life skills, catering to practical societal needs (Kristeen *et al*., 2024; PORALG, 2019). Itigi District Council is among 30 councils within the country where this programme is implemented. IPOSA incorporates pre-vocational and pre-vocational training components to equip adolescents with the skills necessary for self-employment and productive engagement in the workforce. The curriculum for the Itigi centre encompasses training in trades such as tailoring, welding, and mechanics, thereby enabling learners to acquire practical competencies aligned with the demands of local economies (Siafu, 2021). This study, therefore, aims to explore how IPOSA can enhance economic independence and social cohesion among the youth population in Itigi District Council, Singida, through its flexible schedule and competency-based approach. The specific this study address the key on what are the perspectives of key stakeholders regarding on the potential of Integrated Programme for Out-of-School Adolescents in fostering economic independence among youth in Itigi District?

Methodology

This study adopted a qualitative thematic approach to explore stakeholders' perspectives on the potential of Integrated Programme for Out-of-School Adolescents in fostering economic independence among youth in Itigi District, Singida. As put forward by Yun *et al* (2023) this approach gives proper techniques in exploring particiapants' voice. The study involved one area of study located in Itigi district council where IPOSA learning centre exist. The area was chosen due to the availability of IPOSA learning centre and willingness of the key informants in providing data. The sample size of Ten (10) research participants were successfully obtained and interviewed to obtain the data. Purposive and random sampling were used to identify

participants. Learners were obtained randomly while education leaders, teachers, parents, community leaders and NGO representatives were purposively selected. Semi-structured interviews were conducted in Swahili and translated into English for analysis. Respondents were asked about their perceptions on the potential of integrated programme, challenges and recommendations. Thematic analysis was used to identify key patterns and insights from the participants related to the integration of vocational skills, life skills, entrepreneurship and literacy within the curriculum.

Results and Discussion

This section presents the study's findings and explores their implications for the Integrated Programme for Out-of-School Adolescents (IPOSA). By analysing real-time implementation data, it offers a comprehensive understanding of the programme's potential to foster economic independence among youth in Itigi District. The discussion focuses on the programme outcomes it achieved, highlighting its effectiveness from both economic and social perspectives. Additionally, this section presents suggestions and recommendations while offering insights into areas requiring improvement.

What are the perspectives of key stakeholders regarding the IPOSA in fostering economic independence among youth in Itigi District?

Analysis of participant perspectives affirms the potential for growth and development through the Integrated Programme for Out-of-School Adolescents in Itigi District. Drawing on insights from youth, facilitators, and parents, the findings reveal significant prospects for enhancing economic opportunities among adolescents who are currently out of school.

Adolescents in Itigi have access to learn basic livelihood options, such as mechanics, welding and petty trade like tailoring (IPOSA, 2019). They expressed enthusiasm for acquiring new knowledge and skills, highlighting their aspiration to contribute meaningfully to both their families and the wider community. One of the interviewed out-of-school adolescent aged 19 had this to say;

> "this Integrated programme remains essential because it will equip us with valuable knowledge and skills, such as tailoring and cloth-making, which in turn will enable us to achieve self-employment and improve our economic prospects"

The facilitators observed that the integration of practical training in welding and mechanics with life skills and entrepreneurship education effectively unlocks the potential of out-of-school adolescents, empowering them to pursue financial independence and achieve long-term stability. They emphasize that this comprehensive approach offers sustainable solutions by equipping youth with both

technical competencies and an entrepreneurial mindset, which seems crucial for self-employment and economic resilience. Parents, on the other hand, express confidence in this strategy, asserting that, with appropriate guidance and access to opportunities, their children who missed formal schooling can transcend poverty and build better futures. As pointed out by Gough (2025), their views stress the significance of holistic skill development and supportive structures in fostering sustainable livelihoods among vulnerable youth populations.

Stakeholders consistently highlighted that focused skills training, structured mentorship, and better access to financial capital could transform these economic activities into sustainable income sources. A community leader expressed optimism, stating;

> "Our youth are energetic and eager; with the right support, they can turn their hard work into successful businesses."

This viewpoint features a widespread belief in the potential of local youth to achieve economic progress when provided with the necessary support. Community involvement and ownership have emerged as critical determinants of the programme's success. Stakeholders consistently emphasise the importance of actively engaging families and community leaders to foster meaningful participation. Integrating programme activities with local traditions, cultural practices, and values remains essential for ensuring long-term sustainability. Perspectives from parents and representatives of non-governmental organisations further reinforce the need for multidimensional, community-driven approaches to youth empowerment. Programmes rooted in local contexts are more likely to build trust, relevance, and sustained impact (Bilderback, 2024).

The qualitative findings reveal a clear demand for integrated support services, as respondents emphasize that isolated interventions, such as short-term vocational training, remain inadequate for sustainable youth development. They advocate for comprehensive packages that combine practical skills, mentorship, psychosocial counselling, and business support to address the multifaceted needs of youth. An NGO staff member emphasises this perspective by stating that;

> "Training a girl in sewing alone is insufficient; she also requires confidence, networks, and startup support to escape poverty.

This perspective aligns with the arguments presented by Singh and Agarwal (2024), who emphasise the importance of adopting holistic and multi-dimensional approaches in youth empowerment strategies. They argue that skill development alone is insufficient; it must be complemented by psychosocial and economic support to achieve sustained and meaningful impacts.

From the study findings, it was revealed that out-of-school youths, especially girls, experience significant vulnerabilities due to social exclusion. This includes stigma, early marriages, and risky behaviours like substance abuse. Parents and NGO representatives note that these social disadvantages make girls more prone to negative outcomes, supporting existing research on gendered vulnerabilities. These insights highlight the vital need for targeted interventions to combat social exclusion and lessen the risks faced by marginalised youth. This aligns with Shah (2025), who emphasises the importance of community-based support systems and gender-sensitive strategies in reducing exposure to harmful social practices and behaviours.

Conclusion

These perspectives emphasise the positive potential of Itigi's out-of-school adolescents and the transformative impact of integrated programmes. Such programmes equip youth with essential skills, resources, and confidence, allowing them to transition from vulnerability to sustainable livelihoods. The findings reveal that Out-of-School adolescents in Singida face various challenges that require comprehensive solutions. By addressing both economic and social needs, integrated programmes offer a more sustainable and effective approach than fragmented efforts, empowering youth to overcome barriers and achieve long-term development outcomes.

Recommendations

Based on the findings, it is recommended to adopt integrated youth programmes that combine vocational training, entrepreneurship, life skills, and psychosocial support to address the multifaceted needs of out-of-school adolescents. Strengthening public-private partnerships can better align training with market demands and create pathways to decent employment. Additionally, enhancing community engagement by involving parents, elders, and local leaders in programme design and implementation ensures cultural relevance and sustainability. Participants advocate for more contextualized content, increased hands-on activities, and youth-centred approaches, emphasizing the importance of community involvement and ongoing support to sustain learning outcomes.

Furthermore, supporting access to start-up capital through microcredit schemes, youth savings groups, and mentorship programmes can facilitate entrepreneurial initiatives. Ensuring gender-sensitive programming remains crucial to protect girls from early marriage and encourage their active participation in economic activities. Alternatively, policymakers and educators must adopt context-sensitive, learner-centred strategies that address local needs and leverage community resources. Future

research should explore longitudinal impacts and scalability of such integrated programmes. Finally, developing robust monitoring and evaluation systems will enable stakeholders to track outcomes effectively and continuously adapt strategies to improve programme impact.

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Potentials and Limitations of AI Integration in Enhancing Lifelong Learning: Experience from Adult Learners

Michael W. Nicodemus, Southwest University (China), Ester P. Kabelele, Institute of Adult Education & Jimmy E. Kihwele, Mzumbe University

Email: michaelwnicodemus@gmail.com

Abstract

The proliferation of AI has prompted educational institutions to develop frameworks for ethical integration of AI into their academic programmes. This study examined the perceived potential and limitations of integrating AI to enhance lifelong learning among adult learners. Using a convergent parallel mixed-methods design, the study involved 77 adult learners from the Morogoro region, who consented to participate. Data were collected through questionnaires and in-depth interviews, employing random and purposive sampling, respectively. Analysis of quantitative data employed descriptive statistics, while qualitative data involved content analysis. Findings indicate that, despite limited institutional support and an environment hindering AI integration in learning, adult learners are using AI with limited competency, thereby jeopardising its potential to enhance lifelong learning. This implies that, despite developing new knowledge, adult learners often unethically use AI to generate unauthentic responses. Therefore, the study recommends establishing frameworks to guide the proper integration of AI in enhancing lifelong learning.

Key words: Adult learners; lifelong learning; AI; technology

Introduction

In the context of instantaneous technical, social, and economic transformations, lifelong learning is widely acknowledged as a vibrant process for personal advancement, career flexibility, and societal development (Dede & Richards, 2020). It is recognised as the voluntary, ongoing pursuit of skills and knowledge throughout an individual's life, either through formal or informal education (Eriksson & Lycke, 2025; Morgan, 2025). For achieving the national educational development goals and the global Sustainable Development Goals (SDGs), adult education is a fundamental pillar (UNESCO, 2012; Faradova, 2020). It plays a crucial role in empowering individuals with the necessary competencies, knowledge, literacy, and skills for professional advancement, societal development, and improved livelihoods, thereby making a meaningful contribution to national progress (Devi, 2024).

In the context of international education frameworks like the SDGs, particularly SDG 4, there is an emphasis on the aim to ensure inclusive, equitable, quality education, also promoting lifelong learning opportunities for all (Faradova, 2020; Hanemann & Robinson, 2022). Achieving sustainable development requires lifelong learning, as it

equips individuals with the skills, knowledge, values, abilities, and essential information necessary to address socio-environmental issues (Said & Abdallah, 2024). This goal highlights the importance of education for children, youth, and adults. Thus, adult education is one of the central approaches in reducing inequalities, providing second-chance opportunities, assuring social inclusion, and fostering sustainable development across all age groups (Grotlüschen et al., 2024). This global SDG aligns with Tanzania's national education ambitions and priorities, as outlined in the Vision 2050 strategies, by incorporating adult education and lifelong learning into planned objectives, curricula, and policies (Chua, 2025).

The expansion and rapid transformation of educational innovations, from digitalisation to the integration of artificial intelligence, result in the reshaping of the acquisition and delivery of educational information (Dahri et al., 2024). Artificial intelligence (AI) currently leads the way in educational innovation, offering significant potential to enhance lifelong learning for educators and learners, including adults (Attwell et al., 2020; Mo, 2025). Its integration advocates for modified learning, immediate feedback through virtual helpers and intelligent tutoring systems, flexible learning opportunities, democratised learning, and fostering independent learning (Shifa et al., 2025). Despite this technological advancement, the integration of AI raises a challenging situation regarding digital inclusion, especially for marginalised groups and adults with limited digital skills (Shifa et al., 2025). Additionally, over-reliance on robotics learning could diminish the chances for human-centred learning and essential collaborative learning, which are crucial for developing critical thinking and social skills (Storey & Wagner, 2024). As the educational field evolves, it is vital to understand the experiences of adult learners with AI adaptation, perception, and application. Moreover, understanding persistent barriers will be crucial for ensuring that the potential transformative power of AI in lifelong learning is realised and rightfully shared. Therefore, this study examined the perceived potential and limitations of integrating AI to enhance lifelong learning among adult learners. Specifically, it sought to answer the following research questions.

(a) How do adult learners perceive the integration of AI for lifelong learning?

(b) How do adult learners use AI in learning to enhance lifelong learning?

(c) What impact does the integration of AI have on the lifelong learning outcomes of adult learners?

(d) What are the challenges adult learners encounter when using AI?

Theoretical framework

The study draws its theoretical framework from the Unified Theory of Acceptance and Use of Technology (UTAUT) model, developed by Venkatesh and others in 2003 (Xue et al., 2024). The model is comprehensively built upon integrated and synthesised frameworks from other theories of technological adoption and use, such as innovation diffusion theory (IDT), the Technology Acceptance Model (TAM), and the Theory of Planned Behaviour (TPB). The UTAUT model classify main four factors for adoption and use of technology among users; (i) effort expectancy, the adopted technology reduces efforts and time in accomplishing tasks, (ii) performance expectancy, producing maximum performance with accuracy and efficiency, (iii) social influence, the mostly uses, accessible and others are using that can assist when needed, and (iv) facilitating conditions, accessibility, self-directing for easy use and cheap (Rana et al., 2024). These theoretical constructs guided the development of data collection tools, which focused on adult learners' experiences with using AI based on their digital literacy skills for easy navigation and inserting command prompts. The situation necessitates examination of the perceived potential and limitations of integrating AI to enhance lifelong learning among adult learners.

Methodology

The study employed a convergent parallel mixed-methods design to analyse the research problem by combining quantitative and qualitative data (Creswell & Creswell, 2023). The convergent parallel design is flexible, allowing researchers to collect rich, detailed data that uncovers the experiences, perceptions, and perceived challenges of adult learners when integrating AI for lifelong learning (Cohen et al., 2018).

This study was conducted in four (4) strategically selected adult education centres across six districts in the Morogoro region of Tanzania (IAE, 2025). These centres are ideal because their adult learners have access to the internet and ICT devices such as laptops, smartphones, and tablets, which support the use of AI in their learning. While learners appreciate AI for saving time on classroom activities and assignments, questions remain about its competency and ethical use in lifelong learning. Therefore, this study explores adult learners' perspectives on the potential and limitations of using AI, aiming to promote ethical use and ensure that the learners validate the accuracy of information generated by various AI tools they use.

Simple random and purposive sampling were used to select adult learners studying at different levels in selected centres. Researchers randomly selected adult learners in their classroom during the preparation week. Researchers further purposively selected representatives from each class of adult learners to provide their insights on the use of

AI for lifelong learning. The total sample from whom data were collected included 77 adult learners. The study's approach and design proposed the incorporation of both sampling techniques to enhance the sample's representativeness (Creswell & Creswell, 2023), while facilitating a comprehensive analysis of how adult learners perceive, use, and encounter challenges in integrating AI for lifelong learning.

The study gathered quantitative data through semi-structured questionnaires (Cohen et al., 2018; Johnson & Christensen, 2019) administered to adult learners across the selected adult education centres. The questionnaires comprised both closed-ended and open-ended questions to assess adult learners' perceptions, experiences, and challenges they encountered in using AI for lifelong learning. Qualitative data were gathered through in-depth interviews with the purposefully selected adult learner leaders from each level of study (Creswell & Creswell, 2023).

Quantitative data were analysed using descriptive statistics in SPSS V25, and the results were summarised in tables of frequencies and percentages for thorough interpretation (Johnson & Christensen, 2019). Researchers analysed qualitative data thematically through coding, categorisation, theme development, and interpretation (Braun & Clarke, 2022). After the analysis, the results were compared to identify areas of convergence or divergence.

A pilot study was conducted to assess the validity and reliability of the instruments and verify consistency in responses (Creswell & Creswell, 2023). Content validity was assessed through expert review to ensure that the interviews effectively covered the relevant constructs (Johnson & Christensen, 2019). Researchers estimated the internal consistency of the questionnaire items using Cronbach's Alpha test, which estimated 0.83(83%) consistency of the questionnaire items as summarised in Table 3.1.

Table: Reliability Statistics

Cronbach's Alpha	No of items
0.83	29

A Cronbach's alpha of 0.83 indicates good reliability. The 29 items in the questionnaire consistently measure the same underlying construct related to adult learners' perceptions, experiences, and challenges of using AI for lifelong learning (Creswell & Creswell, 2023). The questionnaire had stable, cohesive responses. Items for this study aligned well, and Researchers adhered to research ethics by obtaining relevant permits from the authorities, obtaining consent from participants after informing them about the study's objectives, and ensuring anonymity and confidentiality through the use of

pseudonyms (Creswell & Creswell, 2023; Cohen et al., 2018; Johnson & Christensen, 2019).

Results

The study examined the perceived potential and limitations of integrating AI to enhance lifelong learning among adult learners. It focused on understanding perceptions, uses, impacts and challenges encountered by adult learners in using AI for learning purposes.

Demographic characteristics of respondents

From the study findings majority of the adult education learners 33(42.9%) were of the age group 35 – 44 years, 26(33.8%) leaners were in the age bracket 25 – 34 years, few learners 12(15.6%) were of the age group 45 – 54 years, insignificant number of respondents 5(6.5%) were of the age below 25 years and one respondent 1(1.3%) is of the 55 years and above. The majority of learners, 64 (83.2%), in adult education centres are young to middle-aged adults, aged between 25 and 44 years, which reflects an energetic workforce aware of the ongoing AI advancements for their learning. A majority of 41 (53.2%) of the adult learners were male compared to their female counterparts, who were 35 (45.5%). Their proportion shows fewer disparities, as almost half of the learners are from each gender, implying that both genders have equal access to adult education offered in their local centres. More than half of the respondents (52, 67.5%) enrolled in a bachelor's degree programme, and a few of them (22, 28.6%) were adult learners enrolled at the diploma level. A very insignificant portion of the respondents (3, 3.9%) enrolled in a certificate programme (See Table 1). This implies that the majority of adult learners had progressed in their education, pursuing diplomas and bachelor's degrees to advance further, and they had awareness of current AI innovations in education.

Table 1: Demographic distributions of respondents

SN	Aspect	Range	Frequency	Percent
1	Age (Years)	Below 25 years	5	6.5
		25-34 Years	26	33.8
		35-44 Years	33	42.9
		45-54 Years	12	15.6
		55 Years and above	1	1.3
		Total	77	100.0
2	Gender	Male	41	53.2
		Female	35	45.5
		Total	77	100.0
3	Level of study	Certificate	3	3.9
		Diploma	52	67.5
		Bachelor degree	22	28.6
		Total	77	100.0
4	Did you receive any computer training before	No	25	32.5
		Yes	52	67.5
		Total	77	100.0
5	Computer experience	No experience	6	7.8
		Less experience	20	26.0
		Average experience	49	63.6
		Hinger experience	2	2.6
		Total	77	100.0
6	Frequency of AI use	Always	4	5.2
		Rarely	33	42.9
		Frequently	24	31.2
		I have never	10	13.0
		Sometimes	6	7.8
		Total	**77**	**100.0**

Source: Field data

The majority of respondents, 53 (67.5%), in adult learners' centres had received earlier computer training, while a few, 25 (32.5%), had not received any computer training. The large number of adults who learn seems to receive an introduction to computer courses at the certificate level and during diploma and bachelor's degree levels, which are essential for their ability to navigate AI platforms. The study findings depict that most of the respondents, 49(63.6%), had average experience in computer use, 20(26%) had less experience in computer use, and 6(7.8%) had no experience at all in using a computer and a few of them, 2(2.6%), had higher experience in computer use. The majority of adult learners have average to higher experience in using computers, which is significant for AI use. Less than the average number of respondents (33, 42.9%) rarely use AI platforms, 24 (31.2%) frequently use AI, 10 (13%) reported they had never used AI, 6 (7.8%) sometimes use AI, and only 4 (5.2%) of respondents always use AI. According to the study findings, more than half of the respondents (49, 63.6%) do not use AI frequently, as the majority tend to use it rarely.

Adult learners' perception of the integration of AI in their institutions

The study aimed to understand adult learners' perceptions of integrating AI into learning. The findings indicate that, despite the majority of respondents (67.5%) admitting to receiving training on computer use and 63.6% having average experience in using computers (as indicated in Table 1), a notable discrepancy remains. However, the findings suggest that training and experience in computer use are not directly related to AI use in their studies. Regarding AI use, the majority of respondents indicate that they disagree with the notion that they possess the necessary AI literacy skills to enhance their effective learning process with it. Additionally, the findings suggest that there are no institutional policies to guide the integration of AI into the teaching and learning process (See Table 2).

Table 2: Perception of the supportive environment for AI integration

S/N	Statement	SD N(%)	D N(%)	N N(%)	A N(%)	SA N(%)	Total N(%)
	I believe my learning institution provides adequate resources for AI integration.	25 (32.5)	46 (59.7)	2 (2.6)	4 (5.2)	0 (0)	77 (100)
	My learning institution offers sufficient training on how to use AI for learning	11 (14.3)	40 (51.9)	13 (16.9)	8 (10.4)	5 (6.5)	77 (100)
	The institution's policies support and encourage the use of AI for learning	21 (27.3)	37 (48.1)	9 (11.7)	9 (11.7)	1 (1.3)	77 (100)
	My institution provides technical support for using AI tools in learning	12 (15.6)	28 (36.4)	20 (26)	14 (18.2)	3 (3.9)	77 (100)
	I feel confident in my ability to use AI tools for learning	20 (26)	33 (42.9)	14 (18.2)	7 (9.1)	3 (3.9)	77 (100)
	I have the necessary skills to effectively use AI for learning (Like how to command and verify the accuracy of information)	11 (14.3)	43 (55.8)	17 (22.1)	6 (7.8)	0 (0)	77 (100)
	I am comfortable using AI tools independently for my learning needs	25 (32.5)	41 (53.2)	7 (9.1)	4 (5.2)	0 (0)	77 (100)
	I am aware of the various AI tools available for learning	15 (19.5)	42 (54.5)	12 (15.6)	8 (10.4)	0 (0)	77 (100)

Source: Field data

Males (90.2%) feel more comfortable using AI in learning activities compared to females (77.8%). This suggests that females are less comfortable using AI for learning, necessitating interventions such as capacity building or motivational support. Additionally, 75.6% of males reported being aware of various AI tools for specific

learning activities, compared to 69.4% of females. Respondents who received training are more confident in using AI compared to those with no training. For instance, 76.9% of those who received training reported being comfortable, compared to 52% of those who did not receive training. Again, 76.9% of those who received training had mastered the necessary AI skills to assist their learning process compared to 56% of those who did not receive training. 78.8% of those who received training understand different types of AI tools relevant to their learning needs compared to 64% of those who did not receive training. The frequency of AI use enhances the comfort of its use. For example, findings indicate that 100% of those who always use AI and 95.8% of those who frequently use AI are more comfortable with AI compared to 40% of those who rarely use AI. The study also found that 90.4% of those who received training feel confident in using AI for learning purposes compared to 76% of those who did not receive AI literacy training.

Based on the functionality of AI, respondents acknowledged that they view the tools as necessary for adapting to the transformation of the technological landscape. For example, Respondent C said, "*It is a valuable and stimulating tool for learning and encourages a broad range of searching for materials and various information, enabling the student to learn according to their own pace and capacity without dependence on the instructor*". Although, some respondents who had never used the tool they feel they must learn and use based on what they hear from their colleagues. Respondent A admitted this, saying, "*I would like to be guided on the use of AI. Education should be provided to students to understand the concept and the proper use of Artificial Intelligence.*

Adult learners use AI in learning to enhance lifelong learning

The study aimed to investigate how adult learners utilise AI to enhance lifelong learning. Several uses were identified, including accessing educational resources and materials for learning, receiving feedback on learning activities, exploring new learning opportunities, staying updated with the latest knowledge and writing assignments. The results are as shown in Table 3.

Table 3: Adult learners' use of AI in learning

S/N	Statement	SD N(%)	D N(%)	N N(%)	A N(%)	SA N(%)	Total N(%)
	I use AI tools to access educational resources and materials for learning.	7 (9.1)	3 (3.9)	4 (5.2)	38 (49.3)	25 (32.5)	77 (100)
	I use AI to enhance my problem-solving skills.	6 (7.8)	2 (2.6)	3 (3.9)	48 (62.3)	18 (23.4)	77 (100)
	I use AI to receive feedback on my learning activities.	25 (32.4)	41 (53.3)	1 (1.3)	3 (3.9)	7 (9.1)	77 (100)
	I use AI to explore new learning opportunities.	22 (28.6)	44 (57.1)	1 (1.3)	4 (5.2)	6 (7.8)	77 (100)
	I use AI to stay updated with the latest knowledge in my field.	27 (35.2)	41 (53.2)	3 (3.9)	3 (3.9)	3 (3.9)	77 (100)
	I use AI to write my assignments	10 (13)	6 (7.8)	2 (2.6)	35 (46.8)	23 (29.9)	77 (100)

Source: Field data

The findings from the respondents revealed that, on the use of AI, 35 (85.4%) males and 27 (77.1%) females agreed that they use AI to access learning resources and documents; 37 (90.2%) males and 29 (70.7%) females use AI to improve their problem-solving skills; 5 (50%) males and 5 (50%) females agreed that they use AI to get feedback on their learning activities; 4 (40%) males and 6 (60%) females they use AI for discovering new learning opportunities; 3 (50%) males and 3 (50%) females agreed that they use AI for staying updated with latest knowledge in their field of study while 32 (78%) males and 26 (63.4%) females agreed that they use AI for writing their academic assignments.

Impact of AI integration on lifelong learning of adults

The study aimed to investigate the perceived impact of integrating AI on the lifelong learning outcomes of adult learners across five key areas: motivation, retention, self-paced learning, skill development, and practical knowledge application. The results indicate a predominantly negative perception, with a significant majority of respondents expressing disagreement across various items of AI integration for adult learners' lifelong learning, as summarised in Table 4.

Table 4: Impacts of AI on Adult Learning

SN	Statement	SD N(%)	D N(%)	N N(%)	A N(%)	SA N(%)	Total N(%)
	AI has enhanced my ability to retain new information.	22 (28.6)	44 (57.1)	5 (6.5)	3 (3.9)	3 (3.9)	77 (100)
	AI has helped me achieve my learning goals more effectively.	27 (35.1)	37 (48.1)	7 (9)	4 (5.2)	2 (2.6)	77 (100)
	AI has increased my motivation to continue learning.	30 (39)	37 (48.1)	5 (6.5)	3 (3.9)	2 (2.6)	77 (100)
	AI has helped me develop new skills more quickly.	24 (31.2)	41 (53.2)	6 (7.8)	4 (5.2)	2 (2.6)	77 (100)
	AI has enabled me to learn at my own pace.	26 (33.8)	40 (51.9)	6 (7.8)	3 (3.9)	2 (2.6)	77 (100)
	AI has improved my ability to apply new knowledge in practical situations.	27 (35.1)	37 (48.1)	8 (10.4)	3 (3.9)	2 (2.6)	77 (100)

Source: Field data

The study findings in Table 4 indicate that AI appears to have a limited impact on motivating adult learners, as the majority, 87.1%, disagree that AI has increased their motivation to continue learning. A significant majority, 66 (85.7%) of adult learners, did not perceive AI as effective in improving their information retention abilities. Despite AI's potential for personalised learning, most adult learners, 85.7%, did not feel it supported their self-paced learning. The study findings also indicated that most respondents, 65(84.4%), did not find AI effective in developing their new skills more quickly. In comparison, the other majority 64 (83.2%) did not perceive AI as enhancing their ability to apply knowledge practically and felt that AI did not significantly aid in achieving learning goals, respectively.

When asked about the impacts of AI on their learning activities, respondents hinted that AI assists them in learning new knowledge and refining what they already know. Respondent B admitted that, "*I use AI to learn new things that I never learnt in other trainings, as well as to refine things we thought we knew but have now changed due to societal progress*". Again, those who have yet to use AI revealed that they wish to learn and utilise AI in their learning. Respondent D said, "*AI is truly what I'm hearing about here. I suggest it be taught so it can help those of us who don't know it.*"

Challenges encountered by adult learners when using AI for learning

The study's findings, as presented in Table 5, suggest that male adult learners encountered greater obstacles in adopting AI for lifelong learning than their female counterparts. Most male respondents (63%) reported difficulties in using AI tools, compared to 46% of the females. Similarly, 22 (54%) of males felt overwhelmed by the volume of AI-generated information, compared to 15 (43%) of females. Access issues were more significant for males, with 26 (63%) citing cost or availability barriers,

compared to 16 (46%) of females. Concerns about information accuracy were reported by 21 (51%) of males versus 10 (29%) of females, while 20 (49%) of males felt that AI tools did not meet their personal learning needs, compared to 8 (23%) of females. Integration challenges were reported by 23 (56%) males versus 11 (31%) females, and 22 (54%) males expressed privacy and security concerns, compared to 12 (34%) females. However, 24 (59%) of males reported lacking the skills to fully utilise AI tools, compared to 12 (34%) of females.

Table 5: AI challenges adult learners encounter during learning

Statement	SD N(%)	D N(%)	N N(%)	A N(%)	SA N(%)	Total N(%)
I find AI tools difficult to use.	3 (3.9)	17 (22.1)	11 (14.3)	30 (39)	16 (20.8)	77 (100)
I encounter technical issues when using AI for learning.	3 (3.9)	15 (19.5)	8 (10.4)	35 (45.5)	16 (20.8)	77 (100)
I feel overwhelmed by the amount of information provided by AI tools.	4 (4.2)	22 (28.6)	14 (18.2)	26 (33.8)	11 (14.3)	77 (100)
I have difficulty accessing AI tools due to cost or availability.	8 (10.4)	13 (16.9)	14 (18.2)	25 (32.5)	17 (22.1)	77 (100)
I am concerned about the accuracy of information provided by AI tools.	2 (2,6)	20 (26)	23 (29.9)	23 (29.9)	9 (11.7)	77 (100)
I feel that AI tools do not meet my specific learning needs.	7 (9.1)	25 (32.5)	16 (20.8)	12 (15.6)	17 (22.1)	77 (100)
I struggle to integrate AI tools with my existing learning methods.	5 (6.5)	21 (27.3)	16 (20.8)	23 (29.9)	12 (15.6)	77 (100)
I am concerned about the privacy and security of my data when using AI tools.	4 (4.2)	23 (29.9)	15 (19.5)	21 (27.3)	14 (18.2)	77 (100)
I lack the necessary skills to utilise AI tools for learning effectively.	8 (10.4)	15 (19.5)	18 (23.4)	23 (29.9)	13 (16.9)	77 (100)

Source: Field data

The study findings also reveal that adult learners without computer training encountered greater challenges in using AI tools compared to those with training. Technical difficulties were reported by 18 (72%) of respondents without training, compared to 33 (63%) with training. The majority, 14 (56%) of those without training, felt overwhelmed by the vast amount of AI-generated information, compared to 23 (44%) with training. Access barriers due to cost or availability affected 15 (60%) of respondents without training, compared to 27 (52%) with training. Concerns about the accuracy of AI information were less common among those without training (8, 32%) than those with training (24, 46%). The integration of AI tools with current learning methods was challenging for 9 (36%) of those without training, compared to 26 (50%) with training. Privacy and security concerns were noted by 9 (36%) of respondents without training, versus 26 (50%) with training. Nevertheless, 10 (40%) of those without training lacked the skills to fully utilise AI tools, compared to 26

(50%) with training. These results underscore that the lack of computer training aggravates the challenges of adopting AI for lifelong learning among adult learners.

Despite the majority of respondents admitting to using AI, the challenge most reveal is a lack of appropriate skills and techniques for verifying the accuracy and correctness of information obtained from AI. For example, Respondent A admitted that, "*The method I use to confirm is to employ different AI tools for the same concept or information to ensure its response accuracy"*. Using AI to verify information from another AI is a weak strategy that does not ensure the validity of information. Other respondents compare the information they obtain from AI to what they were taught or what they learned by asking their colleagues. For distance, Respondent E said that, "*I confirm by asking my peers if they are also aware of that information or by comparing it with the course learning materials we are given*".

Discussion

The study examined the perceived potential and limitations of integrating AI to enhance lifelong learning among adult learners. Findings reveal that there is no AI training for adult learners, which limits the harnessing of its potential in learning. Although they reported attending computer training, it was not related to the use of AI in learning. Njong and Ime (2025) argue that it is necessary to capacitate adult learners with AI skills to master and use diverse AI tools for learning. This is similar to Özkeskin et al. (2025), who argue that AI enhances learners' access to and engagement with educational materials during the learning process. This aligns with Ng et al.'s (2021) observation that trained adult learners possess the ability to evaluate the quality of materials, adhere to ethical requirements, and utilise digital tools effectively. Findings indicate that adult learners have a low level of AI literacy, as they have not received capacity building to enhance their digital competency. The findings are similar to those of Özkeskin et al. (2025), who reported that many learners lack AI literacy skills, hindering its full integration into learning. The observation results in low usage among adult learners, as Asad and Ajaz (2024) revealed that only 33.3% of university students utilised AI in their learning, indicating a low level of required digital literacy in integrating it into their learning. Rodríguez-García et al. (2020) argue that AI literacy is critical for promoting critical thinking, problem-solving, and the adoption of digital technologies in learning.

The majority of respondents are unfamiliar with various AI tools for learning, indicating limited use or reliance on a single tool they understand. Shifa et al. (2025) argue that AI raises challenges for marginalised groups, such as adult learners, hindering their adoption and integration in learning. Findings reveal that there are no

institutional policies or frameworks in place to support and guide the integration of AI in learning among adult learners. The finding is contrary to the UNESCO Institute for Lifelong Learning (2020), which emphasises the promotion of lifelong learning, in which AI is pivotal in sustaining learning among adult learners. Again, male respondents are more comfortable and aware of AI used in learning than females, indicating a widening technological gender gap among adult learners. Despite gender variations in AI use, Milana et al. (2024) report that the number of adult learners using AI is increasing.

Based on the issue of AI usage to enhance lifelong learning, the findings suggest that at least each respondent is aware of AI applications for various educational activities, with males appearing to be more prevalent. Most male respondents (85.4%) use AI to access learning resources and documents, compared to 77.1% of female respondents. Additionally, 37 (90.2%) males use AI to enhance their problem-solving skills, compared to 29 (70.7%) females. Again, 32 (78%) males use AI for writing their academic assignments compared to 26 (63.4%) females. This finding is related to the studies by Stöhr and Malmström (2024) and Ofosu-Ampong (2023). Hence, there is a need for the establishment of institutional measures aiming at promoting women's engagement with AI technologies. Moreover, the findings indicate minor use of AI in the use AI to get feedback on their learning activities (5 (50%) males and 5 (50%) females); the use AI for discovering new learning opportunities (4 (40%) males and 6 (60%) females); the use AI for staying updated with latest knowledge in their field of study (3 (50%) males and 3 (50%) females). The findings are similar to the study of Asad and Ajaz (2024). However, there is a need for AI literacy capacity-building training for adult learners to improve their AI awareness for effectively utilising AI for lifelong learning.

The study findings imply that adult learners reported a limited impact of AI in enhancing lifelong learning across multiple dimensions, suggesting that AI tools, as experienced by adult learners, were not well-suited to their learning needs or were not effectively integrated into their learning processes. A minority of the adult learners found some value in AI due to their differences in how AI was utilised. According to the study findings, significant limitations exist in AI's current application for adult lifelong learning, potentially due to factors such as a lack of personalisation and insufficient training on AI use. The findings concur with the study carried out by Özkeskin et al. (2025), which suggested that learners indicate a need for comprehensive AI literacy training, as most of them lack foundational skills that impair their AI use and affect learning. Nevertheless, the study's findings are consistent with the UTAUT model, as the low adoption and negative perceptions of AI among adult

learners result from the deficiencies in the four UTAUT constructs. For adult learners to effectively utilise AI in enhancing their lifelong learning, adult education institutions should provide an AI utilisation framework and prioritise AI training for principled AI use among adult learners.

The study findings show that males report greater difficulties than females in using AI tools, which concurs with findings by Ahn (2024), who noted biased AI responses, potentially contributing to males' perception that AI fails to meet their personal learning needs. The study findings, based on computer training status, indicate that learners without training faced more technical difficulties. These findings align with those of Özkeskin et al. (2025), who also note a lack of foundational AI skills, as reflected in the high skill deficiencies reported. The findings were also in tandem with findings by Xu and Babaian (2021) and Asad and Ajaz (2024), which highlight unreliable learning materials generated by AI tools, corresponding to adult learners' concerns about the accuracy of information provided by AI tools and adult learners' feelings of being overwhelmed and doubting the accuracy of AI tools. The findings also align with the UTAUT framework, which emphasises that skill gaps, unreliable outputs, and access barriers accelerated by gender and training status limit adult learners' adoption of AI for lifelong learning. Therefore, adult learners need to be equipped with effective AI use so that they can obtain reliable outputs and reduce their over-dependency on AI tools in their lifelong learning.

Conclusion

The study examined the perceived potential and limitations of integrating AI to enhance lifelong learning among adult learners. The study found that there are no institutional supports, such as policies and facilities, or AI-specific training that adult learners receive to enhance their lifelong learning using digital technologies. Findings show that 87% of respondents have used AI at some point in their studies, despite lacking relevant AI competencies for its practical application, raising concerns about the ethical use and data security. Although adult learners recognise the importance of AI in enhancing learning activities, such as searching for materials, interacting, and refining their ideas, their responses suggest that they do not fully benefit from AI due to their limited skills. The finding implies that continued AI use among adult learners without appropriate literacy skills, in the absence of institutional guidelines and frameworks, potentially increases the risk of unethical use and data security.

Recommendations

To maximise AI's potential benefits in lifelong learning, the study recommends that adult learning institutions address challenges by establishing supportive policies and

frameworks for effective AI integration. However, adult learning institutions should devise mechanisms to enhance capacity building for instructors and adult learners at all levels to ensure appropriate use of AI in the learning process. This is because the study focused on adult learners enrolled in Certificate, Diploma, and bachelor's degree programmes, who might have higher but varied intellectual abilities requiring harmonisation. Future studies should focus on adult learners enrolled in vocational and technical education programmes to determine the level of AI usage and the challenges they encounter, informing these institutions on appropriate interventions for effective AI use.

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Digital Devices on Equity and Accessibility in Lifelong Learning Opportunities in Vocation Tertiary Institutions in Kilimanjaro, Tanzania.

Itiha Oswald Mwachande, Institute of Social Work

Email: itiha.mwachande@yahoo.com

Abstract

This study aims to examine the influence of digital devices on the equity and accessibility of Lifelong Learning Opportunities in Moshi-Kilimanjaro, Tanzania. The study employed an interpretivist research philosophy. This study applied a qualitative research approach and case study design. This study applied a semi-structured interview for data collection with seventeen (17) participants. The study indicates that digital devices enable the accessibility of learning materials such as books, articles, journals, handouts and notes. The study findings indicate that accessibility of lifelong learning opportunities faces challenges of internet problems, costs to access the internet and unreliable electricity to power digital devices. The findings indicate that there is poor internet infrastructure to support digital devices like desktop computers, laptops and smartphones for lifelong learning opportunities. Furthermore, this study indicates poor library internet installation that discourages equity and access to lifelong learning opportunities. The study concludes that for effective and easy equity and access to lifelong learning opportunities, a suitable and sustainable internet to support digital devices for individuals to acquire lifelong learning opportunities. The government needs to invest much on internet accessibility for equity and accessibility of digital devices to support lifelong learning opportunities.

Key words: Digital device, Equity, Accessibility, Lifelong, Lifelong learning

Introduction

Lifelong learning gives rooms for elders to updated themselves and practice the rapid advancement of science and technology through digital devices (Xu et al., 2025). Yun and Kim (2025) indicate the influence of digital devices on learning through experience-enabling learners' access new information and educational approaches contemporarily. This imply that learners learn new knowledge and skills immediately through digital devices basing on their daily life experience. The focused and moderated use of digital devices such as laptops and smartphones in education may improve academic achievement (Yun & Kim, 2025). Lifelong learning is the kind of learning whereby individuals have freedom to learn anything, anywhere and at whatever size of the content and mode and of study through any means (Phuoc, 2023). Learning in lifelong learning is flexible, and there is no restrictions on physical constraints (Phuoc, 2023). Ahuja (2023) indicates that access to technology and digital

materials have become vital demand for successful learning in digital age. However, the persistence of inequalities to access and opportunity with digital devices have resulted to digital divide due to social economic status and geographical location, resulting to barriers to learners' access to digital devices (Ahuja, 2023). Digital divide refers to disparities in accessing digital devices, internet connectivity and digital literacy skills (Warschauer and Matuchniak, 2010). Gottschalk and Weise (2023) explain the digital divide as the differences in accessing digital devices. It is concerned with the gap between and among those with and without contemporary information technologies to access the upcoming digital technologies. Yadav (2024) explain digital learning that it causes geographical hindrances and provides opportunities to education for students who may be geographically find it difficult to attend traditional learning in stationary institutions. It enables to improve equity by providing opportunities for underserved people such as learners with disabilities and those with poor background (Yadav, 2024).

Globally, digital devices on equity and accessibility of lifelong learning opportunities have a great role to impart knowledge and skills to old learners. The United Nations' Sustainable Development Goal 4 (SDG 4) emphasizes inclusive and equitable quality education, promoting lifelong learning opportunities for all (UNESCO, 2020). In Canada and United States, Lifelong Learning policies focus on learning that takes place after statutory schooling (Roumell & Salajan, 2023). Multiple policies base on adult learners and on skills development for the labour force of the adult age (Roumell & Salajan, 2023). The Transforming Education Summit by United Nations in 2022 urged the governments to focus on power of the digital revolution to drive education reform globally and provide extreme quality education reform and lifelong learning to all in Canada and United States (Global Smart Education Network ([GSENet], 2024). Digital devices have transformed education, but disparities in access and digital literacy persist, exacerbating existing inequalities (Warschauer & Matuchniak, 2010). The COVID-19 pandemic has further highlighted these disparities, with many learners facing challenges in accessing digital devices and internet connectivity (Hodges et al., 2020). Gottschalk and Weise (2023) provide that factors such as socio-economic status and geographical limitations can lead to drawbacks to learners' access to digital devices and internet connectivity. Gottschalk and Weise (2023) indicate that digital technologies lead to support the incorporation of many and various student groups in education in different ways such as enhancing accessing educational content, improving personalization and offering distance-learning opportunities, as it was during the COVID 19 pandemic era. Nevertheless, the continuance of digital inequalities can reduce digital equity and inclusion, particularly for disadvantaged students (Gottschalk and Weise, 2023).

In Africa, initiatives like the African Union's Digital Transformation Strategy aim to promote digital inclusion and leverage technology for economic growth (African Union, 2020). However, digital divides persist, particularly in rural areas (ITU, 2022). In East Africa, countries like Tanzania have implemented initiatives to promote digital literacy and access to digital technology (Tanzania Communication Regulatory Authority, 2022). The use of digital devices today in different sectors appears to be the only reliable answer to the needs of physical distancing (Langthaler & Bazafkan, 2020). Lifelong learning can also be a physical distancing through the online scheduled learning programmes. Langthaler and Bazafkan (2020) provide education sector as an example of distance learning through digital devices while pandemic disease qualifies to be the pushing factor to distance learning. Zongozzi and Ngubane (2025) explain that the coronavirus disease 2019 (COVID 19), Fourth Industrial Revolution (4IR) and learners with disabilities have contributed on upcoming and dependence on learning through digital devices in South Africa. On the other side, this can be also the forcing factor to enable adult learners acquire lifelong learning through digital devices.

In Tanzania, the Tanzania government has emphasized integrating technology into education, but disparities in access to digital devices and internet connectivity remain, particularly in rural areas (Mtebe et al., 2021). The government realizes the importance of digital transformations to advance quality education provision and connect individuals to the dynamic change of world of work (Manyengo, 2021). Okeleke (2019) indicates that the rapid population connected with communication and internet services indicates the digital advancement in Tanzania. A study on digital literacy in Tanzanian schools highlighted the need for targeted interventions to address these disparities (Mtebe et al., 2021). Manyengo (2021) shows that while existing rules and frameworks promote the use of technology in teaching and learning, some may need to be updated or implemented further. Challenges in incorporating technology for teaching and learning include inadequate teacher training, limited access to digital tools, and poor internet and power connectivity in some areas (Manyengo, 2021). This indicates the need for improving internet infrastructure, digital devices advancement and power connectivity.

This study was guided by the self-directed learning theory in lifelong learning. Malcolm Knowles pioneered the self-directed learning theory within the field of adult education. Ahammad (2023 indicates that the concept of self-directed learning is the most significant idea in the education context for adult learners. It is suitable for continuing education. People can identify their exceptional learning needs and determine their preferred ways of acquiring information across lifelong learning (Ahammad, 2023). Lifelong education principles require a smooth transition from formal education to

the world of work or workforce (Ahammad, 2023). Charokar and Dulloo (2022) provide the concepts of self-directed learning that are based on adult learning principles and learning from experience, fostering skills for lifelong learning. The development of self-directed learning should ensure the presence of digital device resources, control the power of information technology, and incorporate a cognitive and affective assessment master plan enhance the success of self-directed learning in lifelong learning (Charokar and Dulloo, 2022).

The increasing integration of digital devices in lifelong learning has raised concerns about equity and accessibility. Equity is concerned with ensuring fair access to digital devices and lifelong learning opportunities (Selwyn, 2016). Accessibility in digital learning refers to designing digital learning environments to accommodate diverse needs and abilities (Kearns, 2018). Equity and accessibility may lead to a digital divide. Despite the potential of digital technologies to enhance learning experiences, disparities in access to digital devices, internet connectivity, and digital literacy skills persist, exacerbating existing inequalities. This study aims to assess digital device equity and accessibility in lifelong learning, identifying barriers and opportunities to promote inclusive and equitable education for all.

Methodology

This study followed the interpretivist research philosophy and employed a qualitative research approach with a case study research design. This study applied a semi-structured interview for data collection. Mwachande (2024) elaborates that interpretivist research philosophy and qualitative research approach were chosen because of their capacity to look into what really happens in the field, that is, the real-world applications of the phenomenon under investigation. To give a qualitative analysis of a single entity that included all aspects, this study employed a case study technique (Mwachande, 2024). On the other hand, this study employed a case study research design because subjective rather than objective elements are included in an in-depth analysis of a phenomenon (Mwachande, 2024). The purposive sampling technique was applied to select twenty participants from VETA Moshi Kilimanjaro. VETA Moshi Kilimanjaro was chosen because it allows no age limit for adults to join learning. This indicates that it qualifies to be among the institutions for lifelong learning. The participants of this study included the principal, matron, the college government chairperson, secretary, and final year class representatives who were level two and three. The researcher designed semi-structured interview guiding questions for data collection. Mwachande et al. (2023) indicate that data collection under an interview involves two or more participants by exchanging information between the interviewee and interviewer during data collection. Ruslin et al., (2022) indicate that a

semi-structured interview is more effective for qualitative research as it provides in-depth information and evidence from respondents while focusing on the study's objectives. Additionally, semi-structured interview provides researchers with greater flexibility and adaptability than unstructured interviews, which do not fully address the direction (Ruslin et al., 2022). The study included seventeen (17) participants, including the college principal, matron, the chairperson and secretary of the past regime and the existing regime, five (5) class representatives from the level three finalists and six (6) finalists. The selection of VETA Moshi Kilimanjaro is based on its capability to include lifelong learning in the country. The selection of Moshi Vocational Training College was based on the researcher's discretion to determine the attributes of the sampled population. The researcher used thematic data analysis in this study. The study includes three main steps that are; transcribing the results and synthesising data into themes, thick descriptions, quotes and presentations of participants' perspectives and attitudes towards Digital Devices on Equity and Accessibility in Lifelong Learning Opportunities in Vocation Tertiary Institution in Kilimanjaro, Tanzania.

Results and Discussion

This study focused on digital devices on equity and accessibility in lifelong learning opportunities in VETA Moshi Kilimanjaro, Tanzania. The study had three areas: perception on equity and access to digital devices in lifelong learning, barriers that face equity and access to digital devices in lifelong learning and measures for equity and access to digital devices in lifelong learning

Perception on Equity and Access to Digital Devices on Lifelong Learning

The participants were given a chance to respond to the perception of equity and access to digital devices in lifelong learning. From semi-structured interviews during data collection, all participants had similar arguments that there is no equity and access to digital devices due to financial status. The installed internet is special for a particular office and not for students to access. It was thought that digital devices, equity and access would be a very vital means for lifelong learning. It was argued that for grown-up learners like adults, can position themselves from any place they would wish to learn and learn through digital devices. Their perception based on the connectivity of digital devices and the internet is the fundamental means for lifelong learning. People can learn even when they are in their offices or at home. It was noted that through the internet and digital devices, people can acquire knowledge and skills effectively. It was observed that teachers or authorities have the capability to formulate distance learning, which enables learning from any location. It was also perceived that effective equity and access to digital devices may lead to saving the time of a learner to acquire

programmes through digital devices with internet connectivity, facilitating online learning. One participant from the institution commented, saying:

> To me, I see digital devices with internet connectivity as the important factor for effective learning in this digital error. Lifelong learning suits adults well, and it is an endless learning that ends when one dies. Since adult learners have different commitments to meet their life goals, the use of digital devices can assist them to learn while proceeding with their lives. I suggest a serious investment in digital devices with internet infrastructure connectivity.

Another participant commented on the perception of equity and access to digital devices in lifelong learning in the digital world.

> I think that it is time for the government to invest in digital devices with internet infrastructure for effective equity and access to lifelong learning. The government can create centres with internet accessibility to enable effective use of digital devices. Through digital devices with internet connectivity, learners can share notes, Google necessary materials and download what seems to be important to facilitate lifelong learning.

Furthermore, another participant commented on the equity and access to digital devices in lifelong learning by pointing out challenges. The participant commented, saying;

> My perception of equity and access to digital devices in lifelong learning is that it is difficult to have effective lifelong learning through digital devices. Digital devices need internet connectivity. Enjoying internet connectivity with digital devices in learning may make knowledge and skills acquisition through lifelong learning. Currently, there in digital divide in equity and access to digital devices in lifelong learning.

Manyengo (2021) indicates that incorporating technology for teaching and learning includes inadequate teacher training, limited access to digital tools, and poor internet and power connectivity in some areas. If this is the situation, learners from areas with poor internet and power connectivity will be in problem engaging in lifelong learning through digital devices such as desktop computers, laptops, smartphone and tablets.

Barriers to Equity and Access to Digital Devices in Lifelong Learning

This study engaged participants in exploring barriers to equity and access to digital devices in lifelong learning. The participants argued that financial constraints and internet infrastructure are the main problems that face learners under lifelong learning. It was noted that people from a poor economic background face challenges in buying and using digital devices due to poor internet. For one to access Google search engines requires digital devices with internet connectivity. It was argued that some learners own a mobile phone, which does not enable Google engine search. It was also said that some live in areas with a poor power supply to support digital devices and internet

accessibility. It was suggested that for effective equity and access to digital devices in lifelong learning requires comprehensive internet infrastructure is required. This may support easy equity and access to digital devices in lifelong learning.

On the other hand, the participants argued that currently they access the internet through their own bundle. There is no shared Wi-Fi from the authority to support downloading or searching for learning materials for their studies. No, bundle no learning surfing materials. It was noted that there is internet for official use. It was also noted that there is a computer room where students can access digital devices, which are desktop computers with internet. The service cannot be accessed when they are out of the computer room. They showed interest in having wireless internet that could be connected to their digital devices, such as smartphones or tablets. One participant commented that;

> I think the government should invest in regional and district libraries with internet infrastructure. All regional and district libraries should be well-equipped with internet facilities. In addition, there should be computer centres to facilitate lifelong learning in regional and district libraries. I also suggest the investment in internet infrastructure with wider accessibility. This should be done in all government institutions, from central to local government offices, to support electronic services and online or blended lifelong learning. The Wi-Fi should be free to all who seem to be engaged in lifelong learning. This may encourage lifelong learning while learners are continuing with their responsibilities. This will enable the reduction or elimination of the disparities in equity and access to digital devices in lifelong learning in Tanzania.

Mtebe et al. (2021) comment similar issue that there should be the need for targeted interventions to address these disparities in equity and access to digital devices in lifelong learning. It is expected that the investment in equity and access to digital devices in lifelong learning may lead to reducing the digital divide. This will also enable a smooth transition from formal education to the world of work or workforce (Ahammad, 2023). Manyengo (2021) shows that while existing rules and frameworks promote the use of technology in teaching and learning, some may need to be updated or implemented further. Therefore, the government requires improving the existing rules and frameworks to promote the use of technology in lifelong learning.

Measures for Equity and Access to Digital Devices in Lifelong Learning

Furthermore, the participants were requested to share the measures for equity and access to digital devices in lifelong learning. It was noted that effective equity and access to digital devices in lifelong learning requires establishing opportunities for teachers' in-service training. This will enable teachers to update themselves through the training scheduled. It was also argued that the government requires improving the internet infrastructure that will enable lifelong learning through digital devices such as

desktops, laptops, smartphones and tablets. It was also suggested that, apart from government authority, other stakeholders should engage in supporting equity and access to digital devices in lifelong learning. Creating such an environment will enable lifelong learners to acquire knowledge and skills easily. One participant commented on equity and access to digital devices on lifelong learning, saying;

> On my side, I can see that in some areas, internet accessibility becomes a very serious problem. Waves' variation has become a very serious matter, as people can communicate effectively. I think the government, by engaging different stakeholders need identify areas with internet accessibility. Thereafter should construct towers and improve infrastructure that facilitate lifelong learning. In all academic centres, the government requires the construction of the infrastructure that enables Wi-Fi for all stakeholders who are in need. On the other hand, this may also support the equity and access to digital devices in lifelong learning for those who wish to use the service.

Another participant commented on the measures for equity and access to digital devices on lifelong learning, saying;

> I think the government and other stakeholders in lifelong learning should initiate digital device distribution programmes, low-internet plans and public Wi-Fi initiatives to support equity and access in lifelong learning. I also think that stakeholders should be engaged in designing digital learning platforms and materials to accommodate diverse needs. Additionally, I suggest the initiatives on digital literacy and online resources training, focusing on equity and access to lifelong learning.

Gottschalk and Weise (2023) indicate the role of digital technologies in supporting the incorporation of many and various student groups in education, including lifelong learners. This can be done through enhancing access to educational content, improving personalization and offering distance-learning opportunities, as it was during the COVID 19 pandemic era. Nevertheless, the continuance of digital inequalities can reduce digital equity and inclusion, particularly for disadvantaged students (Gottschalk and Weise, 2023). This means that the disadvantaged learners may be assisted through digital devices. Therefore, due to the need for equity and access to digital devices in lifelong learning, the government needs to invest much on digital infrastructure for equity and access in lifelong learning.

Conclusion

This study concludes that digital devices may lead to a digital divide due to financial constraints. The study indicates that individuals from poor families cannot afford digital devices with internet connectivity compared to those from rich families. The issue of buying bundles for internet accessibility has become difficult for some individuals due to poverty. It is also concluded that equity and access to digital devices contribute a lot in acquisition of knowledge and skills in lifelong learning. Therefore,

it is very important to invest in digital devices and infrastructure to facilitate equity and access to lifelong learning.

Recommendation

From the findings and conclusions above, this study recommends the following: First, the government needs to construct effective digital and internet infrastructure to support lifelong learning. Second, the government needs to engage stakeholders to invest on application of digital devices and internet infrastructure for lifelong learning. Third, the government need to support all academic institutions to support lifelong learning. The government needs to encourage individuals to acquire knowledge and skills through lifelong learning in the world of work.

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Examining the benefit of Artificial Intelligence adaptation for Andragogy in Adult Education and lifelong learning in Tanzania

Potfa Peter Luhala, The University of Dodoma; Haiqin Yu, Huazhong University of Science and Technology (China), Moabu Jimmy Chandafa, Mbeya University of Science and Technology; Robert Cornel Maximilian, Makerere University & Norbert Makarius Nombo, Institute of Adult Education

Email: luhalapotfa@gmail.com, yuhaiqin@hust.edu.cn, moabuchandafa95@gmail.com, Rmaximillian262@gmail.com & norbertnombo@yahoo.com

Abstract

In the modern-day world, characterized by increased technological progress, artificial intelligence (AI) became one of the central constructs in the field of education, especially adult education (AE) and lifelong learning (LL). The current study critically examines the andragogic and other implications of introducing AI to the AE environment in Tanzania. The research investigates the existing benefits of AI in adult learning institutions within a qualitative methodological framework based on thematic analysis. Findings indicate that AI enhances learning activities and the provision of tailored learning experiences to learners. However, infrastructural, technological, and policy challenges heavily limit its widespread adoption. The paper also suggests strategic investment in research and innovation centres dedicated to AI-based andragogy. This type of investment is crucial to creating contextualizing and evidence-based approaches that can improve AE and LL in the State of Tanzania and the region of the East African states in general.

Key words: Artificial intelligence, adult education, lifelong learning.

Introduction

Education is the transfer of society's knowledge and experience to the next generation, preparing them to join and help society grow (Nyerere, 1967). The founding father of Tanzania, Mwalimu Julius Nyerere, was the one who came up with the idea that education is a lifelong process, which is significant to the individual and the nation. Artificial Intelligence (AI) is quickly becoming a transformative force that is changing the way the main parts of the learning ecosystem work (Selwyn, 2022). However, the advancement of AI in meeting the salient issues of Adult Education (AE) and lifelong learning (LL) remains under-researched in the academic community, and adult learners are characterized as a neglected species of the generative AI era (Adarkwah, 2025). It is especially strong in situations where resources are scarce, like in Tanzania, where using AI is not a new idea but a possible way to reach sustainable development goals.

AE and LL presuppose all the continuous learning processes, formal and informal, in the course of which adults become competent, broaden their knowledge, and increase

the technical or professional level of qualification (UNESCO Institute of Lifelong Learning, 2022). It serves as a crucial foundation of human capital, making it resilient and competitive in a changing economic and technological environment (World Bank, 2019).

AE plays a vital role in national development, poverty eradication, and social empowerment in Tanzania (URT, 2014). However, the sector remains facing these long-standing issues: geographically dispersed populations, economic limitations that force adults to choose labour over learning, a lack of qualified instructors, and an overwhelmingly one-size-fits-all approach to instruction that cannot meet the needs and experiences of diverse adult learners (Lwehabura & Mattee, 2018; Mallongi, 2022). These issues lead to severe skills deficits in the labour market. Unemployment and underemployment persist despite high labour force participation, as the data below illustrate. The ILO (2020) cites this discrepancy (young people often lack the skills employers demand) as a primary cause of unemployment worldwide.

Table 1: Adult Illiteracy Rate in Tanzania (Age 15+)—A key indicator of the need for robust adult education systems.

Area	Total (%)	Male (%)	Female (%)
Female (%)	22.5%	16.2%	28.5%
Urban	9.8%	6.9%	12.5%
Rural	28.1%	20.9%	35.0%

Source: UNESCO UIS (2023).

AI is an innovative project that will likely transform the principles of pedagogy, optimize the administrative frameworks, and enhance the learning atmosphere, making it friendly and flexible enough (Zawacki–Richter et al., 2019). The above-mentioned developments are worth studying, especially in the field of AE, where some of the basic assumptions are self-directedness, dependence on existing experience, deliberate goal orientation, and transfer of training to practice (Knowles, 1980).

AI can support adaptive learning models by delivering customized learning plans, real-time messaging, and personalized feedback, leveraging its ability to provide individualized content and thereby aligning with the fundamental propositions of andragogic theory. However, it is definite that AE is often informal, accidental, and mainly a component in everyday practice. A key phenomenon in adult learning, as Marsick and Watkins (2001) note, is the significant opportunity presented at the critical core of convergence between innovation and development in mobile and just-in-time learning technologies. While there are positive aspects, the proliferation of AI can also result in numerous negative outcomes. We must use it cautiously. The author states that technology is neutral, and the results depend on how an individual uses it (Colt,

2023). In the context of Tanzania, the implementation of AI needs a survey of aspects related to digital literacy, infrastructure, and cultural considerations. The use of education technology without a thoughtful plan has a high risk of increasing more problems than solutions (UNESCO, 2023).

In the current paper, the author attempts to analyse theoretical and empirical AI application models in the AE sector in Tanzania as presented by adult learners. The study explores accessibility concerns and personalization processes, evaluates how various AI technologies can be applied to andragogy practices, and examines key infrastructural, policy, and cultural factors that will enable the technology to effectively implement the changes. The study can contribute to advancing knowledge about non-discriminatory and transformative technologies within the Tanzanian educational framework, thereby enabling AI to assist adult educators and promote the active involvement of adults in developing states, following Nyerere's principles.

Theoretical framework

This paper will be guided by the Critical Theory of technology (CCT) developed by Feenberg (1991, 2005). CTT breaks the assumption of technological neutrality by emphasizing the social aspect of cultural, political and institutional settings in designing, accepting and using technologies. It is undisputed that technology is a socio-technical system. It in this perspective is not only the effects of the social structures and values that are incorporated in the use of technology but also the way in which technology is used as a determiner. CTT provides a critical perspective on both the dangers and opportunities presented by the application of AI to LL and AE. However, adaptation of different learning tools like intelligent learning systems, automated grading tools, chatbots, and other tools can provide timely feedback and promote constant learning (Mishra and Sahoo, 2022; Zawacki-Richter and Junga, 2023), with the short-term technology efficiency depending on the specific institutional and social structure.

This approach fails to consider the need for adequate infrastructure, supportive policies, and trained educators. The introduction of AI could increase challenges instead of solutions and simplify learning (UNESCO, 2023; World Bank, 2021). CTT also emphasises the role of stakeholders in determining the utilisation of technology. This means that the initiation and implementation of AI in AE and LL have to be initiated and implemented by governments, legislators, educators, international bodies, and the civil society in Tanzania. Zawacki-Richter, Marin, Bond, and Gouverneur (2019) state that the collaboration of multiple stakeholders will make AI tools not only highly technical but also pedagogically and socially responsive. This is in line with a

recommendation by UNESCO (2023) that the AI Human AI Detector report by 2025-09-21 03:12 AM. The AI Human AI Detector report, Version 2025-v5.5.0, recommends that governments invest in and develop expertise in education technology while formulating inclusive policies to create enabling environments. By placing AI in the context of a transformational, yet arguable, technology, it is easier to embed the conceptual framework within CTT. With its potential to support the rapid reskilling and upskilling of adult learners, AI can eliminate skill mismatches, improve employability, and help reduce poverty (OECD, 2023; World Bank, 2023). However, if we fail to address issues of access, control, and localisation, AI could potentially widen the digital divide and marginalise disadvantaged populations. Since CTT is a holistic theoretical perspective, the study can address the way uptake of AI within Tanzanian AE can be shifted to a less technological-focused and more socially engaged and contextualised innovation.

Conceptual framework

AI's use in andragogy points to the concept of learning. It is transforming our way of examining the relevant facets of andragogy as well as LL. Figure 2 illustrates the entire process. The most significant one is the CTT, which demonstrates that technology cannot be neutral. Feenberg (2005) noted that AI is increasingly becoming a part of culture, politics, and institutions. For this reason, underrating AI in education cannot allow people to go with the adaptation of 21st-century science and technology innovation. There is a need to see equality and justice (Selwyn, 2022). AE is on the national agenda in Tanzania; for its full implementation, AI should be adjusted to policy, school priorities, and cultural peculiarities of Tanzania (Mushi, 2021).

This model primarily focuses on the relationship between CTT and AI. Feenberg (1991) highlighted that technology has developed within office and cultural circumstances. This is why we view AI andragogy not as technology, but rather as a learning tool. Consider chatbots, smart tutors, interactive systems, and smart marking systems (Ouyang, Zheng, and Jiao, 2022). In the case of Tanzanian learners who experience a lack of infrastructure and different needs, the AI implementation must comply with the requirements of the government and the current infrastructure (World Bank, 2020).

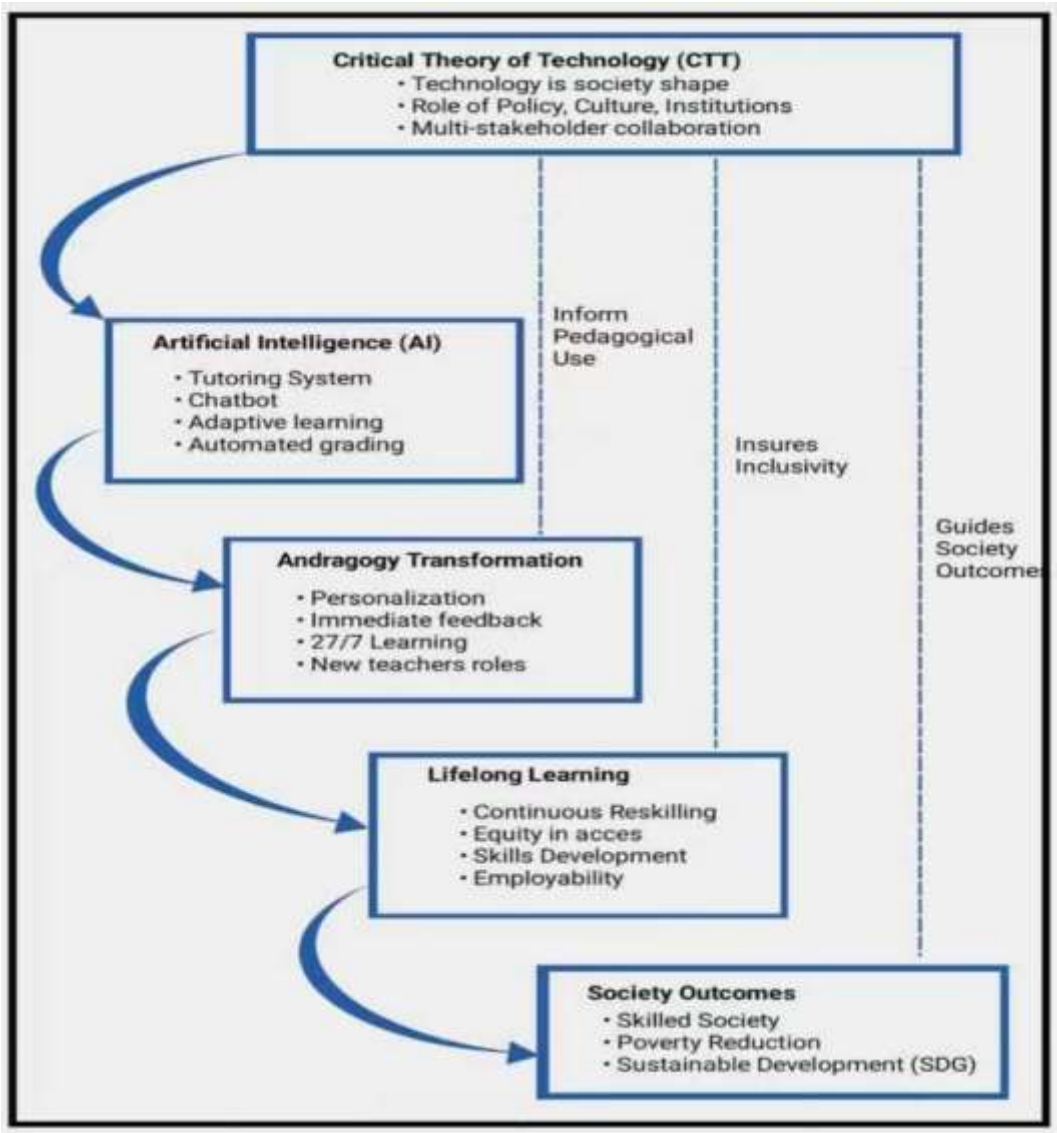
AI transforms the entire game of andragogy since it alters adult learning behaviour. It can provide real-time feedback and transform andragogy (Baker, 2016; Zawacki-Richter et al., 2019). As a tool, AI andragogy permits learners to view materials at their suitable time and decrease the unnecessary complications facing adults in their work and household life (Adarkwah, 2025). It simplifies the role of the teacher to be an

instructor, not a content feeder, thereby leading to the demands of critical thinking and personal learning (Selwyn, 2019). Concisely, adult learners are intentionally motivated, and Usher's theory is concerned with life experience, which is supported by AI (Knowles, 1984).

The utilization of instant feedback and personal experiences can assist the adult in maintaining reskilling and upskilling and facilitate the improvement of accessibility to education (United Nations Education Institute for LL, 2022). This is vital in Tanzania, where the majority are missing the skills that are needed in the job market and hence are unemployed (ILO, 2020; World Bank, 2019). Instead, AI-based learning enhances personal proficiency to respond to technological and economic transformations by equipping one with the specific professional expertise that underlies the entire philosophy of LL.

Additionally, AI andragogy builds upon the principles of LL. Therefore, the society develops skills through daily learning and reskilling, leading to a reduction in inequality (OECD, 2023). The result is societal development, contributing to poverty reduction, equal opportunities, and achieving SDG-4 (UNESCO 2023). In Tanzania, the adult illiteracy rate is estimated to be 20 percent or higher of the population (UIS, 2022); the use of AI for AE andragogy and LL can decrease the number to nearly zero and lead to effective national development (URT, 2014). Throughout the entire structure, CTT continuously intersects with various elements. The CTT emphasizes the construction of social technology, positioning AI andragogy as a tool of learning rather than as an education project. It insists on the role of AI andragogy in education by emphasizing stakeholder engagement and cultural awareness (Colt, 2023; Zembylas, 2023). To verify, this theoretical framework demonstrates that the way adult learning and LL can be transformed in Tanzania is through AI andragogy or automated through the application of CTT. Additionally, AI can offer various types of andragogy opportunities that effectively enhance skills, contributing to holistic development, poverty reduction, nation building, and the cultivation of a strong and determined populace.

Figure 1: Conceptual framework: AI, Andragogy, and LL in Tanzania



Source: Self-complied 2025

Methodology

A qualitative approach was used to explore the educational benefit of AI use in AE and LL in Tanzania. The in-depth interview was conducted, and the document was analysed purposively. Qualitative methods are used to answer questions about experience, meaning, and perspective, most often from the standpoint of the participant (Hammarberg and Kirkman, 2016). Moreover, qualitative methods have emerged as indispensable tools for garnering profound insights and understanding complex phenomena (Weng Marc Lim 2024). Both primary and secondary data were

collected. Judgmental sampling was used to collect primary data from 20 adult education stakeholders. Judgment sampling is used when the researcher aims to dive deep and have rich information about the study (Campbell et al., 2020). Judgmental or purposive sampling is a strategy in which particular settings, individuals, or events are selected deliberately to provide information that cannot be obtained from other choices (Etikan & Bala, 2017).

Secondary data was collected from the United Republic of Tanzania Government document, the Education Sector Development Plan 2025/2026-2029/2030. Moreover, documents from international education organisations such as UNESCO, the World Bank, and the ILO were analysed. The study was carried out in only two selected adult education camps out of 26, which are Dar es Salaam and Dodoma. Dar es Salaam was chosen due to its status as Tanzania's economic hub, while Dodoma was chosen due to its status as Tanzania's capital city.

Table 2: Demographic information of the participant (N=20)

Characteristic	Description	Interviews number
Sex	Male	10
	Female	10
Age	15-25	2
	26-35	7
	36-45	8
	46+	3
Level of studies	Diploma	9
	Bachelor	8
	Masters	3

Source: Field data, 2025.

The ethical aspect was considered by ensuring that the identity of the participants is secured by a detailed anonymization procedure. This was done by issuing the participants with distinctive alphanumeric codes where P indicates participant, F or M indicates gender, a figure (1-20) indicates a distinct identifier, and C1 (Dar es Salaam Camp) or C2 (Dodoma Camp) indicates the research location. One such example would be the code PM1-C2, which can be identified with Male Participant 1 in the Dodoma Camp.

Interviews were held with students who studied their different levels of education at the Tanzania Institute of Adult Education. Some of the participants passed the AE path from secondary school up to the master's level of study to obtain a comprehensive understanding of institutional andragogy. The group discussions focus on cohorts of adult learners to comprehend their experiences and anticipations concerning AI-assisted education.

Results and Discussion

The objective of examining the benefits of integrating AI into andragogy and LL in Tanzania guides the discussion and data analysis process. The government of the United Republic of Tanzania, through the Ministry of Education, Science, and Technology, made different efforts to raise awareness among the stakeholders. The efforts include an introduction to the National Guidelines for Artificial Intelligence in Education 2025. Furthermore, the Education Sector Development Plan 2025/26–2029/30 emphasises the value of AE. The analysis of documents and a deep interview show that much remains to be done to provide the effective use of AI in andragogy, solve the skills gap and become part of the sustainable development.

Various stakeholders have different views on the advantages of AI in AE and adult learning. The results imply that fewer stakeholders are aware of the importance of AI in andragogy, and most of them are not aware of it. Few people discussed the benefits of AI andragogy, as follows:

Personalized and adaptive learning

AI helps students to learn on their own in the absence of a teacher. This is because AI depends on the presence of the internet and a device that can help consumers to access AI, like ChatGPT and Meta AI. Moreover, AI goes beyond the geographical obstacles, as it can help students who are in any place to learn without a teacher.

> Meta AI on a smartphone allows a 45-year-old student to learn English language skills, providing explanations, vocabulary improvement examples, and lessons on vocabulary and short stories. The application is wonderful, as it provides these answers on time (Interview, FP3-C2: July 17th, 2025).

Ouyang (2020) supports this; the systematic review found that a primary application of AI in online education is earning process personalisation, which includes recommending individualised learning paths and giving adaptive learning content based on student profiles and immediate performance data. Education technology, including AI, can help address the global learning crisis by providing individualised education that can cater to students at different learning levels within the same classroom (World Bank 2021).

Greater Accessibility and Flexibility

AI offers learning everywhere and anytime without being limited to physical classrooms and schedules. This is a prerequisite among adults who have occupational and family commitments.

> I have to take care of my family, especially my son, who is one year old, and my father, who is 88 years. I can comfortably do my assignments after they have gone to sleep. Being a mummy and taking care of the parents, and managing to study is not an easy task. The use of generative AI like ChatGPT and Meta AI helps me to be free to ask questions whenever I get a chance and challenges in my studies (Interview, FP5-C1: July 14th, 2025).

AI can facilitate access to learning resources and instruction anytime and anywhere. This kind of technology is specifically useful to learners in remote and underserved regions, along with learners who are unable to visit traditional schools due, conflict, disability, work, and family commitments (UNESCO 2023). AI will be able to offer 24-hour support and beat time and space limitations of conventional classroom learning (Zawacki-Richter and Junga 2023). According to the World Bank (2021), AI could also provide education to scale and out of the classroom to adults and non-school teenagers.

Bridging the Teacher Gap and Enhancing Andragogy

Tanzania confronts a significant deficiency of trained educators, particularly in rural regions. AI acts as a catalyst, enhancing rather than replacing teachers. GenAI in education will usher in a world of adult learning that will be radically different from its predecessor (Adarkwah, 2025). It can automate administrative functions (grading, attendance) and furnish educators with comprehensive statistics on student performance. Moreover, regardless of Tanzania is a big country geographically. Tanzania has a total surface area of 947,300 square kilometres (km^2), which includes both land and water surfaces and 31 regions (Central Intelligence Agency 2023, URT 2022); there are only 26 AE camps. The use of AI can bridge the gap for the teacher.

> We have a few teachers; we meet with them only four times a year. During the arranged time, which can be one to two weeks, teachers have to teach us many lessons. A few years ago, before the presence of AI like ChatGPT, it was so difficult to learn. Nevertheless, nowadays, even in the absence of a teacher, AI can assist us to learn (Interview, MP7-C2: July 17th, 2025).

With the help of AI, students can receive the support of a personal nature, which makes it possible to address a large and diverse classroom with one teacher (World Bank, 2021).AI acts as an administrative and pedagogical assistant by automating tasks like grading and feedback (Zawacki-Richter et al., 2019). In general, AI not only supports the work of the teacher as a facilitator but also simplifies the learning process.

> Towards technological development, Gene AI, like ChatGPT, is the best tool to be used in learning. For the sake of LL, GenAI is the best tool used to answer different questions. If ChatGPT were not available, I might fail. We have a few teachers; they provide many materials to study during the learning process. GenAI, like ChatGPT, is used as an invisible teacher. I communicate with it by

> asking various questions, and I receive timely answers. I feel lucky to have ChatGPT (Interview, MP1-C1:July14th, 2025).

The work of AI is to assist people in learning; AI andragogy can simplify the AE learning process. Research indicates that AI andragogy can significantly simplify the learning process in AE by personalising content delivery, automating feedback, and reducing administrative burdens on educators (UNESCO, 2021).

> I am a postgraduate student pursuing a master's of Education and Community Development. My supervisor is in Dodoma, while I live in Tanga. We mostly communicate via email. I receive instruction and then have my own time to work on my thesis. The use of ChatGPT facilitates the analysis of research objectives, the interpretation of complex feedback, and the refinement of my academic writing (Interview, FP6-C2: July 17th,2025).

Another master's student has been undertaking his studies since the certificate at the Institute of AE, he said.

> The use of GenAI in my thesis has significantly enhanced efficiency and the investigation of my studies; moreover, it decreases transport costs, as instead of travelling from Singida up to Dodoma, I just receive instruction via email and work on my own (Interview, MP4-C1: July 17th,2025). Students can get feedback on their questions on time. Moreover, generative AI helps to break complex issues into simple and manageable ones for learning (Graefe et al., 2025).

Language and Literacy Support

Natural Language Processing (NLP), a branch of AI, can enhance advanced tools for language acquisition and literacy. This encompasses speech-to-text, text-to-speech, grammar checkers, and interactive language exercises.

> After finishing my assignment, I usually test my grammar and correct my mistakes in language. The presence of Gen AI assists students in correcting various errors in the English language. The provision of immediate feedback on style and grammar is crucial (Interview, FP19-C1: July 14th ,2025).

Automated feedback tools play a very important role in enhancing accuracy because they enable learners to identify and correct errors (Barrot 2023). O'Neill & Russell (2019) argue this; specific tools like grammar applications identify surface-level errors and provide explanations for corrections.

In addition, AI use in andragogy can solve the problem of unemployment. This is because many individuals do not graduate from formal education due to various factors. A significant challenge for national development is that a majority of youths do not complete formal education, hindered by a confluence of economic, geographic, and social barriers (HakiElimu, 2021; World Bank, 2022). This reality points out the importance of strong AE paths as an alternative for skill and credential attainment.

UNESCO Institute for LL (2022) argues that AE provides a vital alternative pathway for individuals who have been failed by formal initial education systems, allowing them to acquire essential skills, competencies, and credentials for personal development, employment, and active citizenship. To enhance the effectiveness of AE, AI should be utilised in andragogy. World Bank (2019), the demand for new skills is accelerating, and traditional educational paths are insufficient for andragogy.

Generally, incorporating AI into AE, andragogy, and LL in Tanzania presents a revolutionary opportunity; however, it requires careful and contextually informed implementation. The studies have depicted that there are still gaps to be filled, although the Tanzanian government has taken good steps, as evidenced by the adoption of National Guidelines on Artificial Intelligence in Education (2025) and the reestablishment of AE in the Education Sector Development Plan (2025/26–2029/30). The practical application of AI's potential remains constrained among principal stakeholders, based on research findings. The research findings show that it is true that the use of AI in learning, especially in AE, can fuel the learning process, as it is cost-effective and acts as an accessible tool. All participants insist on the importance of generative AI applications like ChatGPT in providing immediate educational assistance and in promoting critical thinking through personal learning, as well as addressing the scarcity of instructor availability in LL methodologies. AI tools boost the learning experience through the provision of automated feedback as well as personalised content, at the same time giving a second chance of learning opportunities to the majority of people who, in one way or another, are marginalised from formal education institutions, hence directly solving national issues like unemployment due to a mismatch of skills.

However, achieving the inclusive benefits of AI in AE requires addressing significant deficiencies in digital infrastructure, AI literacy, and national-level policy frameworks. Currently, there is a digital divide between metropolitan and rural regions, along with disparate awareness and access to AI technology, which carries a risk of increasing current educational gaps. Therefore, the next initiatives should emphasise investment in digital inclusion, educator training, and the creation of ethically informed, pedagogically robust AI applications that are suited to Tanzania's context. The research has also presented that although the government of Tanzania has achieved some commendable efforts, such as implementing the National Guidelines on Artificial Intelligence in Education (2025) and reaffirming AE in the Education Sector Development Plan (2025/262029/30), there are still some issues to be addressed.

AI has huge potential to improve AE and LL in Tanzania. When appropriately used, it can act as a driver of educational equity, economic empowerment and sustainable

development. There should be collaboration strategies between different stakeholders of AE, including government, educational institutions, and communities, necessary for generating a comprehensive as well as transformative AI-enhanced educational landscape.

Conclusion

It is globally recognised that AI, when used in AE for andragogy, is pivotal for LL. Additionally, some argue that AI-driven andragogy can effectively address the mismatch between skills and the needs of society and the nation as a whole. Although in most African countries, including Tanzania, AI use for andragogy is not a priority. Referring to the 2030 Tanzania global sustainable development plan, the Ministry of Education in the United Republic of Tanzania should prioritise developing a generative AI application for andragogy to enhance the teaching and learning process, thereby improving skill alignment and employment opportunities.

Recommendations

The study discussion shows that the generative AI app for andragogy must be developed quickly. There is an urgent need to develop generative AI applications for andragogy to address the growing skills gap and enable personalised learning at scale (World Economic Forum, 2023). The use of AI in Tanzania AE must not copy Western models, which are actually not suitable for the context of Tanzania. It requires a systematic reconceptualization and revitalisation to effectively meet local contexts and issues (UNESCO, 2021). This enhancement is critically required to support andragogy, which has historically faced challenges related to scalability, resource distribution, and cultural pertinence (Mushi, 2021). An effective AI-driven AE model for Tanzania requires a decolonial approach, generating tools that are suitable for local languages and domestic knowledge systems instead of imposing external frameworks (Zembylas, 2023). There is a need for a comprehensive national policy governing AI user in the Tanzanian education system, including AE.

It is important to invest in digital infrastructure. UNESCO (2021) underscores the necessity of prioritising infrastructure development to provide all learners, regardless of location, with access to the necessary digital tools and connectivity. Investment in robust digital infrastructure is the foundational step to unlocking the potential of AI in education; without it, technological advancements risk exacerbating existing inequalities between urban and rural communities (World Bank, 2021). The digital divide between the urban and rural setting needs to be bridged to ensure that there is fair access to AI-based education facilities. The availability of electricity, the

accessibility of the internet, ICT facilities such as computers, tablets, and smartphones should be used to make AI easier to use.

To enable adult learners to apply AI, AE institutions will need to establish LL or professional development cycles to increase AI levels among teachers and students. According to Graefe et al. (2025), the training can make people aware of the use of AI as well as its importance and contribution in the academic arena.

More importantly, it is essential to support research and innovation centres dedicated to AE and AI-based andragogy of LL (in Tanzania as well as the EA region in general) to support local, evidence-based innovations. According to UNESCO (2023), AI technology is user-friendly; hence, it is easy to understand in workshops and professional training, as these approaches enable faculty to be more efficient in their work.

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Artificial Intelligence and Machine Learning: The Future of Lifelong Learning

Anagrolia Faustino Mahenge, Suye Secondary School, Arusha City Council

Email: anagroliafaustino2014@gmail.com

Abstract

Artificial Intelligence (AI) and Machine Learning (ML) are transforming education globally by personalising learning and improving outcomes. In Tanzania, these technologies have significant potential to enhance the Competency-Based Curriculum (CBC) and support lifelong learning. This paper reviews literature and case studies from 2018 to 2025 to explore how AI and ML can promote inclusivity and competency development for learners of all ages. The findings indicate that AI and ML facilitate personalised learning paths, learner-centred teaching, and the development of key competencies, including problem-solving and digital literacy. They also enhance opportunities for adult education. However, challenges such as infrastructural limitations and digital inequalities persist. To maximise the benefits of AI and ML in advancing lifelong learning in Tanzania, collaboration among policymakers, educators, and technology stakeholders is essential, ensuring a fair and sustainable integration aligned with local needs.

Key words: Artificial Intelligence; machine learning; lifelong learning; competency-based curriculum; sustainable development

Introduction

The global shift toward digital transformation has made Artificial Intelligence (AI) and Machine Learning (ML) indispensable in modern schooling. These technologies enable individualised learning, data-driven education, and adaptive skill improvement (Luckin, 2018; Chen & Liu, 2018). In the twenty-first century, lifelong learning has become critical for labour competitiveness, innovation, and social advancement.

In Tanzania, AI and ML have the potential to speed up the implementation of the Competency-Based Curriculum (CBC) by providing real-time student assessment, targeted content distribution, and digital accessibility (Regmi, 2022). However, issues remain, notably in addressing digital inequality. Urban internet access surpasses 80%, whereas rural penetration is roughly 30%, with approximately 24% of connections being unreliable. Additionally, approximately 30% of rural inhabitants have adequate digital literacy (Ng, 2023).

Despite these limits, AI has the potential to bridge educational gaps, encourage lifetime skill acquisition, and convert Tanzania into a knowledge-driven country. This study critically evaluates worldwide and regional studies from 2018 to 2025, evaluating how

AI and ML contribute to lifelong learning, what problems they pose, and how Tanzania might effectively apply these findings.

Methodology

A desk-based systematic literature review was carried out, with a focus on 50 scholarly papers from 2018 to 2025 obtained from IEEE Xplore, SpringerLink, ScienceDirect, PubMed, and Google Scholar. The keywords used included *Artificial Intelligence, Machine Learning, Lifelong Learning, Educational Technology, and Sustainable Development.* The inclusion criteria prioritised research that investigated AI/ML applications, ethical challenges, and policy implications in lifelong learning, both worldwide and in developing countries. Data extraction involved summarising techniques, findings, and implications, allowing for the synthesis of topics relevant to Tanzania's educational revolution.

Findings and Discussion

The examination of literature from 2018 to 2025 reveals that Artificial Intelligence (AI) and Machine Learning (ML) are transforming the landscape of lifelong learning through personalisation, efficiency, and accessibility. According to research, adaptive learning systems driven by AI may tailor learning experiences to individual progress, strengths, and learning styles, improving learner engagement and outcomes (Chen & Liu, 2018; Luckin, 2018). Globally, these technologies have proven helpful in promoting competency-based education by allowing students to master important 21st-century abilities, including creativity, cooperation, and problem-solving. AI-driven analytics in professional and adult education enable continuous assessment and tailored feedback, supporting lifetime upskilling and reskilling to meet labour market demands (Perez-Ortiz et al., 2021; Regmi, 2022).

In Tanzania, the use of AI and ML has the potential to strengthen the Competency-Based Curriculum (CBC) by enabling learner-centred methods and inclusive education, particularly for marginalised and rural areas. Learners can gain access to personalised materials, vocational training tools, and real-time feedback via AI-powered digital platforms, thereby bridging the urban-rural educational divide. Such technologies can also help teachers by automating administrative work and offering data insights for personalised instruction. Nonetheless, the benefits are hampered by problems such as limited digital infrastructure, insufficient internet access, and low AI literacy among educators and students. These limits limit the scalability of AI projects, emphasizing the importance of focused investments in digital infrastructure and capacity creation.

Furthermore, ethical considerations are an important part of AI's integration into education. Issues such as algorithmic bias, data privacy, and transparency must be addressed to guarantee that AI applications promote fairness and accountability (Kamath & Liu, 2021; Fletcher et al., 2021). Policy frameworks governing ethical AI use are still in their early stages in Tanzania, demanding multi-stakeholder collaboration among government, academia, and the corporate sector. To achieve equitable and sustainable AI-driven lifelong learning, it is critical to create inclusive digital strategies, raise public awareness, and establish strong governance systems. Tanzania may use AI and machine learning to boost lifelong learning in line with national and global educational goals by coordinating policy innovation, infrastructure development, and human capacity building.

Figure 1. Conceptual model

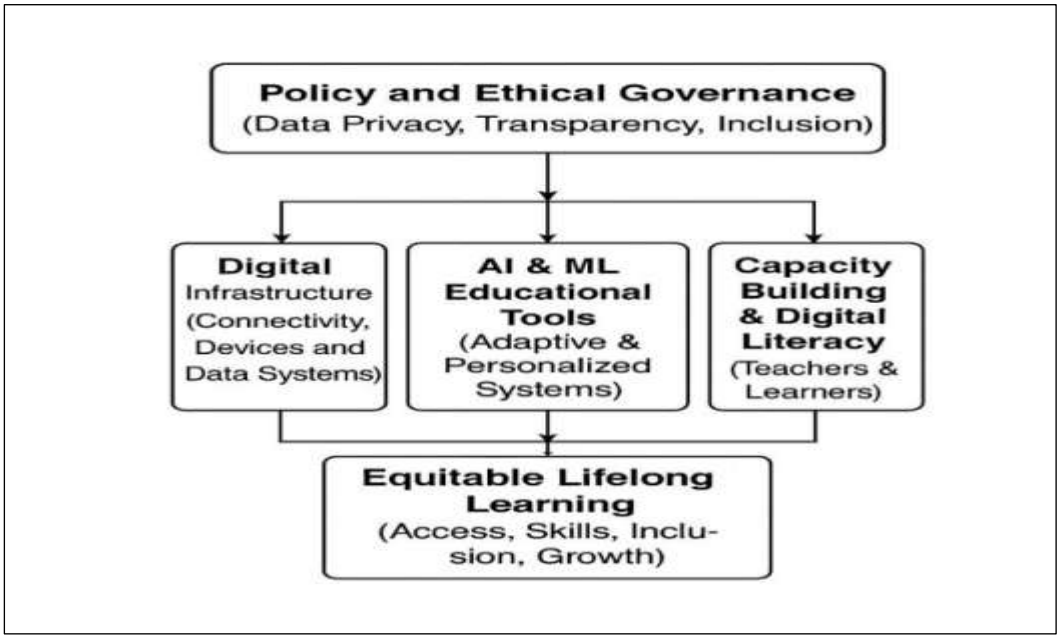
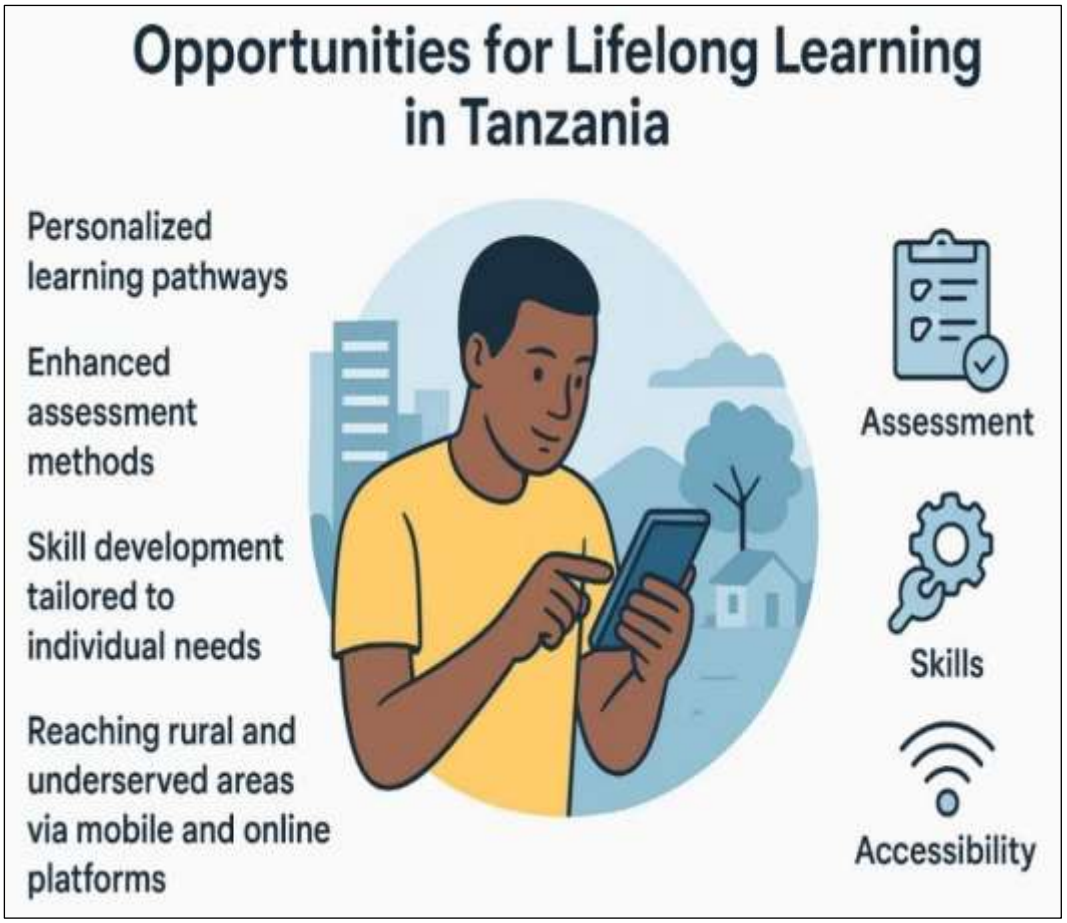


Figure 1, Conceptual model illustrating the relationship between ethical frameworks, digital infrastructure, and AI-driven tools in promoting equitable lifelong learning outcomes in Tanzania.

Figure 2: The diagram "Opportunities for Lifelong Learning in Tanzania"



The diagram "Opportunities for Lifelong Learning in Tanzania" was developed for this study using literature (2018-2025) and Tanzanian education policy reviews on AI, ML, and lifelong learning within the CBC framework.

The diagram titled "Opportunities for Lifelong Learning in Tanzania" shows how Artificial Intelligence (AI) and digital technologies can transform education by creating personalised learning pathways, improving assessment methods, and supporting skill development based on individual needs. It highlights the role of AI in reaching rural and underserved communities through mobile and online platforms, promoting inclusivity and accessibility. Overall, the diagram illustrates how AI aligns with Tanzania's Competency-Based Curriculum (CBC) and national goals to advance equitable, flexible, and future-oriented lifelong learning.

Figure 3: The "Current Challenges & Constraints"

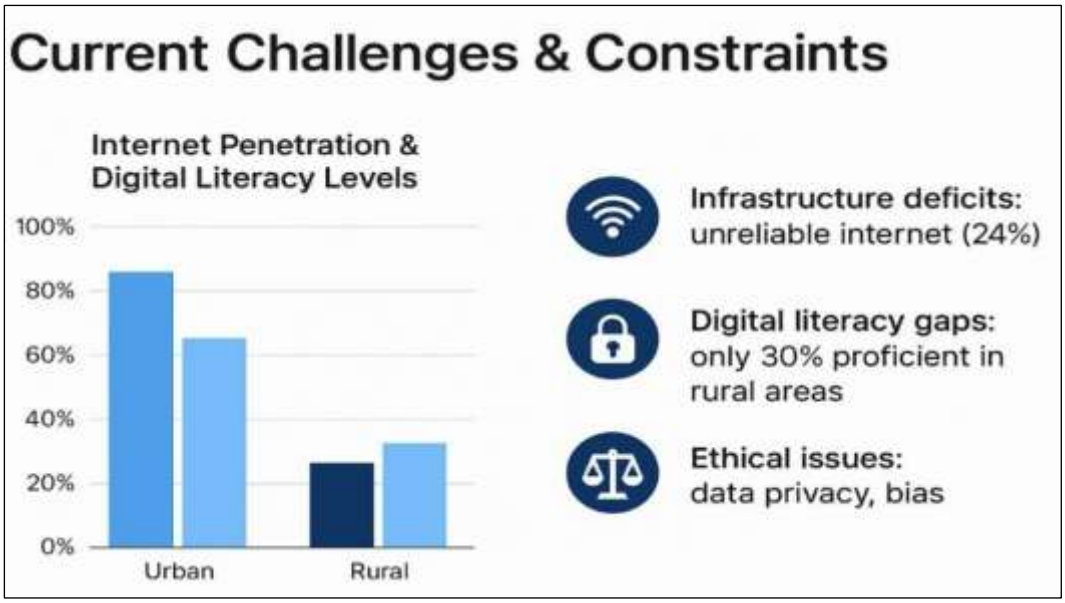


Figure 3, the "Current Challenges & Constraints" diagram was created for this study using synthesised findings from reviewed literature (2018-2025), such as Chen & Liu (2018), Perez-Ortiz et al. (2021), and Regmi (2022), as well as policy data on Tanzanian digital infrastructure and literacy levels.

The "Current Challenges & Constraints" map depicts the primary challenges to integrating Artificial Intelligence (AI) and digital learning systems in Tanzania, with a focus on differences in internet availability and digital literacy between urban and rural areas. Urban regions have relatively high internet penetration (over 80%) and digital literacy levels (about 65%), whereas rural areas lag substantially behind, with values ranging from 25% to 35%, showing a continuing digital divide. Only approximately 30% of rural students are technologically literate, emphasising the critical need for focused capacity-building and digital inclusion initiatives. Furthermore, infrastructure deficiencies such as inconsistent internet connectivity for 24% of users and ethical worries about data privacy and algorithmic bias impede egalitarian AI deployment. Overall, the findings highlight that to achieve inclusive and sustainable AI-driven lifelong learning,

Conclusion

Between 2018 and 2025, research shows that Artificial Intelligence (AI) and Machine Learning (ML) have become critical to improving lifelong learning through personalisation, inclusion, and enhanced learning outcomes. In Tanzania, their

integration has the potential to significantly boost the Competency-Based Curriculum (CBC) by encouraging adaptable learning environments that cater to individual student needs while increasing digital literacy and creativity. The findings show that AI and ML can help with learner-centred teaching, give real-time feedback, and enable continuous skill improvement for all age groups, including adult and continuing education. However, realising these benefits requires addressing issues like infrastructure bottlenecks, digital inequality, and ethical data stewardship.

To secure the long-term adoption of AI and ML in lifelong learning, Tanzania must develop close collaboration among politicians, educators, industry leaders, and technological entrepreneurs. Such collaboration should centre on adopting supportive regulations, creating digital infrastructure, and fostering capacity-building activities that prepare teachers and students to effectively use AI tools. Furthermore, ethical and transparent governance frameworks are required to ensure that AI-powered education remains equal and in line with national development goals. Tanzania may proactively embrace these technologies to position its education system to meet both global trends and local requirements, fostering a competency-based, lifelong learning culture that supports long-term national progress.

Recommendations

Tanzania's government should develop a national policy to integrate AI and ML in education ethically and sustainably. These policies must promote data privacy, transparency, and accountability in order to prevent algorithmic bias and exploitation of student information. Collaboration among politicians, educators, and technology experts is critical for developing governance frameworks that ensure AI deployment is consistent with Tanzania's Competency-Based Curriculum (CBC) and the larger aims of sustainable development. Furthermore, explicit ethical norms should be devised to govern AI use in both public and private educational institutions. 2. Expand infrastructure by investing in bandwidth, devices, and power stability for underserved populations.

Infrastructure Expansion and Digital Inclusion: Improving digital infrastructure is crucial for fulfilling AI's potential in lifelong learning. Investments should prioritise increasing internet speed, offering inexpensive digital devices, and boosting electrical access, particularly in rural and underdeveloped areas. Public–private partnerships can help scale up connectivity initiatives and ensure equitable access to AI-powered learning platforms. This infrastructure base will allow for consistent and inclusive participation in AI-supported educational programmes, bridging the digital divide between urban and rural learners.

To fully benefit from AI and ML, educators, administrators, and learners must develop digital capabilities. This can be accomplished through professional development programmes, teacher training seminars, and the inclusion of AI literacy in the national curriculum. Teachers should be able to not only efficiently employ AI tools but also evaluate AI-generated insights to improve student learning. Similarly, learners must be led to critically engage with AI systems, knowing both their promise and limitations, to promote ethical and informed technology use.

AI solutions should be adapted to Tanzania's linguistic, cultural, and educational contexts to ensure relevance and inclusivity*:* Creating AI platforms that support Kiswahili and local languages can improve access for all students. Furthermore, content should represent local expertise, beliefs, and learning styles to ensure that AI-powered systems reinforce national identity while increasing global competitiveness. Localisation also contributes to increased user engagement and guarantees that AI technologies complement existing educational frameworks rather than imposing external models.

Monitoring and evaluating the impact of AI and ML projects on teaching quality, learner outcomes, and fairness in education requires ongoing study and assessment: Establishing national and regional research networks can help to promote evidence-based policymaking and educational technology innovation. Regular monitoring will help guarantee that AI systems are fair, transparent, and responsive to new problems, such as technical advancements or evolving societal dynamics. Continuous feedback from educators, students, and politicians should help steer iterative changes and long-term sustainability.

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Enhancing Lifelong Learning Through Blended and Microlearning in Tanzania Adult Learning Environments: A Comparative Analysis

Mustapha Almasi, Mzumbe University, Tanzania

Email: amustapha@mzumbe.ac.tz

Abstract

Access to quality adult education remains a significant challenge in many developing countries due to low technology adoption, inadequate teaching materials, and adult family responsibilities. Traditional educational models often fail to address the diverse needs of learners, highlighting the need to adopt innovative approaches. This study examined challenges of traditional classroom learning, compared learners' perceptions of its effectiveness to blended and microlearning, and assessed differences in perceived effectiveness among the approaches. Using a descriptive study design, 227 graduate and current adult learners were studied. Data were analysed using means, frequencies, thematic analysis, the Relative Importance Index (RII), and one-way ANOVA. Time constraints and lack of flexibility (RII= 0.86) were the most significant challenges of traditional face-to-face learning. Mean scores indicated that blended learning and microlearning were perceived as more effective than traditional learning. Furthermore, ANOVA results demonstrated that blended learning and microlearning were associated with significantly higher effectiveness scores compared to traditional face-to-face learning. By leveraging blended learning and microlearning, this study aims to bridge the digital divide and enhance educational accessibility in Tanzania.

Keywords: Blended learning, microlearning, lifelong learning, adult education.

Introduction

Human learning has always been a continuous endeavour, as Paulo Freire famously stated, from cradle to grave. This implies that learning is an integral part of human life. Concepts such as lifelong learning emphasize the desire and continuity of human education. Consequently, both young people and adults need to continue learning throughout their lives. Adult education has traditionally been conducted using face-to-face approaches, where learners and instructors meet in person. This mode of learning offers several advantages, including physical and emotional connections between the learner and instructor, enhanced concentration, and immediate dialogue (Naznean, 2022; Topping, 2023). However, adult learners often face numerous social, economic, cultural, and personal obligations, making it difficult to engage in traditional learning settings (Mahai, 2021). This challenge has led to the introduction of various online-based programmes such as online learning, open distance education, microlearning, and blended learning, which utilize the internet as the primary learning platform instead of the classroom.

This study investigates how innovative approaches, such as blended learning and microlearning, can be leveraged to enhance lifelong learning among adult learners in Tanzania. In this study, lifelong learning is viewed as an educational phenomenon encompassing all life processes from birth to death, as well as all activities aimed at developing individuals' knowledge, skills, and competencies (Kaplan, 2016). Meanwhile, adult education is conceptualised within the framework of five segments, referred to as the AE typology (Rubenson & Elfert, 2013). These five segments include the foundational segment, higher education segment, workplace-related segment, other labour market-related segment, and the personal/social segment. However, this study focuses specifically on the higher education segment.

Blended learning is an educational approach that combines face-to-face learning and online instruction (Almasi, 2019). Most formal adult learning programmes in Tanzania have traditionally relied on face-to-face instruction. This approach limits adult learners' access, tends to be costly and time-consuming, and requires the physical presence of the learner, which can be challenging due to adult responsibilities.

Therefore, there is a need to adopt innovative approaches, particularly blended learning and microlearning, which tend to offer more affordances that would otherwise be impossible in a traditional setting. Unlike traditional classroom learning, which tends to be fixed in time and space, blended learning and microlearning provide more flexible, learner-centred opportunities that can help sustain lifelong learning among adults (Nkkhoo, 2023; Alias & Razak, 2025).

Microlearning involves delivering content in small, focused segments, such as short videos, quizzes, and infographics that can be quickly consumed, often via mobile devices (Ghasia & Machumu, 2021). It emphasises short-term, informal learning activities or on-the-job learning when learners need knowledge to solve specific problems (Drakidou, 2018). Microlearning is valuable because it enhances access, engagement, and flexibility, particularly for adult learners. When combined with blended learning, which encompasses both formal and informal learning, microlearning becomes a powerful approach to adult lifelong learning. The next section of this paper outlines key barriers to adult learning in Tanzania from the perspectives of microlearning and blended learning. It then discusses how these approaches can be leveraged to improve adult and lifelong learning in Tanzania.

This study employs Self-Determination Theory (SDT) and the Community of Inquiry (CoI) framework (Garrison & Arbaugh, 2007; Ryan & Deci, 2024). SDT posits that individuals are most motivated and engaged in learning when their basic psychological needs are satisfied (Ryan & Deci, 2024). These needs include autonomy, competence, and relatedness. This implies that adult learners need to feel autonomous to sustain

their learning; they also need to perceive that they are acquiring competence throughout the learning process while maintaining connections with other learners and their workplaces (Nikou, 2019). Meanwhile, the CoI framework proposes that courses should be designed to foster teaching, social, and cognitive presences (Garrison & Arbaugh, 2007). These presences are essential for sustaining learning and creating meaningful educational experiences. Consequently, this study proposes that autonomous, competent, and connected learners who engage in well-designed blended and microlearning courses will continue lifelong learning, as such learning aligns with their goals.

Key Barriers to Adult Learning in Tanzania: Traditional Approaches vs Blended and Microlearning

Numerous studies have examined the barriers to adult education in Tanzania. This section provides a synopsis of these barriers, with a particular focus on those related to instructional approaches. For instance, a study by Msuya (2016) identified insufficient teaching and learning resources, including inadequate library space, as key obstacles. In light of this, the present study proposes that the introduction of blended and microlearning approaches could help mitigate these challenges. These approaches leverage online resources, which learners can access anytime and anywhere, provided they have internet connectivity.

Interestingly, a study by Mwakyambiki et al. (2024) identifies five key barriers to adult education, including the availability of professional teachers, domestic responsibilities, time constraints, and a lack of conducive learning environments. However, challenges such as time constraints and domestic roles could be addressed by introducing blended and microlearning approaches, allowing learners to study comfortably at home or in the workplace. The study by Cosmas (2018) reports similar findings, noting that adult learners often struggle to balance their study time with other activities.

Further studies show that some adult learners lack skills related to internet and computer use (Cosmas, 2018), which may pose challenges when learning through blended and microlearning approaches, as these methods largely rely on internet access. Nevertheless, this study asserts that the lack of advanced internet and computer skills may not necessarily be a hindrance, since blended and microlearning require only basic skills that can be easily acquired. For instance, in the study by Almasi, Zhu, and Machumu (2018), students with basic computer skills performed better than those with advanced computer skills.

Using Blended and Microlearning Approaches to Enhance Adult Learning

Blended learning is often considered a new phenomenon, but it is based on an old concept. However, this perspective depends on how one defines it. Blended learning involves the integration of traditional classroom-based instruction with online or internet-based teaching methods (Almasi, 2019). It is a hybrid educational approach that combines the strengths of both traditional and online instructional methods.

Blended learning, as a pedagogical approach, is typically characterised by a combination of classroom and online activities that integrate face-to-face interaction with digital tools and online content delivery (Zhang, Huang, & Ma, 2008; Almasi et al., 2024). It offers flexibility in time and location, allowing learners to access materials anytime and anywhere (Hrastinski, 2019). Furthermore, blended learning enhances student engagement, provides diverse learning resources, fosters opportunities for collaboration and communication, supports lifelong learning, and facilitates continuous learning and feedback (Graham, 2006; Garrison & Vaughan, 2008; McLaughlin et al., 2014; Thamrin et al., 2024; Almasi et al., 2024; Almasi et al., 2025).

However, the cited benefits of blended learning are not achieved automatically. Instructors must rethink and redesign their courses to realise these advantages. This is supported by studies conducted by Hoic-Bozic, Mornar, and Boticki (2008); Vaughan (2010); Jeffrey, Milne, and Suddaby (2014); Yin and Yuan (2024); and ElSayad (2024). One effective approach to redesigning blended learning courses is through the Community of Inquiry framework (Vaughan, 2010). The Community of Inquiry is a critical discourse model comprising three interactive elements: teaching presence, cognitive presence, and social presence. A blended course designed with these elements tends to foster collaboration and enhance both the sense of community and learning (Almasi et al., 2024).

On the other hand, microlearning utilises short, targeted content that is primarily delivered online or with internet assistance (Alias & Razak, 2025). This teaching and learning approach rely on well-focused, bite-sized, and easily digestible content that can be completed in the shortest possible time (Ghasia and Rutatola, 2021; Ghasia, 2023). The concept of microlearning is based on Hermann Ebbinghaus's curve, which states that when people take absorb amounts of information, retention of to degrade decline time (Nikkhoo et al., 2023).

According to Ghasia (2023), microlearning is characterised by several key features: small-sized content, often referred to as the material digestible and easily grasped within a brief period to accommodate modern learners; and a focus on a single learning objective. Other attributes of microlearning include independent units, even when part

of a larger whole; highly interactive content and activities; multi-device compatibility; and content available in diverse formats such as text, video, and audio. Consequently, online materials—including video tutorials, audio podcasts, presentations, scenarios, and assessments—can be effectively presented as microlearning.

Nevertheless, microlearning is criticised for being unsuitable for complex and complicated materials and analytical skills, and for its use of small chunks, which may prevent learners from understanding the material in depth (Fitria, 2022; Nikkhoo et al., 2023). Other scholars argue that microlearning tends to depend on the characteristics of individual learners, meaning it may be suitable only for certain types of learners (Sozmen, 2022).

Microlearning can be an integral component of blended learning delivery, where instructors design courses incorporating the key features of the microlearning approach (Nkou, 2019; Semingson, Crosslin, & Dellinger, 2015). This indicates that blended learning can effectively integrate microlearning elements to enhance student learning. Therefore, this study argues that both blended and microlearning approaches can serve as innovative and effective methods to improve lifelong and adult education in Tanzania. Several studies have confirmed the practical benefits of these approaches (Yu et al., 2025; Almasi et al., 2024; Lusa, Adanan, & Yurniawati, 2022; Almasi & Zhu, 2020; Vo, Zhu, & Diep, 2017), including their positive impact on student learning, motivation, and satisfaction. Furthermore, microlearning has been shown to improve retention, reduce cognitive overload, and enhance student learning outcomes (Zarshenas, 2022; Senadheera et al., 2023).

Purpose of the study

This study investigates how adult learners perceive blended learning, and microlearning in relation to the effectiveness of these learning modalities.

i) To identify the common challenges associated with traditional classroom learning as experienced by adult learners.

ii) To examine whether learners perceive blended and microlearning approaches as more effective than traditional instructional methods.

iii) To determine whether there is a significant difference in perceived effectiveness among traditional, blended, and microlearning instructional methods.

Method

This study employed a descriptive research design in which students and graduates from various study programmes were randomly sampled and surveyed. A sample of

227 participants was used, involving continuing and graduate adult education learners. About 61% of the participants were male, and 39% were female. Participants' ages ranged from 20 to 47 years. About 52% of the participants were ongoing adult learning students pursuing degree programmes, 40% were graduates, and 16 % were diploma holders, and 2% did not indicate their education level. A questionnaire covering demographics such as gender, level of education, and age, as well as participants' experiences with traditional face-to-face learning and their views on the efficacy of blended and microlearning approaches, was administered to the participants. The questionnaire was distributed online via Google Forms. The main questionnaire items used a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire consisted of three main sections: participants' experiences with traditional face-to-face learning, their views on blended learning, and their views on microlearning approaches.

This study involved participants enrolled in various diploma, bachelor's, and master's programmes, as well as those who had recently completed adult learning programmes at both colleges and universities. A randomly selected sample of 227 participants was included in the study. Both quantitative and qualitative data were collected. Quantitative data, measuring participants' experiences and views of traditional, blended, and microlearning approaches, were gathered using a survey. Data analysis included frequencies, mean scores, the Relative Importance Index (RII), and one-way ANOVA.

Regarding the most significant challenges of traditional face-to-face learning and the benefits of micro-learning, the Relative Importance Index was computed using the following formula.

$$\mathrm{RII} = \frac{\sum \mathrm{W}}{A \times N}$$

Where, W = weight given to each item (in this case, frequency of mention), A = highest possible weight (max frequency among the items), and N = total number of valid responses. The interpretation of the RII for each indicator is adopted from Sakhare and Chougule, 2019; Almasi, Rumulika, Hakimu and Mbukwa (2024), classified as: High(H) [0.8<RII<1.0], High-Medium (H-M) [0.6<RII<0.8], Medium (M) [0.4<RII<0.6], Medium-Low (M-L) [0.2<RII<0.4] and Low (L) [0.0<RII<0.2].

Findings

Challenges Associated with Traditional Face-to-Face Classroom Learning

In the first objective, the study examined the most significant challenges reported by participants when learning in a traditional face-to-face system. The participants were asked to respond to closed-ended questions with a Likert Scale ranging from 1 to 5, then give responses to an open-ended question regarding the challenges. Consequently, the relative importance index was computed based on the responses provided. The most reported challenges were time constraint and lack of flexibility, RII= 0.86, followed by resource and infrastructure limitation, RII= 0.40, learning and Teaching effectiveness, RII= 0.39, overcrowding environment, RII= 0.34, Psychological and social barriers, RII = 0.26.

However, based on the RII criteria adopted from Almasi et al., (2024), only time constraint and flexibility seem to be High, making it more significant than the rest, while learning and teaching effectiveness (outdated methods, low engagement), overcrowding environment, and psychological and social barriers (lack of confidence to participate in the lesson, language) seem to have Low scores. This indicates that participants find it hard to spend time in one place while attending traditional classroom sessions.

When viewed from SDT theory that posits that people are most motivated and engaged in learning when their basic psychological needs are met (Ryan & Deci, 2024), such findings imply that adult learners will find satisfaction when time constraint is solved. This may suggest the need for a learning modality that considers the time of the learner. The study by McLaughlin (2014) confirms the support provided by self-determination theory. Meanwhile, studies show that instructors tend to be reluctant to employ educational technologies to support blended learning; as such, this makes the blended approach not fully integrated in the learning of students (Rasheed, Kamsin, & Abdullah, 2020). This calls for effective training for instructors to help them integrate the technology.

Table 1.1 Challenges of Traditional face-to-face learning and their Relative Importance Index

Rank	Challenge	Relative Importance Index
1	Time and Flexibility Issues	0.860
2	Resource and Infrastructure Limitations	0.400
3	Learning and Teaching Effectiveness	0.393
4	Overcrowding Environment	0.340
5	Psychological and Social Barriers	0.260

Moreover, the participants were asked to list two important challenges of traditional face-to-face learning. Based on the qualitative responses provided, the challenges of traditional learning can be broadly categorised into three major themes: flexibility and time management, learning environment and resources, and learning effectiveness and engagement. These findings support the quantitative findings reported before.

In terms of flexibility and time management, the rigid nature of traditional learning schedules and the difficulties individuals face in managing their time alongside other responsibilities were the most reported challenges. Lack of flexibility in time and schedule made it difficult for the learners to attend learning and social responsibilities at the same time.

Regarding learning environment and resources, challenges related to the physical and logistical aspects of the learning environment, including infrastructure, class sizes, and availability of materials, were listed. Participants reported issues of overcrowded classrooms, difficulties in travelling to venues, inadequate learning resources and an unconducive learning environment as key challenges.

Furthermore, difficulty in understanding content, lack of engagement due to passive learning or limited interaction in classrooms, lack of personalised learning and fear to participate in class sessions were listed as the most important challenges in the third theme related to learning effectiveness and engagement. This suggests that traditional face-to-face learning delivery has an impact on learner confidence and participation as it affects their engagement in the learning.

Learners' Perceived Effectiveness of Blended, Microlearning and Traditional Face-to-Face Learning

In the second objective, the study aimed to determine whether blended learning and microlearning were considered more effective than traditional learning. To achieve this, participants were asked to respond to several questions for each learning modality using a five-point Likert scale ranging from 1 to 5, with 1 representing Strongly Disagree, and 5 representing, Strongly Agree.

Traditional learning included a total of six questions as follows: *I can regularly attend face-to-face classes without difficulty; travel time or distance makes it hard for me to attend in-person classes; I am actively engaged during traditional classroom lessons; traditional classes fit well with my personal/work schedule; I understand lessons better when taught in person; and large class sizes make it hard to learn effectively. T*he mean score obtained for traditional face-to-face learning was 3.32 (SD = 0.69).

Blended had five questions, which included: *Blended learning makes education more accessible to me*; *I can learn better when online and in-person methods are combined; Blended learning helps me stay more engaged with the content; I can manage my time better when learning in a blended format. I find it easier to review learning materials in blended learning environments.* The mean score for blended learning was 3.92, SD= 0.71. Finally, micro-learning was assessed by the following questions: *Short learning sessions help me understand better than long sessions; I can remember more from short and focused lessons; Microlearning fits well with my busy schedule; I feel more motivated when learning with short, engaging content,* and *I find mobile microlearning tools easy and enjoyable to use.* The mean score for micro-learning effectiveness was 3.84, SD= 0.69.

Overall, the blended learning modality was considered the most effective (M = 3.94), followed by micro-learning (M = 3.84), while traditional face-to-face learning was regarded as the least effective mode (M = 3.32). This suggests that participants perceive blended learning as more effective compared to micro-learning and traditional face-to-face instructional methods. This finding aligns with previous studies (Hoic-Bozic et al., 2008; Elhamuye, 2024; Lusa, Adnan, & Yurniawati, 2022) that demonstrate the superiority of blended learning over traditional approaches. It implies that blended learning supports lifelong learning goals and personalised education.

However, the benefits of blended learning are not automatic; they depend on well-designed blended courses. This is supported by Kaur (2013), who emphasises the importance of keeping online offerings interactive rather than merely "talking at" participants. This perspective is consistent with the Community of Inquiry framework, which posits that effective blended courses incorporate three interactive presences:

cognitive, social, and teaching presence (Martin et al., 2022; Kyei-Blankson, Ntuli, & Donnelly, 2019).

In the same vein, studies have also established the effectiveness of microlearning over traditional learning. This is seen in studies such as Mostrady (2025) due to its use of digital tools such as mobile apps and e-learning platforms, which allow interactive learning. Similar findings are echoed by Sozmen and Bati (2023) that students participating in medical studies through microlearning gained higher self-confidence in learning.

Furthermore, one-way analysis of variance (ANOVA) was conducted to examine the effect of different learning modalities (Traditional Face-to-face, Blended, Microlearning) on learning effectiveness scores. The results show a statistically significant effect of learning modalities on effectiveness scores, $F(2,678) = 47.91$, $p < .001$. Post-hoc comparisons using Tukey's HSD test were performed to determine which specific group means differed significantly. A significant difference between blended learning ($M=3.92$, $SD=0.71$) and traditional face-to-face learning ($M=3.32$, $SD=0.69$), with blended learning showing significantly higher scores ($p<.001$). A significant difference between Microlearning effectiveness ($M=3.84$, $SD=0.69$) and Face-to-face learning ($M=3.32$, $SD=0.69$), with Microlearning showing significantly higher scores ($p<.001$). No statistically significant difference was found between Blended learning ($M=3.92$, $SD=0.71$) and Microlearning effectiveness ($M=3.84$, $SD=0.69$) ($p=.615$). Conclusively, both Blended learning and Microlearning are associated with significantly higher effectiveness scores compared to traditional Face-to-face learning. Various studies confirm these findings. For instance, Elhamuye (2024) finds blended learning to be an effective instructional approach in ESL/EFL education; BL improves students' academic performance (Tong et al., 2022) and consistently demonstrates better effects on knowledge outcomes compared to traditional learning in health education (Vallée et al., 2020).

Conclusion

This study identified important challenges associated with traditional classroom learning, examined learners' perceptions regarding the effectiveness of traditional learning versus blended and microlearning, and determined if there are significant differences in perceived effectiveness between traditional, blended, and microlearning approaches. A novel analysis, the Relative Importance Index, was used to rank the challenges.

Regarding challenges accrued from traditional face-to-face instruction, based on RII results, time constraint and lack of flexibility (RII= 0.86) were the most significant

challenges of traditional face-to-face learning. Qualitative findings confirm these results. Based on mean scores, blended learning and microlearning were reported as most effective compared to traditional learning, respectively. This aligns with Self-Determination Theory (SDT), which posits that learners are most motivated when their autonomy is supported. Adult learners struggle to balance educational commitments with work and family responsibilities. Other challenges, such as infrastructure limitations, low teaching effectiveness, overcrowding, and psychological barriers, were found to be less significant but still impactful.

In terms of the effectiveness of instructional approaches, quantitative results showed that participants rated blended learning (M = 3.92) as more effective than both microlearning (M = 3.84) and traditional face-to-face learning (M = 3.32). Also, the results of ANOVA show that blended learning and microlearning were associated with significantly higher effectiveness scores compared to traditional Face-to-face learning. These findings align with literature suggesting that blended learning supports autonomy, engagement, and flexible access to educational content.

The study further reveals that microlearning and blended approaches are better at meeting adult learners' preferences for flexible, short, interactive, and personalised content. These modalities not only fit better with learners' schedules but also increase motivation and knowledge retention. However, the effectiveness of these methods depends on proper design, technological readiness, and instructor competence in integrating them.

Based on the findings, the study recommends the following:

Adult learning institutions should increasingly integrate blended and microlearning approaches to accommodate learners' diverse schedules and responsibilities. Time and flexibility should be central design considerations in adult education programmes.

Notably, effective implementation of blended and microlearning requires instructors to be trained in digital pedagogy and course design. Therefore, investment in reliable digital infrastructure, interactive learning platforms, and mobile learning tools is essential to support these modalities. When fully adopted, to maximise the benefits of blended and microlearning modalities, learning content should include interactive elements, frequent feedback, and opportunities for social and cognitive engagement, as highlighted in the Community of Inquiry (CoI) framework.

This study is limited in the following ways: The use of a small sample size, that is, 227 participants only, may reflect the views of a small group, which may not represent all adult learners or educational contexts across regions. Meanwhile, while the study assessed perceived effectiveness, it did not evaluate the actual content design or

implementation fidelity of blended or microlearning programmes. Future studies should explore how different design strategies impact learning outcomes

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Completion over Competence Nexus: Coherence between Teaching and Assessment Practices for In-Service Primary School Teachers in Tanzanian ODL Programmes

Castory Kayombo, Mbeya University of Science and Technology & Michael W. Nicodemus, Mzumbe University

Email: castorykayombo44@gmail.com

Abstract

Open and Distance Learning (ODL) is crucial for the professional development of in-service primary teachers in Tanzania, but they struggle to master pedagogical and subject matter competencies. Guided by Biggs and Tang's constructive alignment theory, this study explored the alignment between instructional and assessment practices in ODL programmes for in-service teachers in Tanzania. Using a convergent parallel mixed-method design, data were collected from 192 participants in Mbeya, Mwanza, Morogoro, and Dar es Salaam. The data were analysed using descriptive statistics and thematic analysis. The findings revealed the limited coherence between teaching and assessment practices in enhancing teachers' pedagogical and subject competencies. While some teachers recognised alignment, others mentioned challenges such as inadequate preparation time and limited instructor interaction beyond exam periods. Instructors reported difficulties in managing the academic misconduct of in-service teachers due to their dual roles as learners and clients. The study recommends enhanced training for ODL instructors in competence-based teaching and assessment, the adoption of a blended instructional model, and the establishment of policies to ensure continuous subject-specialisation support for in-service primary teachers.

Keywords: Assessment, In-service Teachers, Open and Distance Learning (ODL), Primary School, Teaching

Introduction

Open and Distance Learning (ODL) has emerged as a pivotal mechanism for the professional development of in-service teachers globally, particularly in resource-constrained contexts such as sub-Saharan Africa. In Tanzania, ODL programmes have been institutionalised to enable primary school teachers to upgrade their academic qualifications from certificate to diploma and degree levels while remaining in service (Chambua, 2025; Lyamtane & Mosha, 2025). Historically, the ODL initiative has enabled thousands of teachers to upgrade their qualifications, serving as a flexible alternative to conventional on-campus programmes and helping to address teacher shortages (Arinto, 2022; Mhando, 2012; URT, 2010). These programmes are designed to enhance both pedagogical competencies and subject matter knowledge, aligning

with national goals for educational quality improvement and teacher professionalisation (IAE, 2020). However, while ODL is documented in other areas, concerns remain regarding the coherence between teaching approaches and assessment practices within these programmes, especially relating to competence-based education reforms parallel to the education policy of 2014 as reviewed in 2023 (Mushi et al., 2025). The shift in paradigm to Competence-Based Education (CBE) in Tanzania aims to bridge the gap between theoretical learning and practical classroom application, requiring the alignment of both teaching and assessment practices with clear and defined competence-based learning outcomes (Kaguo, 2022).

Despite policy reforms and ongoing professional development intended to provide room for in-service teachers to upgrade their competencies, the successful implementation of coherent teaching and assessment through open distance learning mode falls short, while the persistent instructional strategies to foster both pedagogy and subject matter competencies are mentioned to be alarming (Mulkeen & Crowe-Taft, 2010). Appropriate assessment, particularly in large ODL contexts, is not merely a tool for evaluation but an integral part of instructional design as well, essential for providing actionable feedback and supporting both pedagogical skill and subject mastery enhancement for in-service students. Studies have shown that while ODL provides flexibility and access for professional development, it also presents unique challenges such as limited instructor-learner interaction, inadequate learner support, and difficulties in maintaining academic integrity, especially when learners are also employees (Holubnycha et al., 2024; Semwenda, 2025).

The transformation of the educational landscape through ODL builds directly on the growing recognition of professional development as an important driver of career advancement and of lifelong learning. In Tanzania, this shift reflects the intersection between national policy aspirations and global educational commitments (URT, 2024). Consistent with World Vision 2050 and Sustainable Development Goal 4, which the government of Tanzania has signed, priority is given to inclusive, equitable, and quality education, with an emphasis on continuous professional development for different professions, including teaching. To align with these commitments, the 2014 Education and Training Policy, further advocated in 2023, underscored the importance of upgrading the knowledge and skills of professionals, including in-service primary school teachers, through flexible avenues such as on-campus-based training and ODL platforms (Mbuli, 2020).

The reviewed policy has advocated the structural reforms in teacher qualifications and minimum qualification for teachers, where the minimum requirement for primary school teachers has been raised from a certificate in primary education to a diploma in

primary education (URT, 2024). Different initiatives have taken a step in implementing in-service teachers' professional development, such as the Adult Institute of Education (AIE), Open University of Tanzania (OUT), and Agency for the Development of Educational Management (ADEM) (Mbunda et al., 2023). Thus, certificate-level teachers are now strongly encouraged to pursue professional development through on-campus or distance learning. This change not only reflects Tanzania's policy alignment with the Tanzania-global education agendas but also highlights the essential role of ODL in closing gaps created by work obligations, family responsibilities, and economic pressures, thereby allowing in-service teachers to advance academically without leaving their professional duties (URT, 2020; Mankki, 2022).

Although ODL is not being conducted according to conventional classroom norms by offering in-service teachers the flexibility to study at their own time, space, and pace, concerns about the quality and alignment of teaching and assessment remain pressing and cannot be left solely to the discretion of individual institutions to address. In well-developed economies such as the USA, Europe, and some Asian countries, any educational practice is parallel to the quality of input to output through a well-supported, robust infrastructure, dedicated support desks, structured tutorial assistance, and integrated online platforms where recorded sessions are systematically uploaded for student access (Akintola & Bello, 2021). This contrasts sharply with some countries from low economies where ODL is introduced without comparable assurance of infrastructure, labour force, technical know-how, and students' well-established support desk, raising significant questions about the quality and efficacy of ODL implementation in teaching and assessment. As noted by Alenezi et al. (2022), the integration of technology in ODL has addressed some of the challenges related to social knowledge and skills construction by promoting quality teaching and assessment practices, such as increased contact hours for skills development, the use of Learning Management Systems (LMS), and other forms of techno-integration that support competence-based teacher education. However, this may be constrained by the quality of education when its integration is superficial, as reflected in the African settings. Scholars such as Mbuli (2020) and Zhang (2020) have highlighted that the adoption of ODL as an alternative to conventional education (face-to-face education) has largely been reduced to individualised, self-paced learning, often lacking the structured institutional support seen in more developed contexts. Evidence from countries such as Nigeria, Zimbabwe, Kenya, and Tanzania reveal that ODL implementation still faces significant infrastructural, structural, pedagogical, and policy-related challenges (Bara & Bara, 2023).

Since the ODL programme operates through the provision of course orientation and brief facilitation, which are both conducted at the beginning and end of the semester, in-service teachers struggle to cover modules while continuing with their teaching responsibilities at their working posts (Mukama, 2025). On assessment practices, students meet their facilitators in the middle of the semester for the test and Semester Examination (SE) scheduled at the end of the semester, where, at this time, students submit their assignments for marking (Olakulehin, 2024; Mahlangu, 2018). This reliance on personalised study strategies tends to overlook the foundational principles of competence development through social constructivism, which details learning as a collaborative activity rather than an individual struggle (Polen, 2024).

This study was guided by Biggs and Tang's theory of constructive alignment (Biggs & Tang, 2015), which emphasises the coherence between learning objectives, teaching activities, and assessment methods to create an effective and outcome-based learning experience (Lestari & Yusuf, 2025). The theory focuses on what learners should achieve and how teaching, learning and assessment processes can be aligned to support those outcomes, rather than prioritising content coverage alone (Hamdoun, 2023). In this study, constructive alignment provided a lens for examining whether ODL teaching and assessment practices for in-service primary school teachers are coherently structured to foster competency-based learning outcomes. The theory also informed the analysis of how misalignment between teaching and assessment may hinder the development of genuine professional skills in teachers.

The findings contribute to policy efforts aimed at aligning ODL teacher education with national and global commitments, such as Vision 2050 and SDG 4, which emphasise inclusive, equitable, and quality education. However, the study highlights the institutional instructional support and ensures that ODL becomes a more effective pathway for professional development among in-service primary school teachers. Therefore, this study examined the alignment between teaching and assessment practices in ODL programmes for in-service primary school teachers in selected adult learning centres in Tanzania.

The Research Questions

1. To what extent do ODL instructors' pedagogical understandings translate into competence-based teaching and assessment?
2. How do in-service teachers perceive the alignment between teaching and assessment in ODL for developing their competencies?
3. What challenges hinder the design and implementation of competence-based teaching and assessment practices in ODL centres?

Methodology

This study simultaneously collected both qualitative and quantitative data through a convergent parallel mixed-methods design to analyse the research problem (Creswell & Creswell, 2023). This convergent parallel design was particularly appropriate for investigating the coherence of teaching and assessment systems. This study collected both quantitative and qualitative data to develop a comprehensive and nuanced understanding of whether ODL programmes are designed as integrated systems that develop competence or as disjointed processes focused primarily on completion (Cohen et al., 2018).

The study involved 192 respondents, including 49 instructors from ODL centres, regional residential tutors from four regions, and 143 in-service teachers enrolled in the ODL programme. The number of respondents was determined by calculating the required sample size using the Krejcie and Morgan sampling determinant schedule (1970) table for a known population (Bukhari, 2021). The total number of instructors and in-service teachers was obtained from the regional residential tutors' enrolment reports. The four regional residential tutors were deliberately selected based on their responsibilities for admission and overall supervision of ODL teaching and assessment at their centres. The 49 instructors were chosen through stratified sampling after grouping their professional subjects into four strata: Arts and Social Sciences, which comprised 40% of the instructors (20 instructors), Science, which comprised 30% (15 instructors), Education, accounting for 20% (10 instructors), and Community Development, representing 10% (4 instructors). The in-service teachers were randomly selected during the week before their end-of-year exams, ensuring representation from each level of study.

The study was conducted in eight ODL centres across the Mbeya, Mwanza, Morogoro, and Dar es Salaam regions, selected to capture both urban and rural contexts within Tanzania's ODL system. The centres, identified in consultation with regional residential tutors, were all actively serving the target population of in-service primary school teachers who study under a low-contact operational model, where face-to-face interaction is limited primarily to orientation, mid-semester tests, and final examinations.

Quantitative data were collected using structured questionnaires administered to both instructors and in-service primary school teachers. These questionnaires captured insights into the participants' experiences and perceptions of teaching and assessment practices in ODL centres (Creswell & Poth, 2018). Qualitative data were gathered through in-depth interviews with regional resident tutors (n = 5), randomly selected instructors (n = 8), and purposively selected class representatives (n = 4) of in-service

teachers, who provided rich information until data saturation was reached. These interviews explored participants' perceptions and experiences regarding the teaching and assessment of in-service primary school teachers enrolled in ODL programmes (Johnson & Christensen, 2019). Classroom observations were conducted during the preparation week to document actual teaching and assessment practices. The triangulation of questionnaires, interviews, and observations offered a comprehensive understanding of the professional development strategies employed at ODL centres.

Analysis and Presentation

Questionnaire data were analysed using descriptive statistics in SPSS version 27, including frequencies, percentages, means, and standard deviations. The results are summarised in tables to present the participants' perceptions of teaching and assessment alignment. Qualitative data were analysed thematically, focusing on respondents' detailed explanations rather than fragmenting data into codes and themes. This approach preserved the authentic voices of the respondents and provided rich context to complement quantitative trends (Creswell, 2012). The findings were integrated in line with the convergent parallel design, and the quantitative and qualitative results were merged during interpretation. Statistical patterns showed the extent of coherence or misalignment between teaching and assessment, while narrative data explained the underlying reasons and provided contextualization for deeper insight into the subject of the study.

A pilot study was conducted in two adult education centres that shared key characteristics with the centres selected for the main study. These centres were subsequently excluded from the main study to prevent bias. The questionnaire demonstrated high internal consistency, with a Cronbach's alpha coefficient of 0.87, indicating that the instruments were valid for data collection (Cohen et al., 2018).

Table 1: Reliability Statistics

Cronbach's Alpha	No of items
0.87	19

A Cronbach's alpha of 0.87 indicated good reliability. The 19 items in the questionnaire consistently measure the same underlying construct related to the coherence of teaching and assessment practices of ODL programmes for in-service teachers' competence development (Creswell & Plano Clark, 2018). The reliability of the instruments was further indicated by the clarity of the questions and the consistent response patterns observed during the pilot phase, suggesting that participants interpreted the items as intended (DeVellis, 2016; Taherdoost, 2016).

The researchers strictly adhered to established ethical research principles by obtaining clearance from relevant institutional authorities (Bryman, 2016). The participants' rights and dignity were protected throughout the study. Informed consent was obtained from all participants, with a clear explanation of the study's purpose, procedures, and their right to participate voluntarily (Cohen et al., 2018). Participants were explicitly informed of their freedom to withdraw from the study at any stage without facing any consequences, thereby promoting autonomy and trust in the study. To ensure confidentiality, all data were securely stored and accessible only to the research team members. Any direct quotations used in the reporting were anonymised using pseudonyms to preserve participant anonymity (Creswell & Poth, 2018). Furthermore, researchers took deliberate steps to ensure that no harm would come to the participants as a result of their involvement in the study, by the principles of beneficence and non-maleficence (Johnson & Christensen, 2019).

The Study Findings

This study aimed to investigate the coherence between teaching and assessment practices in ODL programmes for in-service primary school teachers and their role in developing competence among in-service primary school teachers throughout their course of study. It focuses on examining the instructors' understanding of competence-based teaching and assessment of in-service primary school teachers developing their profession through the ODL programme. The study findings are summarised in Table 1.

Table 1: ODL Instructors' Innovative Pedagogical Competence in Teaching and Assessment

Statement	SA n (%)	A n (%)	N n (%)	D n (%)	SD n (%)	Mean Score	Standard deviation
I have a thorough understanding of competence-based teaching principles and their application to adult learners	18(36.7)	15(30.6)	6(12.2	6(12.2)	4(8.2	3.76	1.27
I understand how to align competence-based curricula with the specific needs and goals of adult learners	16(32.7)	17(34.7)	7(14.3	5(10.2)	4(8.2	3.73	1.22
I can effectively design competence-based preparation that engages adult learners	17(34.7)	16(32.7)	6(12.2	6(12.2)	4(8.2	3.73	1.26
I am skilled at using assessment tools to evaluate adult learners' competencies accurately	15(30.6)	18(36.7)	7(14.3	5(10.2)	4(8.2	3.71	1.21
I facilitate interactive and practical learning activities tailored to adult learners' needs	4(8.2)	5(10.2)	7(14.3	17(34.7	16(32.7	2.29	1.22
I am adapting teaching methods to address diverse learning styles among adult learners	5(10.2)	4(8.2)	6(12.2	18(36.7	16(32.7	2.29	1.24
I consistently receive feedback from adult learners on my competence-based teaching approaches	4(8.2)	5(10.2)	7(14.3	16(32.7	17(34.7)	2.27	1.23

I can adjust my teaching methods to meet the unique needs of different adult learners	5(10.2)	4(8.2)	6(12.2	17(34.7	17(34.7	2.24	1.24
I actively communicate with adult learners beyond classroom hours and examination periods for learning support	4(8.2)	5(10.2)	7(14.3	16(32.7	17(34.7	2.27	1.23

Key: N = 49, (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree).

The results, summarised in Table 1, reveal a clear contrast in ODL instructors' competence, showing a strong theoretical understanding of innovative pedagogies for competence development but weak practical application during the teaching and assessment process. Instructors demonstrated high competence in foundational knowledge and curriculum design, with mean scores above the neutral point (M = 3.00) for understanding competence-based teaching principles (M = 3.76, SD = 1.27), aligning curricula with learner needs and goals (M = 3.73, SD = 1.22), designing competence-based lesson preparation (M = 3.73, SD = 1.26), and using assessment tools to evaluate competencies (M = 3.71, SD = 1.21). These results indicate that professional development programmes effectively provide theoretical and design-related skills.

However, instructors showed low competence in adaptive and interactive practices essential for learner engagement, as reflected by mean scores below the neutral point for facilitating practical learning activities (M = 2.29, SD = 1.22), adapting methods to diverse learning styles (M = 2.29, SD = 1.24), incorporating learner feedback (M = 2.27, SD = 1.23), adjusting teaching to meet unique learner needs (M = 2.24, SD = 1.24), and maintaining communication beyond classroom hours (M = 2.27, SD = 1.23). This indicates that training may not adequately prepare instructors to apply theoretical knowledge in dynamic learner-centred environments.

Overall, the findings reveal a gap between theory and practice: instructors are proficient in foundational knowledge but lack the practical skills necessary for the effective implementation of competence-based teaching and assessment. This misalignment suggests that current instructor competence is partial and may compromise the quality of the ODL experience for in-service teachers.

Qualitative data from the interviews reinforced the quantitative findings regarding the instructors' understanding of innovative pedagogies for in-service teachers' competence development. Instructors consistently reported limited time for effective learner interaction, especially during exam preparation weeks, where sessions are confined from two to three hours during the exam preparation week. One instructor explained, *"Many of us lack recent pedagogical training for adult learners, particularly primary school teachers upgrading their qualifications, as the emphasis is on encouraging them to study beyond the certificate level."* This highlights how time constraints, insufficient professional development and focus of training hinder the application of innovative pedagogies.

Student leaders echoed this concern, noting that some instructors prioritised completing modules over ensuring comprehension. As one student leader remarked, *"During exam preparation weeks, all instructors teach, but some rush to finish the module, leaving students memorising instead of fully understanding."*

Residential tutors from the two regions further indicated that the ODL programme prioritises completion over competence, although not in direct statements, but technically conceptualised. One tutor stated, *"Not all instructors are institute employees; some are secondary school teachers only available during holidays, so we rush to finish modules to ensure students can take exams."* Another added, *"*

We ensure teachers interpret the subject module accurately so nothing is missed for the exam. Since they are busy at their workplaces and only available during holidays, we focus on covering the entire module rather than using all teaching methods

These insights reveal that while instructors possess theoretical knowledge of competence-based education, practical application is constrained by inadequate training, dual-role responsibilities, and limited instructional time. The diversity of instructor competencies suggests that those with higher qualifications and experience in ODL are better able to adopt innovative methods, particularly when they are comfortable with technology.

These findings are consistent with Kafyulilo and Moses (2012), who found that although teachers understood competence-based principles, they lacked the practical skills necessary for effective competence-based teaching. Therefore, this study recommends enhanced professional development, including rigorous training in competence-based teaching and continuous monitoring to ensure effective skill application in ODL contexts.

Adult Learners' Perceptions of ODL Teaching and Assessments Coherence with Competence Development.

Additionally, the study examined the perceptions of in-service primary school teachers studying through ODL on the ODL teaching and assessment practices. The findings are summarised in Table 2, which presents the perceptions of in-service primary school teachers regarding the effectiveness, relevance, and flexibility of teaching and assessment practices in ODL programmes. The findings on the items were summarised in terms of percentages and frequencies, and means and standard deviations were presented for effective interpretation.

Table 2: In-service primary school teachers' perceptions of ODL teaching and assessments

Statement	SD n (%)	D n (%)	N n (%)	A n (%)	SA n (%)	Mean	Standard Deviation
The ODL programme's teaching materials are clear and relevant to my professional development	43 (30.07%	51 (35.66%	29 (20.28%	14 (9.79%)	6 (4.20%	2.22	1.10
The teaching methods used in the ODL programme effectively support me in gaining the required teaching competencies	46 (32.17%	49 (34.27%	29 (20.28%	14 (9.79%)	5 (3.50%	2.18	1.10
The ODL programme's teaching strategies are flexible and accommodate my learning needs as an in-service teacher	40 (27.97%)	54 (37.76%)	29 (20.28%	14 (9.79%	6 (4.20%	2.24	1.09
The assessments in the ODL programme accurately measure my teaching competencies	49 (34.27%)	51 (35.66%)	23 (16.08%	14 (9.79%)	6 (4.20%	2.14	1.11
The feedback provided through ODL assessments helps me identify areas for improving my teaching competencies	46 (32.17%)	54 (37.76%)	23 (16.08%	14 (9.79%	6 (4.20%	2.16	1.10
The ODL programme's assessments are aligned with the practical demands of teaching in a primary school setting	51 (35.66%)	49 (34.27%)	23 (16.08	14 (9.79%)	6 (4.20%)	2.13	1.11
The ODL programme encourages collaboration with peers to enhance my competency development	43 (30.07%)	51 (35.66%)	26 (18.18%	17 (11.89%	6 (4.20%)	2.24	1.11

The teaching and assessment practices in the ODL programme are relevant to the challenges I face in my classroom	49 (34.27%)	51 (35.66%)	23 (16.08%)	14 (9.79%)	6 (4.20%)	2.14	1.11
The ODL programme has improved my overall confidence in implementing competency-based teaching strategies	29 (20.28%)	43 (30.07%)	43 (30.07%)	23 (16.08%)	5 (3.50%)	2.52	1.11
The ODL programme provides an opportunity to consult with instructors for support anytime I encounter learning difficulties	23 (16.08%)	34 (23.78%)	51 (35.66%)	29 (20.28%)	6 (4.20%)	2.73	1.09

Keya: - 5-Point Likert Scale: Strongly Disagree (SD=1), Disagree (D=2), Neutral (N=3), Agree (A=4), Strongly Agree (SA=5)

The findings related to Sub-Objective 2 of the study, which aimed to examine in-service teachers' perceptions of the teaching and assessment practices used in ODL programmes for their competence development, revealed a high level of dissatisfaction among participants. As presented in Table 2, the mean scores for eight of the ten items fall sharply within a negative range (2.13–2.24), far below the neutral midpoint of 3.00. Teachers perceived that teaching materials (M = 2.22) and methods (M = 2.18) were inadequate for their professional development. Similarly, they believed that assessments failed to measure competencies reliably (M = 2.14), provide meaningful feedback (M = 2.16), or align with practical classroom demands (M = 2.13). The programme was also perceived as lacking flexibility (M = 2.24) and relevance to real-world challenges (M = 2.14).

Two areas were rated as slightly moderate, although they were still problematic. Instructor consultation (M = 2.73) was the least criticised aspect, yet it still reflected inconsistent access. Perceptions of confidence-building (M = 2.52) approached neutrality but remained low, with half of the respondents still expressing disagreement, indicating an uneven programme impact. The moderate standard deviations (~1.10) suggest that while dissatisfaction was widespread, its intensity varied, potentially reflecting contextual or implementation differences across learning centres, rather than a universal programme failure.

Overall, in-service teachers' perceptions are explicitly negative, pointing to a fundamental misalignment between the ODL programme's teaching and assessment practices and their professional learning needs. This collective perception of irrelevance and ineffectiveness highlights a significant gap in achieving the

programme's intended goal of developing practical teaching competence in pre-service teachers.

During in-depth interviews, class representatives revealed that *"ODL learning depends largely on student commitment, with instructor meetings taking place mainly during test and exam preparation weeks."* Adult learners also reported a lack of technological platforms to facilitate continuous engagement with course materials and instructors. One adult learner stated, *"We lack an online study system; we mainly self-study from provided materials and meet only during school breaks."* This suggests that beyond the printed course modules, no e-learning system is in place to complement ODL teaching and assessment practices beyond the normal contact hours.

Another learner's leader added that learning activities are primarily exam-oriented because of limited opportunities for interactive teaching and learning at the ODL centre. She reported that, *"Our teaching mainly focuses on exam preparation, with face-to-face meetings held during preparation weeks; at other times, meeting facilitators depend entirely on the student's initiative."*

Regarding the programme's impact on pedagogical skills, one respondent commented, *"I can say that I gained more theoretical knowledge than practical teaching skills. I think the pedagogical skills I use in teaching are those from my Certificate teacher training.*

These qualitative findings indicate that in-service teachers have varied perceptions of the teaching and assessment strategies used in ODL programmes. While some value professional growth opportunities, many expressed concerns about limited preparation time, minimal instructor interaction outside examination periods, and the absence of blended learning approaches. These findings align with Maijo's (2021) study, which observed that learners often focus primarily on passing examinations and advancing their careers after they enrol.

In light of these insights, this study recommends that ODL programmes place equal emphasis on certification and competence development to ensure that teachers not only achieve career progression but also enhance their professional practice. Strengthening the balance between content coverage and skill acquisition will support teacher effectiveness and improve the overall quality of education.

Learning and Assessment Challenges Encountered in ODL Centres

This study sought to explore the common learning and assessment challenges that instructors and adult learners encounter in ODL programmes. In-depth interviews were conducted with regional resident tutors from selected adult education centres and adult learner leaders from each programme, who were found to provide insights

on learning and assessment in the ODL programme, either towards their competence development or the completion of their studies. The analysed information revealed five themes that emerged at the saturation point, as follows:

Qualitative insights from the in-service primary school teachers reflect that they joined the ODL programme because there are insufficient alternative colleges in their areas. However, the conflict between their employers and families forces them to study through ODL. As one adult learner reported, "*The only institution I can join without employer permission is the adult college, where I study at home and attend sessions during holidays for exam preparation. Another teacher noted that adult education is the only option, as they cannot leave their family*"

Adult learners join the ODL programme because obtaining full-time study leave from their employers in working school is difficult, especially given the shortage of primary school teachers in many schools in the country. Meanwhile, they face pressure to upgrade their qualifications from the certificate level to the minimum diploma level. As one in-service primary school teacher explained: *"There are few teachers, so if some leave for further studies, students miss lessons. Therefore, obtaining permission for full-time study leave is difficult. With scarce chances for full-time leave, I prefer ODL to study while continuing my work."*

Most in-service teachers joined the ODL programme because it offered a practical path to completing their studies while securing certificates that guarantee recognition for promotions and salary increments. One In-service teacher affirmed: *"I am confident ODL will help me complete my studies on time since it is not complicated, it also allows me to study during holidays while managing my other issues, and the certificate granted is recognised for promotion."*

In some other adult learner centres, in-service teachers organise some classes with instructors outside the formal routines so that they cover some modules before the preparation week as noted by one in-service teachers that *"At our centre, we contribute to support secondary school teachers to teach us twice a week at ward headquarters schools, where we also discuss among ourselves with close guidance from the teacher."*

The ODL programme does not allow students to choose their specialisation subject, which leads in-service teachers to focus on art subjects and abandon science subjects, rendering the development of science competence ineffective. Most of the courses offered are for arts subjects and community development. A reported in-service teacher stated, "*This programme allows teachers to develop while working, but subjects like mathematics and science are unavailable. I must choose geography, history, or languages, meaning I may no longer teach mathematics and science except through experience*."

In-service teachers reported having limited contact with instructors, but they would rather organise social network platforms for peer sharing of knowledge, as they reported that *"We do not have regular contact with the teachers; perhaps we have WhatsApp groups for the class where, if you have a question, you ask there and your fellow students respond. If that does not work, then the leaders communicate with the teachers to find a solution."* Other learners also reported difficulties in getting assistance in their learning due to limited interaction with their instructors. "*Studying is a real struggle. We only have the modules, so we look for people to guide us, but we don't get direct contact with teachers except for a short time during exam preparation week.*"

Instructors reported that in-service teachers' learning difficulties were due to their having studied a long time ago, so it takes time for them to cope with the learning differences. One instructor from the centre reported that *"Many of our teachers studied long ago, so guiding them takes time. With only two sessions a week and long modules, participatory methods are difficult to use. Teachers also delay studying until the preparation week, then rush through the material, which is why they often perform poorly in tests."*

Other challenges reported by regional residential instructors are that the majority of in-service teachers have a limited timetable for their work and social responsibilities, and they prefer to balance their work, family, and studies. As reported, *In-service teachers struggle to learn due to work and social commitments, so during preparation week, they prefer clear, exam-focused explanations rather than peer-style teaching".*

The other learners encountered being denied permissions by their work supervisors, as they reported that *"Some teachers are only allowed to attend study sessions during exam weeks, so efforts are made to get education officers to persuade head teachers to grant them time off for preparation week."*

The findings indicate that while Tanzania's Open and Distance Learning (ODL) programmes offer an important alternative for in-service teachers to pursue professional development while at their working centres, significant structural and pedagogical challenges hinder their effectiveness in promoting competence-based learning. The conflict between work, family, and study commitments, limited learners-instructor contact, and narrow teaching subjects specialisation, particularly in science subjects, disrupts the balance between academic progress and developing essential professional skills. The absence of technological integration and dependence on self-study or peer networks highlight gaps in institutional support and in-service teachers' engagement. Additionally, an emphasis on exam preparation and limited participatory time suggests the programme prioritises credentialing over competency development. As a result, these findings emphasise the need to re-evaluate ODL design to increase flexibility in subject matter specialisation, improve instructor-student interaction, and

technological incorporation of learning processes such as LMS tools, upon ensuring that in-service teachers gain certification and practical skills aligned with Tanzania's education reform goals.

Conclusion

To enhance the competence development of in-service teachers pursuing ODL programmes, institutions responsible for delivering ODL programmes should strengthen support mechanisms for both learning and assessment. This aligns with the study by Alenezi et al. (2022), which highlights the difficulties experienced by adult learners in open distance learning, particularly in-service teachers, including developing flexible, subject-inclusive curricula that accommodate science and mathematics instructors, allowing in-service teachers to pursue these subjects because science and mathematics teachers will improve both the subject matter and pedagogical knowledge and skills in their working centres. Enhanced communication platforms between instructors and in-service teachers are essential to ensure regular and accessible interaction, thereby providing *e-learning support* immediately after face-to-face contact using different learning management systems (LMSs). Moreover, introducing guided academic support during non-examination periods through digital tools, weekend classes, or peer-led seminars may help bridge the gap caused by limited contact hours and workload constraints faced by many in-service teachers in the study. Furthermore, collaboration between educational authorities and employers is vital to creating a supportive environment for teachers pursuing further education through ODL. Raising awareness and guidance among school heads about the importance of continuous teacher development, alongside clear policies that support release time for academic preparation, reduce workload for those registered for the ODL programme, and offer incentives where possible to motivate study costs. By recognising the unique circumstances of adult learners and adopting flexible, inclusive, and responsive programme designs, schools can ensure that ODL effectively empowers teachers and improves educational outcomes in underserved areas.

Recommendation

From the findings across all objectives, this study provides key recommendations to strengthen the alignment between teaching and assessment in Open and Distance Learning (ODL) for improved educational quality. Since the study revealed limited instructor understanding of innovative pedagogies suitable for competence-based teaching, it recommends that institutions should offer rigorous training on innovative and learner-centred pedagogies to enable tutors to effectively implement competence-based teaching.

Regarding in-service teachers' perceptions of the alignment between ODL teaching and assessment, the study emphasises the need to achieve a balanced focus between certification and competence development, both on pedagogy and subject matter, ensuring that lecturers meet the goals of the 2023 education review. Strengthening the balance between content coverage and skill acquisition will enhance teacher effectiveness and improve long-term educational quality.

To further promote competence development among in-service teachers in ODL programmes, institutions should strengthen learning and assessment support mechanisms by incorporating flexible subject options, including science, mathematics, and arts, to ensure inclusivity for all teachers who wish to conduct professional development through the ODL approach. Establishing effective communication and *e-learning* platforms to facilitate blended learning is essential for sustaining engagement beyond face-to-face sessions. Collaboration between educational authorities and employers is also vital to ensure supportive strategies that may provide relief to in-service teachers' studies through reducing workload, and provide motivation or incentives for teachers pursuing studies at their own expense. Moreover, adult learning institutions should recognise the diverse needs of in-service learners and adopt flexible, inclusive, and responsive programme structures to enhance competence development.

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Vocational Education Training Skills and Graduates' Employability in Selected Institutions in Tanzania

Casmir Akaro, Dar es Salaam University College of Education and Haruni Machumu & Perpetua Kalimasi, Mzumbe University

Email: casmirakaro@gmail.com

Abstract

The study explores the link between Vocational Education Training (VET) skills and VET graduates' employability in the selected VET institutions in Tanzania through examining the factors that influence VET graduates' employability, determining the perceptions of VET graduates and employers on skill suitability for employment, and exploring challenges facing VET graduates' employability in some selected VET institutions in Morogoro Region. The study employed a quantitative approach with a descriptive research design, involving 95 respondents: 75 VET graduates, 10 VET instructors, and 10 VET employers, selected through simple random sampling. Data were collected through Questionnaires and analysed using descriptive statistics. Findings revealed that various factors influenced VET graduates' employability. Further, skills relating to the labour market demand influenced the VET graduates' employment. We found that limited employment opportunities were a leading challenge. The study concludes that VET influences graduates' employability, though there is a gap between policy and practice.

Keywords: vocational education, VET, graduate employability, VET skills

Introduction

In an era defined by rapid technological change and global economic competition, the ability to acquire practical skills has become critical for individuals and national development. Technical Vocational Education (TVE) equips individuals with competencies that foster self-reliance, entrepreneurship, and workplace effectiveness—advantages often lacking in general education graduates (Nkunya &Mwila, 2024). Globally, vocational education serves as the primary pathway for developing job-ready skills, bridging the gap between education and labour market demands (Ariansyah et al., 2024). Vocational Education and Training (VET) prepares learners for trades, crafts, and professional careers across sectors, including engineering, nursing, accountancy, architecture, law, and other technical fields (Makame & Fulgence, 2024). In Tanzania, VET institutions, both public and private, offer certificate and diploma programmes ranging from soft skills to technical trades and creative industries, targeting individuals seeking to enhance existing competencies or acquire new skills for career advancement (URT, 2008; UNESCO, 2013).

Lack of skills is arguably one of the most important determinants of high levels of unemployment and poverty. In response, policymakers often initiate vocational training programmes in effort to enhance skill formation among the youth (Chakravarty et al., 2020). The conceptualisation of employability skills is diverse, with some participants relating them to entrepreneurship skills and others to technical skills (Makame & Fulgence, 2024). VET is widely recognised as a critical tool for reducing unemployment, poverty, and dependency while enhancing global competitiveness (Koobonye, 2020). With 1.3 billion young people aged 15–24 worldwide, their transition into the labour market profoundly influences both personal livelihoods and socio-economic development (ILO, 2020). Employability is the combination of skills, competencies, and adaptability necessary to secure, maintain, and transition between jobs (Sumanasiri et al., 2015) remains a pressing challenge. Globally, millions of youths remain unemployed or disengaged from both education and work, underscoring the urgent need for effective skills development and labour market alignment (ILO, 2020).

In Tanzania, the Vocational Education and Training Authority (VETA), established under Parliament Act No. 1 of 1994, coordinates, regulates, and promotes VET while aligning skills supply with labour market demand. VETA oversees more than 860 training centres offering over 90 long courses and numerous short programmes to prepare youth for diverse economic sectors (VETA, 2006). Yet, only 72% of graduates from 2010–2015 secured employment, highlighting persistent gaps between training and labour market integration (VETA, 2019).

While studies have examined VET's role in youth employment and poverty reduction globally and in Tanzania (Waziri et al., 2024), limited evidence exists on the direct relationship between VET-acquired skills and graduate employability in Tanzania. Another study exposed that VET graduates in Morogoro Municipality have inadequate competence required in the labour market due to insufficient training facilities to deliver competency-based training (Matundu & Lameck, 2023). This study addresses this gap, investigating how vocational education training shapes graduates' employability, providing critical insights to enhance VET effectiveness, inform policy, and strengthen youth transitions from education to meaningful employment.

Methodology

This study adopted a quantitative approach with a descriptive design to examine the relationship between vocational education and training (VET) skills and graduate employability. Research was conducted in five institutions purposively selected in Morogoro Region: (1) Mikumi Regional Vocational Training and Service Centre, (2) Kihonda Regional Vocational Training and Service Centre, (3) Ujenzi VET College,

(4) Dakawa Vocational Training College, and (5) Morogoro Vocational Instructors Training College chosen for their high concentration of VET graduates and the absence of follow-up tracer studies since the 2019 VETA report, which ranked Morogoro among Tanzania's top five regions for graduate unemployment. A sample of 95 participants, comprising graduates, instructors, and employers, was determined using Slovin's formula, guided by the study's objectives, budgetary considerations, and time constraints. Probability sampling, specifically simple random sampling, was employed to enhance representativeness and minimise bias. Data were collected through structured questionnaires containing both open- and closed-ended items, enabling a balance between capturing nuanced insights and ensuring analytical comparability. Descriptive statistics, computed via the Statistical Package for the Social Sciences (SPSS) version 26, summarised the dataset, while a binary regression model was applied to identify determinants of employability, thereby elucidating the direction and magnitude of relationships between variables and providing evidence-based insights into the VET employment nexus.

Results

Influence VET skills on VET graduates' employability

The study aimed at determining the influence of VET skills on graduates' employability. The study looked at whether sex, marketability of the courses, employer capital, VET graduates' education level, marital status, and job experience are significant in VET graduates' skills in getting employment. The logistic regression analysis was performed to check the relationship between two or more variables. Table 1 presents the results of logistic regression analysis of the influencing VET skills on VET graduates' employment. The predictors in the regression included sex, marketability of the courses, employer capital, VET graduates' education level, marital status, and job experience. Regression analysis helps to predict the value of one variable from the knowledge of the other, and it interprets what exists physically, describing the cause-and-effect relationship.

Table 1: Binary Influencing VET Skills on Graduates' Employment (n = 75)

Variable	B	SE	Sig.	Exp(β)
Sex	5.307	1.065	0.117	1.669
Marketability of courses	7.498	0.887	0.023	2.015
Employer capital	10.228	0.891	0.009	2.325
Vocational education level	11.228	0.899	0.007	2.418
Marital status	3.679	0.913	0.154	1.302

Significant level* = $P < 0.05$

The results from Table 1 showed that three of the predictors included in the analysis (marketability of the courses, employer capital and vocational education level) were statistically significant ($P < 0.05$), respectively, whereas two predictors (sex and marital status) were not statistically significant ($P > 0.05$). Moreover, two of the predictors (job experience and training duration) had a perfect influence on VET skills towards VET graduates' employment.

Perceptions of VET graduates on employment suitability

The perceptions of VET graduates toward VET skills suitability for employment were sought using the Likert scale. Their responses are presented in Table 2.

Table 2: Perceptions of VET Graduates on Employment Suitability

		Agree		Neutral		Disagree	
SN	**Category**	**F**	**%**	**F**	**%**	**F**	**%**
1	Education level helps graduates in getting employment	73	97.3			2	2.7
2	Age does not hinder graduates from getting employment	60	80			15	20
3	The English language is a problem on venturing employment	59	78.7			16	21.3
4	Formal skills are considered in graduates' employment	74	98.7			1	1.3
5	Multi-skilled did not lead to graduates' employment	7	9.3			68	90.7
6	Job experience is very important on graduates' employment	74	98.7			1	1.3
7	Family status do not play role in graduates' employment	21	28			54	72
8	Informal skills do not lead to graduates' employment	4	5.3			71	94.7
9	Sex preference do not consider on graduates' employment	71	94.7			4	5.3
10	Type of skills earned by graduates matters on employment	75	100			-	00

The list of these variables and their values is represented in Table 4.8. The index, ranging from 10 to 50, was constructed as the measure of perceptions on VET skills suitability for the graduates' employment. The instrument consisted of 10 statements with the following maximum values: 10 X 5 = 50 as most favourable responses, 10 X 3 = 30 as neutral perceptions and 1 X 10 =10 as mostly unfavourable perceptions. The scores fall between 10 and 50, scores above 30 of index mean show positive perception, scores below 30 of index mean show negative perception, and a score of

exactly 30 of index mean shows neutral perception. The scale had a mean of 30, the minimum was 10, and the maximum was 50. The score on the index was further categorised into 10-29 score 1 as a negative, 30 score 2 as Neutral and 31-50 score 3 as positive perceptions. Data in Table 3 reveal that 69.07% of the respondents had positive perceptions towards VET skills suitability for employment, whereas 30.93% of the respondents had negative perceptions towards skills suitability for VET graduates' employment. VET graduates were confident with the skills they acquired from their studies, and they wanted to utilise them in their context for employment.

Table 3: Index Scores of VET Graduates' Perceptions of Skill Employability

SN	Category	1 F (%)	2 F (%)	3 F (%)
1	Education level helps graduates in getting employment	73(97.3)	-	2 (2.7)
2	Age does not hinder graduates from getting employment	60(80)	-	15(200
3	The English language is a problem in venturing into employment	59 (78.7)	-	16 (21.3)
4	Formal skills are considered in graduates' employment	74 (98.7)	-	1(1.3)
5	Multi-skilled did not lead to graduates' employment	7 (9.3)	-	68(90.7)
6	Job experience is very important for graduates' employment	74 (98.7)	-	1(1.3)
7	Family status does not play a role in graduates' employment	21 (28)	-	54(72)
8	Informal skills do not lead to graduates' employment	4 (5.3)	-	71(94.7)
9	Sex preference is not considered in graduates' employment	71 (94.7)	-	4(5.3)
10	The type of skills earned by a graduate matter in employment	75 (100)	-	-(00)
	Total	51.8 (69.07)	-	23.2(30.93)

Employers' perceptions of VET skill employability

Information on perceptions of employers towards skills suitability for VET graduates' employment was measured using the Likert scale approach where the scores on positive and negative statements were obtained and compared. Respondents were requested to state their agreement and disagreement with each statement. Later responses were categorised into three groups (agree, neutral and disagree) whereby each statement had percentage scores, as indicated in Table 4.

Table 4: Employers' Perceptions of VET Graduates' Employability

SN	Statement	Agree		Neutral		Disagree	
		F	%	F	%	F	%
1	Education helps graduates to get employment	10	100				
2	Employers cannot play a role in increasing graduates' employment	1	10			9	90
3	Employers cannot employ graduates according to experience	4	40	1	10	5	50
4	Employers hire graduates with vocational skills	9	90			1	10
5	Employers' capital led to graduates' unemployment	7	70	2	20	1	10
6	A lower school leaving age cannot increase the chances of graduates finding a job	4	40			6	60
7	Employers do not employ more female graduates than male graduates	5	50	2	20	3	30
8	Many employers prefer to employ adults rather than young people	4	40	2	20	4	40
9	Different training programmes contribute to graduates' employment	7	70			3	30
10	Vocational training provided by VETA does not relate to employers' demands.	1	10			9	90

The index score on perceptions of employers toward skills suitability for VET graduates' employment was constructed to facilitate comparison of employers' perceptions towards skill suitability for VET graduate employment. The results of the study revealed that half of the employers had positive perceptions towards skill suitability for the graduates' employment. Seven percent were undecided, while 41% of the respondents had a negative perception of VET skills suitability for employment.

Table 5: Index Score of Employers' Perceptions of VET Skill Employability

SN	Statement	1		2		3	
		F	%	F	%	F	%
1	Education helps graduates to get employment	10	100				
2	Employers cannot play a role in increasing graduates' employment	1	10			9	90
3	Employers cannot employ graduates according to experience	4	40	1	10	5	50
4	Employers hire graduates with vocational skills	9	90			1	10
5	Employers' capital led to graduates' unemployment	7	70	2	20	1	10
6	A lower school leaving age cannot increase the chances of graduates finding the job	4	40			6	60
7	Employers do not employ more female graduates than male graduates	5	50	2	20	3	30
8	Many employers prefer to employ adults than young people	4	40	2	20	4	40
9	Different training programmes contribute to graduates' employment	7	70			3	30
10	Vocational training provided by VETA does not relate to employers' demands.	1	10			9	90
	Total (%)		**52**		**7**		**41**

Challenges facing VET graduates in getting employment

The responses on challenges facing VET graduates' employability are presented in Table 6.

Table 6: Challenges facing VET Graduates' Employability

S/N	Challenges (Variables)	F (%)
	Graduates (responses)	
1	Limited employment opportunities	37(49.3)
2	Corruption	24(32)
3	Lack of experience	16(21.3)
4	Lack of qualification	13(17.3)
5	Lack of trust	10(13.3)
6	Lack of connections	13(17.3)
7	Lack of feedback from interview	6(8)
	Instructors (responses)	
1	Lack of experience	8(80)
2	Limited employment opportunities	9(90)
3	Lack of qualifications	6(60)
4	Lack of capital	7(70)
5	Lack of connection	5(50)

Findings indicated that challenges varied from one graduate to another because of differences in courses studied. The study revealed that 37 (49.3%) mentioned limited employment opportunities, and that demand was high, 24 (32%) mentioned corruption and bureaucracies, 16 (21.3%) mentioned limited experience, 13 (17.3%) said lack of qualification, 10 (13.3%) said lack of trust, 13 (17.3%) said there was lack of connection and 6 (8%) said there was lack of feedback from the interview and applications they made. The findings from the instructors showed that 9 (90 %) talked about limited employment opportunities, 8 (80%) talked about lack of experience, 7 (70%) talked about lack of capital for self-employment, 6 (60%) talked about lack of qualification, and 5 (50%) talked about lack of connections.

Discussion

The influence of VET skills on graduates' employability

The two predictors (job experience and training duration) had a perfect influence on VET skills competencies towards VET graduates' employment. These results implied that the two predictors had influenced the VET skills of VET graduates in getting employment. However, Employer capital, Vocational education level, marketability of the courses, job experience and training duration influence VET graduates in employment, though in some contexts they may face obstacles. Moreover, the predictors (job experience and training duration) were studied to examine their influences on VET graduates' skills in getting employment. In relation to job experience, the study sought to know whether experience had an influence on graduate employability. Additionally, the training duration was tested to see whether it had an influence on VETA graduate employability. All these predictors have a perfect influence on the employment of VETA graduates. This implies that most of the institutions and organisations consider more job experience in employing VETA graduates, and those with experience have more chances of being employed compared to those without experience. Also, those who invest more time in obtaining education have high chances of getting employment because the time used allows them to be multi-skilled and have a higher VET skills level, and thus, more chances for employment from the skills.

Perceptions of VET graduates and employers towards skill suitability

The study explored perceptions of VET graduates and employers regarding the employability of skills in the Morogoro region, using a ten-item Likert scale condensed into three response categories and analysed through a perception index. The findings indicate that confidence in the skills acquired by VET graduates is steadily increasing,

with most employers acknowledging that both education level and specific competencies influence hiring decisions, although limited firm size and capital often restrict the number of graduates they can employ. These results are consistent with Waziri (2024), who reported a significant relationship between entrepreneurship knowledge and the employability of graduates. Nonetheless, some employers reported a mismatch between graduate skills and labour market demands, echoing observations by the ILO 2020 via the Association of Tanzania Employers (ATE), which emphasised that while technical skills constitute only 15% of employer requirements, the majority 85% comprise soft skills such as commitment, English proficiency, motivation, and confidence. Collectively, these findings underscore the importance of balancing technical training with the cultivation of transferable employability skills to enhance the alignment of VET graduate competencies with labour market expectations.

Challenges facing VET graduates in searching for employment

The study identified multiple challenges constraining VET graduates' employability, including limited job opportunities, corruption, lack of experience, insufficient qualifications, weak professional networks, and inadequate interview feedback, with instructors additionally noting capital constraints. The labour market's limited capacity relative to the growing number of graduates exacerbates these challenges, reflecting findings by the New South Wales Business Chamber (2016) and Ariansyah et al. (2024), which highlight that youth unemployment is driven by scarce entry-level positions and bureaucratic barriers that disadvantage resource-limited candidates. Employers often require one to two years of prior experience, creating a significant obstacle for new graduates, a pattern reported by Ogondiek (2024), who also emphasised misalignment between graduates' skills and labour market demands. Furthermore, many employers mandate at least Level III VET qualifications, yet graduates frequently face financial, administrative, or academic barriers to achieving this level, reinforcing the skill mismatch noted by Mgaya (2022). These limitations are compounded by inadequate foundational training, unqualified instructors, and suboptimal learning environments, which contribute to deficiencies in employability, core skills, adaptability, and subject knowledge, as documented by Mwita (2018). Collectively, these findings underscore the need for VET programmes to address both technical and transferable skills to align graduate competencies with labour market expectations.

Conclusion and Recommendation

The study concludes that VET plays a critical role in enhancing graduates' employability and contributing to social and economic development; however, it faces

significant challenges. Low societal recognition, gaps between policy and practice, and financial constraints limit the effectiveness of VET programmes. To strengthen VET, strategic measures should be implemented, drawing on successful international models. Providing practical training and internship opportunities will allow graduates to apply skills and gain experience, enhancing employability. Additionally, active engagement with industry stakeholders in curriculum development can ensure that programmes address current labour market needs while anticipating future trends. By fostering collaboration between educational institutions and employers, VET programmes can become more dynamic, responsive, and aligned with market demands, ultimately improving graduate outcomes and supporting broader societal development.

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Students' Perception of the Integration of Entrepreneurship Knowledge and Skills in the Vocational Education and Training Curriculum

Linda Macha & Anathe R. Kimaro, Institute of Adult Education

Email: lindamacha57@gmail.com & anathe.kimaro@iae.ac.tz

Abstract

The interest in entrepreneurship education (EE) among Vocational Education and Training (VET) students has surged due to ongoing unemployment challenges. As a direct response, VET institutions must prioritise the integration of entrepreneurship exposure within their curricula. This study decisively examined learners' perceptions of incorporating entrepreneurship knowledge and skills into VET courses, focusing on the content delivered, instructors' practices, and the key skills required by trainees. Utilising a mixed methods approach with a robust sample of 164 participants, data were systematically collected through questionnaires, interviews, and document analysis. Quantitative data were analysed using SPSS, while qualitative data underwent thematic analysis. The findings unequivocally revealed that entrepreneurial knowledge and skills were not integrated into the VET curriculum but treated as a distinct subject. However, some instructors effectively introduced entrepreneurial concepts through innovative teaching methods. Learners recognised essential skills they needed to acquire, including business management, creativity, and communication. It is imperative that VET institutions allocate adequate time for enterprise attachments and that the government actively supports professional development for entrepreneurship instructors.

Keywords: Entrepreneurship, entrepreneurship knowledge and skills, self-employment

Introduction

Two of the most essential prerequisites for success in starting a new business are the desire and the ability to do so. Entrepreneurial attitudes are not only necessary in a traditional entrepreneurial career, but they are also highly sought after in independent employment relationships ("intrapreneurship"). Furthermore, several changes in the labour market—such as the decline in long-term employment with a single employer, the rise in fixed-term contracts, the growing importance of the service sector, increased flexibility in employment law, and the desire for greater freedom in working arrangements—indicate that careers based on secure, long-lasting employment are becoming increasingly rare, while businesses show a rising interest in highly committed entrepreneurial thinkers. In light of these diverse changes in the labour market,

entrepreneurship is now commonly regarded as a "life skill" at the relevant expert conferences. Some even view entrepreneurship as the fundamental discipline within the fields of business and economics for the twenty-first century (Winarno, 2016; Silveyra, 2020). The vast majority of economically active firms operate within the small business sector, although obtaining high-quality education and training remains essential for success in the market (Wishnu et al., 2020).

As the phase of life which people spend in school makes (or can make) a significant contribution to their awareness of plans and aspirations, the education system is a key area where it is possible to intervene and present entrepreneurship as a viable alternative to dependent employment. This also aligns with various government initiatives, such as the National Entrepreneurship Training Framework (URT, 2013a), and the National Multisector Strategic Framework for Economic Empowerment, which is attached to the Prime Minister's Office (URT, 2013b). Through these strategies, the government works with key organisations such as the Tanzania Commission for Universities and the Ministries of Education, Science and Technology, and Vocational Education (URT, 2013a, 2013b). One of the expected outcomes of this collaboration is the establishment by vocational training institutions of entrepreneurship courses and the encouragement of students to study them.

Tanzania, like many other Sub-Saharan African countries, has vocational education and training (VET) institutions that often serve students from disadvantaged backgrounds. This makes entrepreneurial education (EE) a vital pathway for breaking the cycle of poverty (Nkirina, 2010). It is important to note that EE is distinct from traditional vocational skills training. While the latter focuses on developing the practical and technical skills needed for specific trades (Jardim, 2021), EE emphasises the development of entrepreneurial competencies (EC), which include the attitudes, knowledge, and skills necessary for success in entrepreneurship (Jiang & Cao, 2021). Research has shown that exposing students to EE can enhance their EC, leading to better outcomes in their entrepreneurship careers (Kalimasi, 2016). According to UNESCO-UNIVOC (2022), VET institutions are expected to emphasise the teaching of EC to prepare modern employees and innovative future entrepreneurs for post-pandemic recovery and sustainable societies.

As said elsewhere, the government has made efforts to improve the VET curriculum to equip graduates with skills needed in the industry (URT, 2003; URT, 2014). Initiatives have promoted integration of entrepreneurship knowledge and skills at all education levels to foster job creators rather than job seekers (Kalimasi, 2018; Kalimasi & Herman, 2016), aligning with the Sustainable Development Goals of 2030 and Tanzania Development Vision 2025 (Todd & Mamdani, 2017). In Tanzania,

entrepreneurship courses were introduced in VET centres in the mid-1990s (Chaudhary, 2017). This is done partly in the course of conventional instruction and in the curriculum, but also in the form of new educational focuses and projects. Examples of such activities include entrepreneurship days, student projects, company simulations and a variety of institutional experiments (Macha, 2024).

Given the long existence of VET, one would expect programmes to adapt to the changing labour market, characterised by high unemployment and low industrial growth (Ndyali, 2016). Graduates should possess technical skills to become self-employed and produce quality goods (VETA, 2014). However, entrepreneurship competence has not been clearly defined in VET institutions (Nkirina, 2010), leading to a blend of vocational training and entrepreneurial skills (Nkirina, 2010). There are calls for a structured approach to enhance students' business creation skills (Elin McCallum, 2019). Additionally, employers in Tanzania continue to express concerns about the gap between VET graduates' skills and industry demands (NACTVET, 2022).

There is a critical need to explore students' perceptions of integrating entrepreneurship knowledge and skills into the VET curriculum. Specifically, it aimed to examine the aspects of entrepreneurial knowledge and skills incorporated into VET courses, to explore learners' perception of instructors' practices in exposing them to entrepreneurial concepts, and to investigate learners' perceptions of the entrepreneurial knowledge and skills required by VET trainees. While existing literature often focuses on the employment outcomes of VET graduates (Nkirina, 2010; Olomi & Sinyamule, 2009), it overlooks the entrepreneurial competencies provided to students. Our research, grounded in human capital theory, highlights the necessity of comprehensive exposure to entrepreneurial competencies in vocational training (Bhatnagar, 2020). By addressing the knowledge and skills aspects of entrepreneurial competency, this study fills a gap in EE literature and aims to provide valuable insights for VET administrators and policymakers regarding student exposure to entrepreneurial skills.

Methodology

The study used a mixed-method approach, combining qualitative and quantitative methods. The qualitative approach involved interviews with participants to construct an objective reality and understand their views on the Trainees' perception of the integration of entrepreneurship knowledge and skills in VET courses. This allowed the researcher to understand problems from the perspectives of informants and encouraged participants to share their views (Abbott & Bordens, 2018). The study

used a concurrent research design to gather qualitative and quantitative data on the Trainees' perception of the integration of entrepreneurship knowledge and skills in VET courses. The research design allowed for valid conclusions on entrepreneurial competences (knowledge and skills) in VET institutions and their courses, providing comprehensive data on the trainees' perception of the integration of entrepreneurship knowledge and skills in VET courses. Also, the study utilised various methods such as document analysis, classroom observation, questionnaires, and interviews to gather comprehensive and diverse data, ensuring effective triangulation of information.

The concurrent research design was chosen to allow an in-depth description and interpretation of the existing conditions. The study was conducted in the Morogoro region, located in eastern Tanzania. Morogoro region is selected purposively, and it is considered a hub because of education and training and the only region having Technical Teacher Education Training institutions that prepare VET instructors in Tanzania. The target population for this study was comprised of trainees, entrepreneurship instructors from VTCs and RVTSC in the Morogoro region, with a sample size of 164participants. In this study, both qualitative and quantitative data were collected in order to arrive at a comprehensive understanding of the research problem. The qualitative data were analysed manually using a thematic analysis technique to identify key themes and sub-themes. On the other hand, the quantitative data were analysed using descriptive statistics through SPSS IBM 25 version. Then, the results were presented in tables, percentages and line graphs. The researcher obtained a research clearance permit from the University of Dar es Salaam, obtained informed consent from respondents, and ensured confidentiality by using numbers instead of names and avoiding personal information disclosure. Participants were informed of their right to withdraw if they felt their rights were violated, and a debriefing was conducted at the end of the study to address any questions or concerns raised by the participants.

Research Findings and Discussion

This section presents the results of the study, beginning with the demographics of the respondents in Table 1, then moving into revealing aspects of entrepreneurial knowledge and skills integrated in VET courses, entrepreneurial competences attained by VET trainees and the availability of a conducive teaching and learning environment that supports the development of entrepreneurial competences among level two and three trainees in VET institutions.

Table 1: Demographic Details of Respondents

Demographic Information Gender	Frequency	Percent
Female	54	32.9
Male	110	67.1
Total	164	100.0
Age		
Below 20	31	18.9
21-25	121	73.8
26 and above	12	7.3
Total	164	100.0
Qualification		
NVA Level 2	117	71.3
NVA Level 3	47	28.7
Total	164	100.0
Location		
Kihonda VET	105	64.0
Dakawa VET	59	36.0
Total	164	100.0

Source: Field data analysis (2023)

The data in Table 1 reveal that among the participants, 67.1% were male and 32.9% were female. The majority fell within the 21-25 age group at 73.8%, with 18.9% under 20 years and only 7.3% over 25. Regarding qualifications, 71.3% of participants held NVA Level 2 certifications, while 28.7% had NVA Level 3, likely due to Dakawa VET offering only NVA Level 2 programmes. The gender disparity, with 67.1% males and 32.9% females, suggests that males are more prevalent in VET institutions, which may stem from societal perceptions regarding course selections. This demographic data highlights the importance of implementing inclusive strategies to enhance entrepreneurial capabilities within VET institutions, such as promoting group discussions, project work, and collaborations with local businesses.

Integration of Entrepreneurship Skills in VET trades

Entrepreneurship education is crucial for fostering entrepreneurial competencies in various educational settings, particularly in VET institutions. Document analysis of VET trades revealed that none of the 9 reviewed trades integrated aspects of EE (see Table 2.

Table 2: VET Institutional Courses that integrated EE

S/N	Trades	Level of integrating Entrepreneurship aspects		
		Full integrated	**Partially integrated**	**Not integrated**
1	Plumbing and pipe fitting			√
2	Electrical installation			√
3	Motor Vehicle Mechanics			√
4	Designing, sewing and cloth technology			√
5	Fitter Mechanics			√
6	Agro mechanics			√
7	Auto-electrical			√
8	Masonry and bricklaying			√
9	Carpentry and Joinery			√

Source: Field data, 2023

Data in Table 3 shows that EE was not integrated into all 9 VET trades. Responding to the questionnaire, whether aspects of EE were integrated in VET trades, all 156(100%) disagreed with the statement. This implies that EE was taught as a separate subject and was not blended into VET trades. This questionnaire and document analysis findings were also supported by interview findings. In all interviews with vocational education and training (VET) instructors and principals admitted that entrepreneurship education (EE) was taught as a separate subject and was not embedded in other trades. Thus, it seems there was limited implementation of EE across the VET curriculum. Different interpretations of entrepreneurship, either as a career in itself or as a set of skills to improve employability, may have led to variations in the integration of EE. This would be in accordance with the anticipated institutional challenges outlined in the National Entrepreneurship Training Framework in Tanzania (URT, 2013a), such as a lack of coordinated efforts among actors and facilitators and negative attitudes towards entrepreneurship development.

Learners' perception of instructors' practices to expose them to entrepreneurship skills

As the data Table 3 shows, the most applied practice was for instructors to discuss entrepreneurship related to hobbies with them, 138(84.1%); instructors discussed entrepreneurship related to the subject with learners 137(83.5), and facilitators used stories about entrepreneurs as teaching material 137(83.5).

Table 3: Learners' perception of instructors' practices to expose them to entrepreneurship skills (N=156)

Competency	Agree		Disagree	
	f	%	f	%
Instructors discuss entrepreneurship related to hobbies with us	138	84.1	26	15.9
Instructors discussed entrepreneurship related to the subject with us	137	83.5	27	16.5
Facilitators used stories about entrepreneurs as teaching material	137	83.5	27	16.5
Facilitators arranged a field trip to a business enterprise	135	82.3	29	17.7
The facilitators invite entrepreneurs to visit our classroom	128	78	36	22
Facilitators enable learners to create a practice enterprise or a business of their own	42	25.6	122	74.4
Facilitators introduce local businesses during their teaching	54	32.9	110	67.1
Facilitators invite an entrepreneur to present his/her work in the classroom	55	33.5	109	66.5

Further analysis shows that few learners agreed that instructors enabled learners to create a practice enterprise or a business of their own, nor introduced local businesses during their teaching. It is slightly surprising that in VET, which should be close to real working life and is supposed to use action-based learning practices (Abiola, 2017; Aladejebi, 2018; Abdieva et al., 2019; Almeida, 2019), facilitators mainly implement EE through classroom discussions. Further, it seems that entrepreneurs are invited to the Institution very rarely, and visits outside of the Institute are also used quite seldom compared to discussions in a classroom. However, studies have shown that EE is most effectively learned through active practices and in practical work (Baticados et al., 2014; Boldureanu, et al., 2020). Professional knowledge for an occupation, as needed in VET, requires learning knowledge, skills, and attitudes, which are best learned by combining different learning environments, including learning in companies and the workplace (Damilola, 2015; Brauckmann & Pashiardis, 2020). However, combining

various actors and learning environments is not always easy, and it takes time to break the conventional silos separating the school institution and entrepreneurs (Deveci, 2016).

Studies have shown that different discussions concerning entrepreneurship are easily organised, low-threshold practices (Greene et al., 2015; Hakizimana, 2020; Hardie et al., 2020b) and facilitators seem to quite often utilise them (Hassi, 2016; Jardim, 2021). Business idea as segments, entrepreneurship-related exercises and stories about entrepreneurs are suggested to be practical teaching materials (Rashid, 2019; Kalimasi & Herman, 2016; Kigwalu,2016; Kim-Soon *et al.,* 2020), whereas practice enterprise and mini company exercises provide students with a very concrete experience as an entrepreneur (Krishna, 2020).

Entrepreneurial Knowledge and Skills Needed by VET Trainees

As data in Table 4 shows, VET trainees need to be exposed to both business knowledge and soft skills.

Table 4: Entrepreneurial Knowledge and Skills Needed by VET Trainees

Skills	Not Used		Used				
	N	%	N	%	Mean	Std.	Ranking
Business management	65	39.70	99	60.30	1.60	.491	1
Marketing	71	43.30	93	56.70	1.57	.497	2
Creativity	76	46.30	88	53.70	1.54	.500	3
Writing business plans	106	64.60	58	35.40	1.35	.480	4
Motivation	102	68.30	52	31.7	1.32	.467	5
Financial	147	89.60	17	10.40	1.10	.306	11
Starting own business	149	84.80	25	15.20	1.15	.361	8
Customer service	139	84.80	25	15.20	1.15	.361	8
Problem solving	126	76.80	38	23.20	1.23	.423	7
Interpersonal	117	71.40	47	28.60	1.29	.454	6
Negotiation	143	87.20	21	12.80	1.13	.335	10
Mean					1.31		

The data showcased in Table 4 highlights the critical importance of business management skills for VET (Vocational Education and Training) trainees, with these skills ranked as the top entrepreneurial competencies. Close behind are marketing skills and creativity, underscoring the necessity for trainees to gain exposure to these essential areas. As noted by Munishi (2016), VET students engage with core subjects such as accounting, bookkeeping, marketing, and management, which form the

backbone of their vocational training. These subjects are also integral to building a robust entrepreneurial education framework (Nchu, 2016).

Research emphasises the value of effective business planning, which enhances decision-making and resource management while potentially facilitating capital investment (Landström et al., 2022; Honig & Samuelsson, 2021). Many universities are proactively preparing future business leaders by integrating entrepreneurship into their curricula (Sabokwigina & Olomi, 2010; Landström et al., 2022; Aadland et al., 2023). However, entrepreneurial courses must extend beyond the university setting. While VET institutions excel in practical training, there is a prime opportunity for them to broaden their focus to include comprehensive entrepreneurship education that provides students with valuable skills. Furthermore, when students receive effective entrepreneurship education, it positively influences their likelihood of pursuing entrepreneurial careers (Abdulkarim, 2012; Pilz & Regel, 2021).

In further analysis, the data in Table 4 reveal that VET trainees should be introduced to a diverse array of soft skills that include creativity, leadership training, problem-solving, communication, negotiation, and interpersonal skills. According to Wang and Rafiq (2015) and Honig and Karlsson (2010), social learning is a crucial aspect of preparing individuals for entrepreneurship. This learning occurs through close interactions with others, observation, and imitation of role models (Bandura, 1977; Sakib et al., 2022), which enhances self-efficacy through social influence. Social influence can even lead to contagion, defined by Schoenewolf (1990) as a process where one group or individual influences another's emotions and behaviours, consciously or unconsciously. Thus, providing students with exposure to soft skills is essential for their readiness for entrepreneurship.

Many researchers have investigated the significance of social influence and its role in shaping entrepreneurial readiness (Minna, 2018; Baluku et al., 2021). Additionally, the importance of social capital and its positive effects on entrepreneurial activities have been explored (Aladejebi, 2018). The consensus is clear: entrepreneurship is fundamentally a social phenomenon, and equipping students with skills for social interactions will greatly enhance their potential for successful entrepreneurial endeavours (Elin McCallum, 2019; Onjewu et al., 2021). Entrepreneurs need a diverse set of soft skills, which encompass communication, problem-solving, leadership, and interpersonal skills (Baluku, 2021). The existing literature indicates that social exposure within educational settings fosters a sense of belonging and support, highlighting the value that student contributions bring to their learning environments. By prioritising soft skills exposure, we can significantly enhance the preparedness of students for their entrepreneurial journeys.

Conclusions and Recommendations

This study sought to explore learners' perceptions of integrating entrepreneurship knowledge and skills into the VET curriculum. Specifically, it aimed to examine the aspects of entrepreneurial knowledge and skills incorporated into VET courses, to explore learners' perception of instructors' practices in exposing them to entrepreneurial concepts, and to investigate learners' perceptions of the entrepreneurial knowledge and skills required by VET trainees. The study revealed that, on the current level of EE integration in the curricula and the various strategies used to promote it in the VET institutions, trades indicate that there is little prospect of its effective incorporation into all trades. However, learners agreed that facilitators used versatile techniques of exposing them to entrepreneurial knowledge and skills, such as discussing entrepreneurship related to the subject with learners using stories about entrepreneurs as teaching material, arranging a field trip to a business enterprise and inviting entrepreneurs to visit our classroom. It was also found that students suggested both business knowledge and soft skills they need to learn to equip them with entrepreneurial knowledge and skills. The study concluded that there is a lack of synergy between national, VET-level and industry-level strategies and policies, and such synergy is crucial for appropriate knowledge transfer and effective entrepreneurship development.

In light of our findings, we recommend an approach to EE that goes beyond entrepreneurship subject taught in VET institutions and aims rather for a holistic integration through an enabling policy environment and the promotion of a clearer understanding inside and outside the VET institutions of a wide-ranging definition of entrepreneurship. Such an approach should be accompanied by an awareness creation that will encourage the integration of EE in all VET trades. It is especially important that those trades that are currently not embedded with entrepreneurship knowledge and skills, but which have an entrepreneurship orientation or relevance, should be formally recognised as imparting entrepreneurial skills. VET institutions should also encourage the crossing of boundaries between disciplines to increase the desirability and feasibility of EE in the curriculum, and should improve their links with employers in both the public and private sectors

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Attitudes of Government Technical College Graduates Towards Self-Employment in Dar es Salaam, Tanzania

Subiri Katete, Institute of Adult Education and Zamzam Nyandara & Janeth Kigobe, The Open University of Tanzania

Email: mwashiutwe@yahoo.com, masatuzamzam@yahoo.com & janie34tzed@yahoo.com

Abstract

The study investigated attitudes of government technical college graduates towards self-employment in Dar es salaam, Tanzania. The study used a mixed research approach and an explanatory sequential design. The study had a sample of 200 respondents namely technical graduates, deputy rectors academic and tutors from three selected technical institutions. Data collection was done through questionnaires and interviews, and data were analysed thematically (for qualitative data) and descriptive analysis (for quantitative data). The findings revealed that technical graduates (69%) generally have a positive perception for self-employment, most graduates were aware of specific courses, projects, or experiences aimed at enhancing their skills for self-employment and graduates get exposure to entrepreneurship-related training or workshops at the institution. Moreover, the study demonstrated that despite expressing confidence in pursuing self-employment, a notable portion also acknowledged the challenges (28%) involved, highlighting the need for continued support and resources. Based on the findings, the study recommends that technical institutions should establish continuing professional development programmes that allow graduates to continuously update their knowledge, skills and attitudes. Lastly, technical institutions should create dedicated support systems within technical educational institutions that deliver ongoing assistance to their graduates as they navigate self-employment challenges in their career.

Keywords: Self-employment, technical graduates, attitudes, experiences, technical institutions

Introduction

Unemployment among technical graduates remains a critical issue in developing countries, including Tanzania, particularly in urban centres like Dar es Salaam. Despite of the Government efforts in expansion of technical and vocational education, many technical graduates face challenges in securing official employment (Bazuhair, 2022). Shimba argues that, Tanzania being a developing country, has not been relieved from the challenge of shortage of jobs to many of her people, including technical graduates from universities and colleges. The number of graduates produced by institutions each year who enter in the job market in Tanzania is expected to be between 800,000 and 1,000,000, but the present labour market capacity can only take on roughly 200,000 of

them, this led to a high rate of graduates' unemployment (World Bank, 2015; Msuya, 2020). Subsequently, self-employment appears as a feasible alternative, offering opportunities for innovation and economic contribution.

The Tanzanian government has implemented various initiatives to promote self-employment amongst graduates, emphasizing the role of technical and vocational education in equipping graduates with entrepreneurial skills. This is evidence that Government has been motivating and inspiring university students to appreciate self-employment in their career options after graduation (Haule et al, 2023). Institutions such as the Vocational Education and Training Authority (VETA) have been instrumental in this endeavour. However, the transition from education to self-employment is influenced by multiple factors, including the quality of entrepreneurship education, access to resources, and societal perceptions of entrepreneurship.

There is strong evidence from researchers such as Badri and Hachicha (2019), Singh & Pravesh (2017), and Meyer and Surujlal (2018) who argue that there is an increasing gap between technical education and skills needed to meet the demands of job market. This has led many countries to cultivate an entrepreneurship culture (EC) in the learning institutions. Considering that an EC is an effective approach in coaching undergraduates with skills and positive attitudes needed not only by employers, who are for innovative, adaptive, resilient, and ambitious employees, but also makes graduates ready for self-employment (International Labour Organization, 2020).

Recent studies provide insights into these dynamics. Nzilano et al. (2022) investigated the influence of entrepreneurship education on business start-up intentions among technical graduates in Tanzania. Their findings indicate that perceived behavioural control was the strongest predictor of business start-up intentions, followed by attitudes toward business start-ups and societal subjective norms. Additionally, entrepreneurship education moderated the effects of attitudes and perceived behavioural control on business start-up intentions, suggesting that educational interventions can enhance graduates' confidence and readiness to engage in self-employment.

Another study by Mwakilema (2021) examined factors influencing self-employment among vocational and non-vocational graduates in Arusha and Dar es Salaam. The research identified age, business experience, entrepreneurship training, and access to capital as significant determinants of self-employment for both groups. For non-vocational graduates, additional factors such as marital status, ease of business start-up procedures, and availability of facilities also played a crucial role.

Furthermore, Raphael (2022) explored the relationship between digital skills and self-employment among graduates of technical higher education institutions in Tanzania. The study revealed that while graduates possessed basic digital skills, their competencies in intermediate and advanced digital skills were limited. All levels of digital skills were found to significantly influence self-employment, highlighting the need for comprehensive digital training in technical education curricula.

Despite various efforts to promote self-employment among technical graduates in Tanzania, the uptake remains low, especially in urban areas like Dar es Salaam. This discrepancy raises concerns about the effectiveness of current educational programmes and support systems in fostering entrepreneurial intentions and capabilities. Factors such as inadequate access to capital, insufficient practical entrepreneurial training, societal attitudes toward entrepreneurship, and limited digital competencies may hinder graduates from pursuing self-employment. Understanding these barriers is essential for developing targeted interventions that can enhance the self-employment prospects of technical graduates. This study seeks to investigate the attitudes of government technical college graduates towards self-employment, identifying both motivators and barriers.

Methodology

The study investigated attitudes of government technical college graduates towards self-employment in Dar es salaam, Tanzania. The study employed the mixed approach as a method of inquiry to get more insights from technical graduates' attitudes and perceptions on self-employment aspect. This study employed an explanatory sequential design. the explanatory sequential design enhanced the potential of mixed methods to address research questions more effectively than other approaches. Data were collected through questionnaire and interviews to get more on the study under investigation. Interview sessions took between thirty to fifty minutes and were recorded through digital voice recorder devices, and hand note-taking was used. Before recording, participants were asked for their consent. Data for the study were collected from Dar es Salaam city only because it has a significant number of technical institutions, allowing for the gathering of sufficient information from technical graduates related to the studies in question. This city was purposively selected because it anticipated getting enough technical graduates from technical institutions who participated in the study. A total of 15 lecturers/tutors and 3 Deputy director academics were interviewed to get qualitative data. The researcher created self-developed questionnaires for collecting quantitative data where a total of 182 Likert scale questionnaires were distributed to the respondents (technical graduates) to collect their opinions and beliefs.

The qualitative data were analysed using the thematic approach proposed by Braun and Clarke (2013), whereby appropriate themes were identified, described, and illustrated by the quotes of participants. Quantitative data were analysed using Microsoft Excel 2007 and Statistical Package for Social Sciences (SPSS) whereby tables, figures and graphs were generated. Before commencing data collection, a research permit was obtained from the respective authorities. After that, informed consent to conduct the study was also obtained from the respective sources. Confidentiality of the information gathered and anonymity of the respondents was ensured.

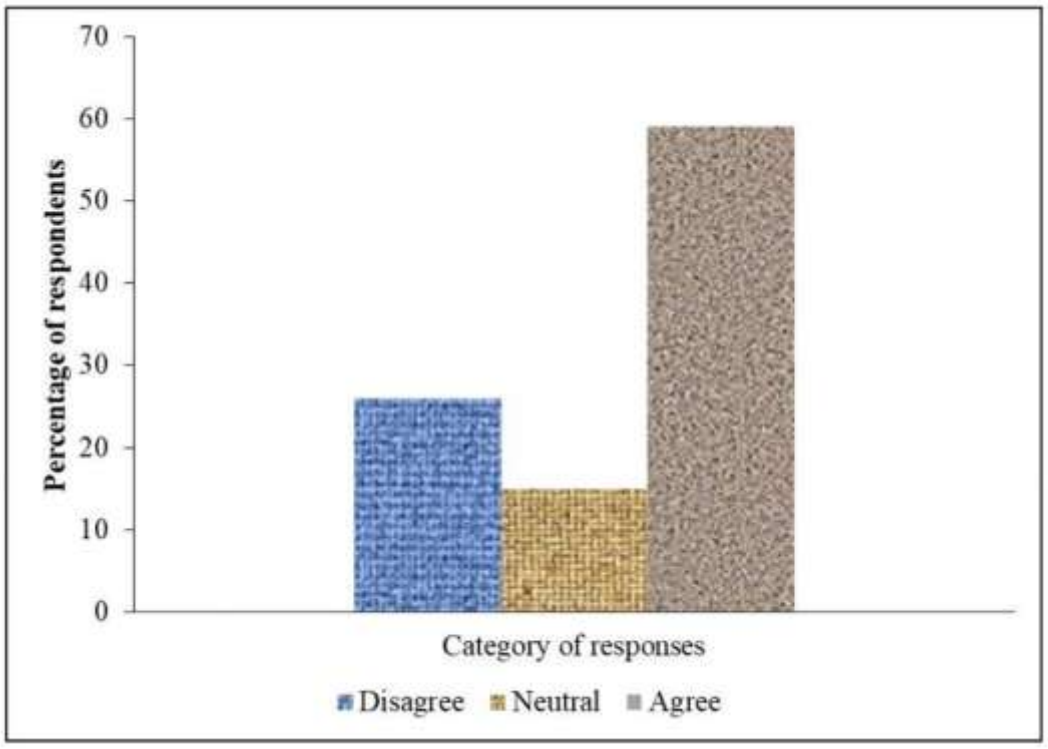
Results and Discussion

This study aimed to investigate attitudes of government technical college graduates towards self-employment in Dar es salaam, Tanzania. Data was collected through questionnaires and interviews. Data was collected from technical graduates, Deputy Rector-Academics and tutors. The emerging themes are presented, analysed and discussed in the following sections.

Graduates' perceptions of technical skills acquired as relevant and beneficial for potential self-employment

Most technical graduates (59.11%) agreed that the graduates' perceptions of technical skills acquired was relevant and beneficial for potential self-employment while 28.08% disagreed and 12.81% remained neutral as shown in Figure 1.1.

Figure 1.1: Graduates' Perception of Technical Skills Acquired as Relevant and Beneficial for Potential Self-Employment



The results show that most graduates' perceptions of technical skills acquired were as relevant and beneficial for potential self-employment. However, the number of graduates (28.08%) was a matter of discussion. The findings revealed that some graduates lacked confidence in their ability to successfully utilize their technical skills in self-employment settings. It was disclosed that some of the graduates felt that the training they received, while technically sound, did not adequately prepare them for the practical and unpredictable challenges of entrepreneurship. These findings are in tandem with one of the tutors who explained that:

> "The lack of hands-on experience in running a business, managing finances, or dealing with clients can greatly diminish a graduate's confidence in their ability to thrive in self-employment. While they may acquire technical skills during their education, applying these skills in a real-world business setting often demands additional knowledge and practical experience." (Interview with Tutor, Institution A).

The text emphasizes how crucial practical experience is in enhancing technical skills for successful self-employment. Graduates typically possessed strong technical knowledge, but they felt uncertain due to a lack of real-world business exposure. The findings align with Parker (2018), who discovered that achieving entrepreneurial

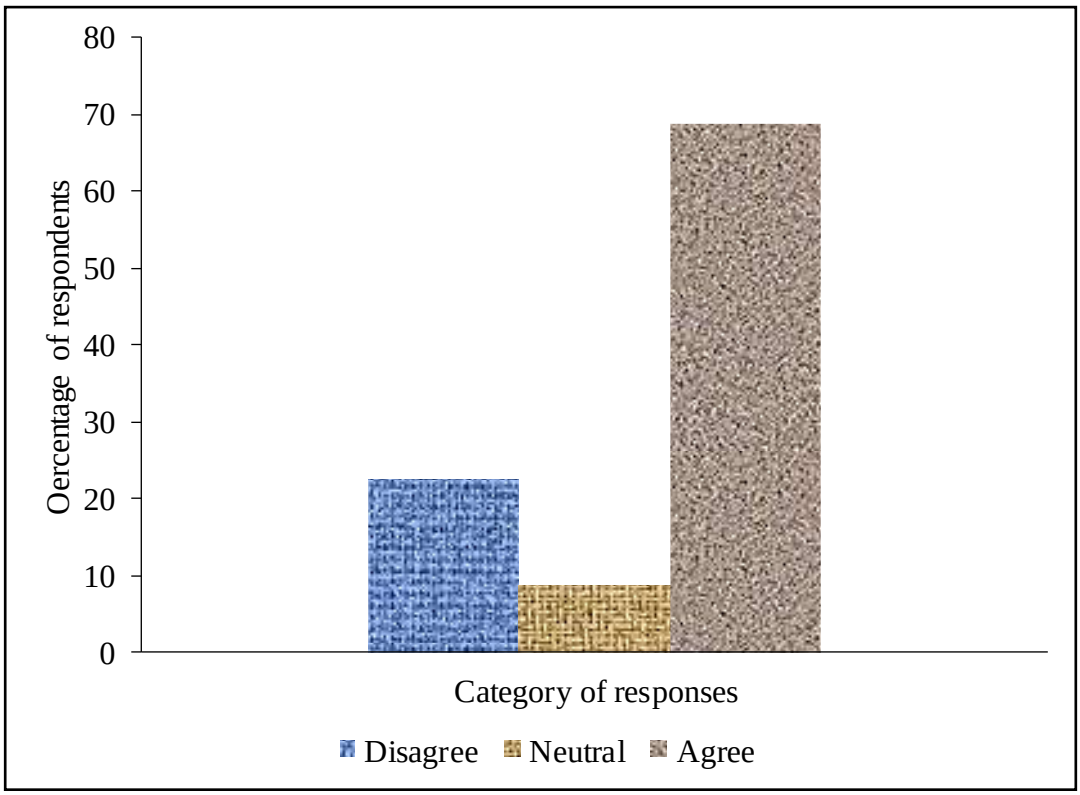
success relies not just on technical skills but also on practical business experience. He pointed out that graduates without hands-on experience in business management often felt unprepared and less confident when starting their ventures.

From the findings, it can be inferred that business success hinged not only on technical skills but significantly on practical business experience. Graduates lacking hands-on exposure often felt unprepared and less confident in starting their ventures.

Specific courses, projects, or experiences that particularly enhanced graduates' skills for self-employment

The majority of the technical graduates (68.7%) agreed on the presence of specific courses, projects, or experiences that particularly enhanced graduates' skills for self-employment while 22.3% disagreed and 9% remained neutral as shown in Figure 1.2.

Figure 1.2: Specific Courses, Projects, Or Experiences that Particularly Enhance Graduates' Skills for Self-Employment



The results above show that, most graduates knew the presence of specific courses, projects, or experiences that particularly enhance graduates' skills for self-employment.

The findings obtained through the in-depth interviews showed that when most graduates were aware of specific courses, projects, or experiences aimed at enhancing their skills for self-employment, several benefits emerged. Respondents indicated that graduates who recognized they had gained relevant technical and business skills through targeted courses or hands-on experiences felt more capable and confident in applying these skills in real-world self-employment situations. This sense of readiness alleviated the uncertainty that often comes with starting a business, as graduates became more familiar with the challenges they might encounter and how to tackle them. With a solid grounding in areas like business planning, financial management, and customer relations, graduates were less likely to fear failure, trusting in their ability to handle common obstacles. One of the participants was quoted as:

> "This confidence can significantly boost their entrepreneurial self-efficacy, which is their belief in their ability to successfully carry out the tasks needed to run a business." (Interview with Deputy Rector-Academic, Institution B).

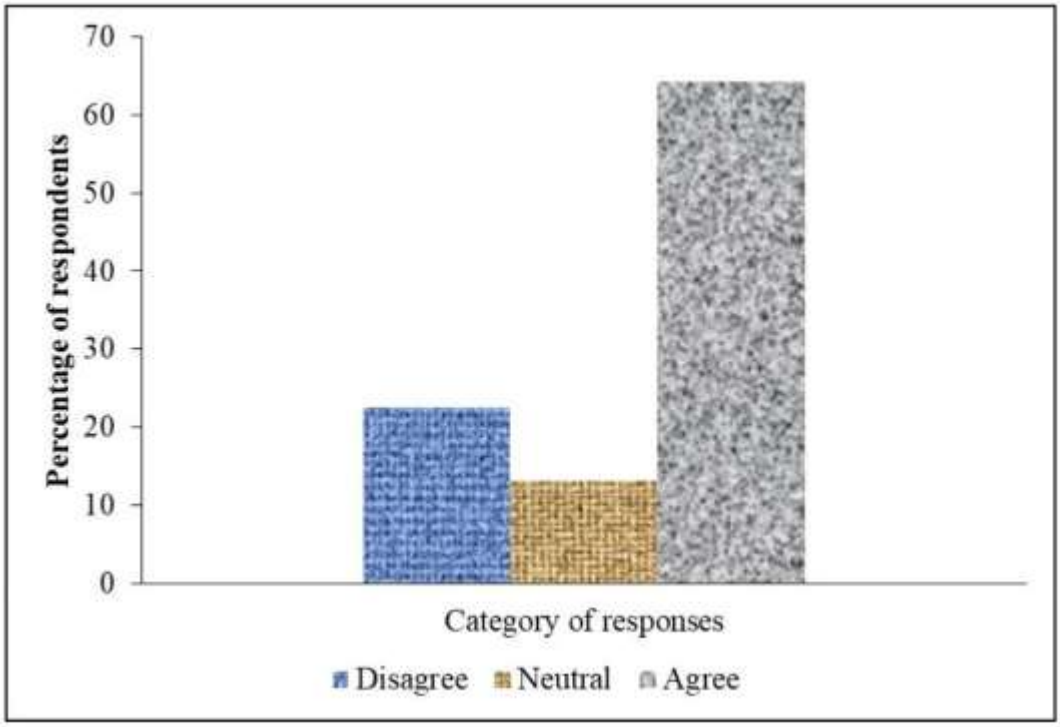
The excerpt highlights the importance of entrepreneurial self-efficacy, which refers to an individual's confidence in their ability to effectively carry out business-related tasks, in motivating them to pursue and achieve success in self-employment.

While most graduates recognised that certain courses, projects, or experiences could significantly boost their skills for self-employment, around 22.3% disagreed. This suggested that educational programmes often took a one-size-fits-all approach, failing to meet the varied needs of individuals pursuing different entrepreneurial paths. Newman et al. (2019) pointed out that entrepreneurial self-efficacy plays a crucial role in the success of entrepreneurs. Those with higher self-efficacy are more likely to persevere through obstacles and implement proactive strategies, which in turn promote sustained business growth and success.

Graduates exposed to entrepreneurship-related training or workshops at the institution

The majority of the technical graduates (64.28%) agreed on the presence of graduate exposure to entrepreneurship-related training or workshops at the institution, while 25% disagreed and 10.72% remained neutral as shown in Figure 1.3.

Figure 1.3: Graduates Exposure to Entrepreneurship-Related Training or Workshops at The Institution



The quantitative findings revealed that graduates get exposure to entrepreneurship-related training or workshops at the institution. The findings from qualitative data revealed that there were some limitations to students' exposure to entrepreneurship-related training or workshops at the institution 'A'. One of the respondents was captured as:

> "It is important to recognize that our institution often falls short in offering students adequate exposure to entrepreneurship training. Although we aim to provide them with essential knowledge, the chances for hands-on, practical experiences that would genuinely prepare them for self-employment after graduation are not as reliable as they ought to be" (Interview with Deputy Rector-Academic, Institution A).

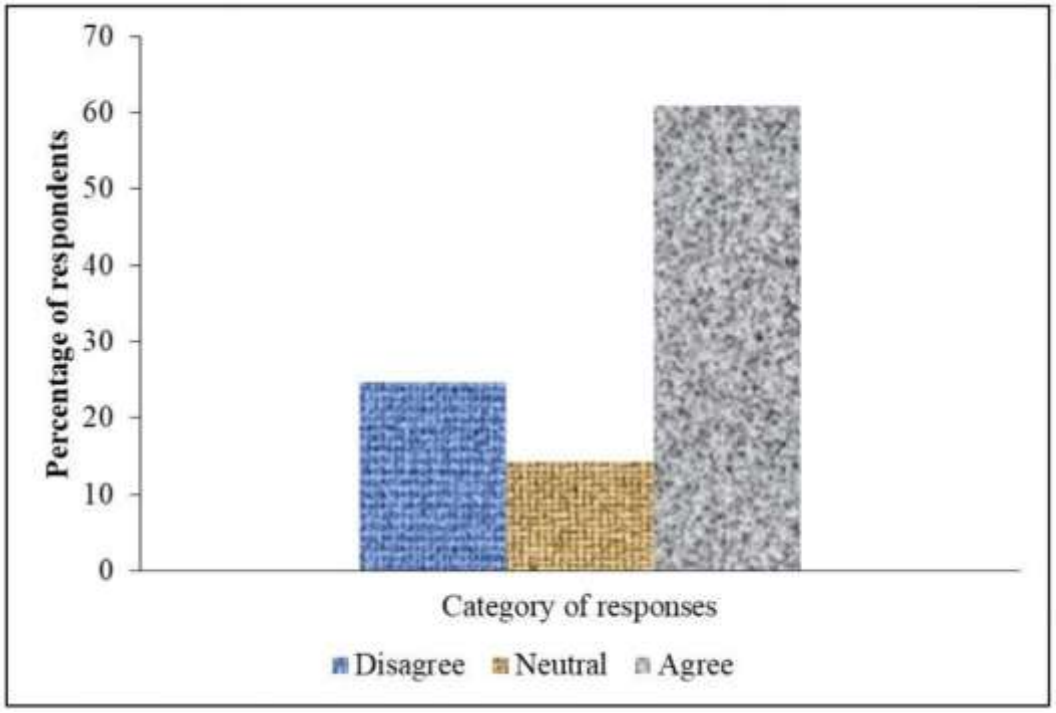
The text points out a gap in the entrepreneurship training provided by the institution. Although the institution strived to impart essential theoretical knowledge, it lacked in delivering consistent, practical, hands-on experiences that were vital for students to cultivate the skills needed for self-employment. This deficiency in exposure to real-world entrepreneurial activities and mentorship opportunities restricted students' readiness to tackle the challenges of self-employment after graduation. From the findings, it can be inferred that despite progresses in entrepreneurship education, many

institutions still lacked sufficient practical training opportunities for students. Liguori and Winkler (2020) concluded that many university entrepreneurship programmes fail to provide the experiential learning opportunities needed to develop practical entrepreneurial skills. It emphasized the importance of hands-on learning to bridge the gap between theory and practice.

Graduate's practical application of their technical knowledge and skills in creating innovative products, services, or solutions for self-employment.

The majority of the technical graduates (60.98%) agreed that graduates got a practical application of their technical knowledge and skills in creating innovative products, services, or solutions for self-employment while 28% disagreed and 11.02% remained neutral as shown in Figure 1.4.

Figure 1.4: Graduate's Practical Application of Their Technical Knowledge and Skills in Creating Innovative Products, Services, Or Solutions for Self-Employment



The findings revealed that graduates knew the practical application of their technical knowledge and skills in creating innovative products, services, or solutions for self-employment. It was reported that students were able to utilize the technical training they received during their studies to identify market opportunities and develop creative solutions that addressed specific needs or problems within their industries.

Contrarily, the findings revealed that some graduates failed to apply their technical knowledge and skills in creating innovative products, services, or solutions for self-employment due to fear of failure and risk aversion. It was reported that some graduates had the knowledge and skills but were hesitant to take the risks involved in starting a business. The fear of failure or the uncertainty of entrepreneurship prevented them from applying their skills innovatively as one of the respondents articulated:

> "Some graduates possess the necessary knowledge and technical skills, yet they hesitate to embark on entrepreneurial journeys because of the risks involved. Many fear the chance of failure, which makes them reluctant to use their expertise to develop innovative products or services. The unpredictability of entrepreneurship, including changing market conditions and the absence of guaranteed success, adds to their reluctance to take bold actions. Consequently, their fear of failure and the uncertain nature of self-employment create major obstacles, hindering them from fully leveraging their skills to start and expand new ventures" (Interview with Tutor, Institution C).

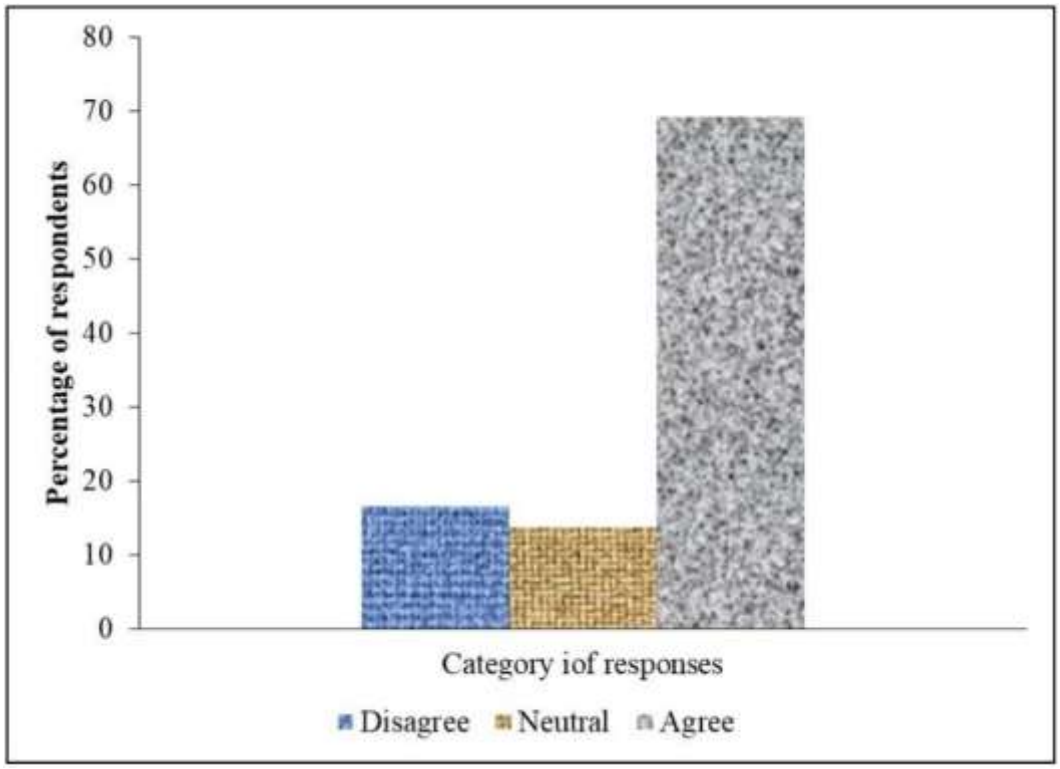
The text discusses how some graduates have the technical knowledge and skills necessary for entrepreneurship, yet they are often reluctant to pursue entrepreneurial activities because of the associated risks. Similarly, Piperopoulos and Dimov (2018) discovered that many graduates feel anxious about the uncertainties associated with entrepreneurship, especially in unstable economic climates.

From the findings, many graduates hesitated to pursue entrepreneurship due to a profound fear of failure and uncertainty in volatile economic conditions. Psychological barriers, particularly the apprehension surrounding business instability, led graduates to opt for more secure employment paths despite possessing strong technical skills. This fear significantly diminished their willingness to engage in entrepreneurial activities, ultimately limiting their opportunities for self-employment.

Graduates experienced sharing their technical education preparedness for freelance work or consulting opportunities as self-employed professionals

The findings of this study showed that the majority of the respondents (69.2%) agreed that technical graduates received experience sharing their technical education preparedness for freelance work or consulting opportunities as self-employed professionals while 20.8% disagreed and 10% remained neutral as shown in Figure 1.5. This revealed that graduates got experience sharing their technical education preparedness for freelance work or consulting opportunities as self-employed professionals.

Figure 1.5: Graduates Experience Sharing of Their Technical Education Preparedness for Freelance Work or Consulting Opportunities as Self-Employed Professionals



In contrast, the findings showed that many cultures placed a high value on traditional employment, which was often seen as a more stable and respectable career choice. This cultural viewpoint created considerable pressure on students to pursue conventional jobs with established companies instead of considering freelance or self-employment options. The societal expectation to obtain a steady income along with benefits like health insurance, retirement plans, and job security overshadowed the appeal of entrepreneurship or freelance work, which were frequently regarded as less stable and riskier, as one of the respondents noted.

> "Some students may adopt these cultural beliefs and feel reluctant to use their technical education for self-employment opportunities. They might be concerned about the stigma tied to freelancing, which is often viewed as an unstable or less respected career path compared to traditional salaried jobs. This fear can result in a diminished drive to seek out chances to showcase their skills and expertise in a freelance role" (Interview with Deputy Rector-Academic, Institution D).

The text emphasis is on the impact of cultural beliefs on how students view and choose their career paths. Many students internalized societal norms that favoured traditional jobs over self-employment, which created anxiety about freelancing. This anxiety often

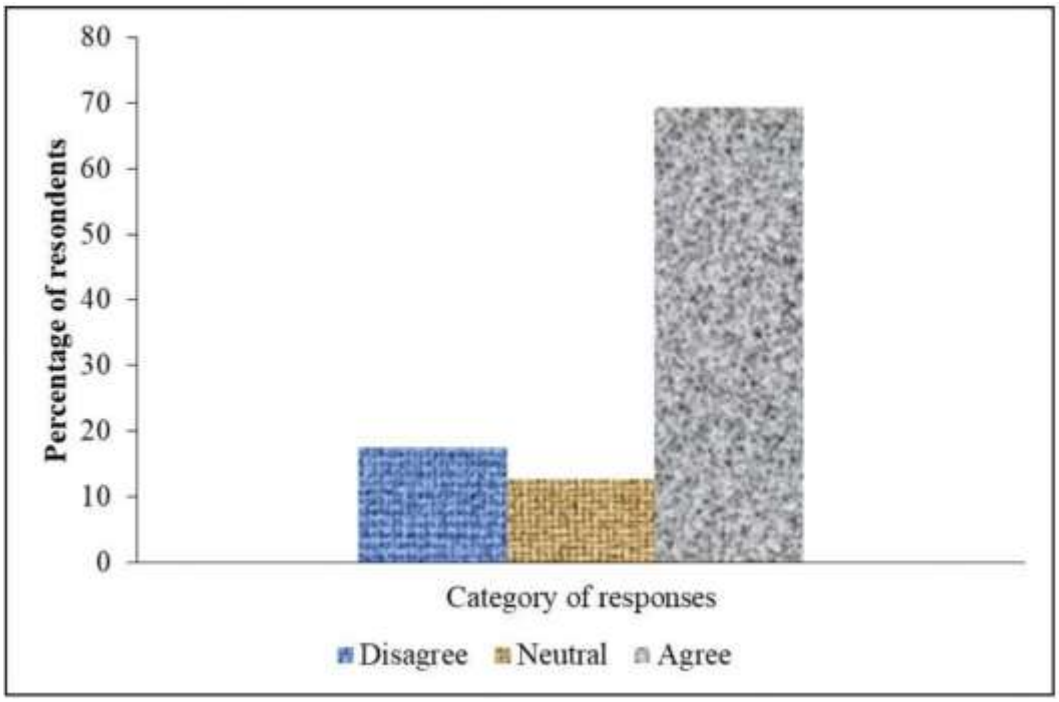
arose from the stigma that linked freelancing to instability and a perceived lack of prestige compared to regular jobs. As a result, students felt dissuaded from exploring entrepreneurial ventures, which limited their drive to utilise their technical education for self-employment. The pressure to meet societal expectations restricted their ability to explore and showcase their skills and knowledge in a freelance setting.

The findings suggested that cultural expectations and societal norms significantly influenced young people's views on entrepreneurship. Gangi and Timan (2020) emphasized that cultural stereotypes and societal norms regarding gender roles frequently dissuade individuals from seeking self-employment, resulting in a preference for traditional career paths. Therefore, it is crucial to tackle these cultural obstacles to cultivate a more entrepreneurial mindset among the youth.

Additional skills or knowledge beneficial for enhancing preparedness and competitiveness for self-employment among graduates

The findings of this study showed that the majority of the respondents (69.23%) agreed that technical graduates received additional skills or knowledge beneficial for enhancing preparedness and competitiveness for self-employment among graduates while 20.7% disagreed and 10.60% were neutral as shown in Figure 1.6.

Figure 1.6: Additional Skills or Knowledge Beneficial for Enhancing Preparedness and Competitiveness for Self-Employment Among Graduates



Majority of government technical graduates get additional skills or knowledge beneficial for enhancing preparedness and competitiveness for self-employment among graduates.

Conversely, qualitative data revealed that students during their courses undertakings they were acquainted with additional skills or knowledge which prepared them for self-employment as one of the participants was quoted:

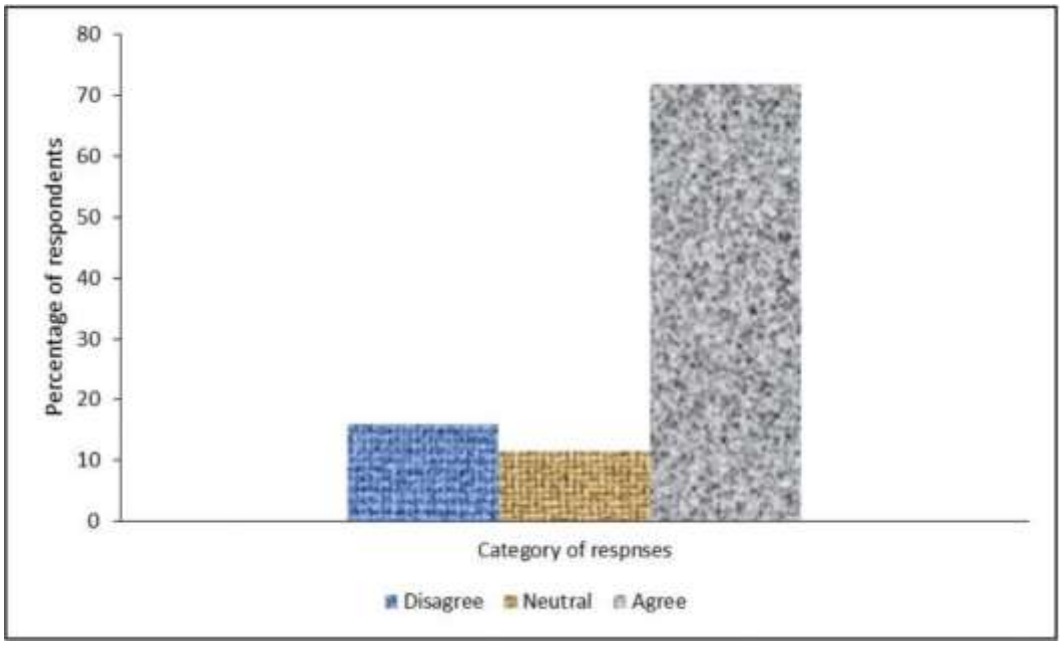
> "In today's business landscape, digital tools are essential for the success of any venture. A solid grasp of online marketing enables students to effectively promote their products or services through platforms such as social media, search engines, and email campaigns, allowing them to reach a wider audience compared to traditional marketing methods. Knowledge of e-commerce equips them to set up and manage online stores, process payments, and handle customer interactions efficiently, which is especially important as more consumers turn to online shopping." (Interview with Deputy Rector-Academic, Institution C).

The text above highlights the crucial importance of digital tools in today's business landscape, especially for students gearing up for self-employment. It pointed out that familiarity with online marketing, e-commerce, web development, and customer relationship management (CRM) systems enabled students to effectively promote their products or services, manage customer interactions, and maintain a robust online presence. From the findings, one can assume that the effective use of digital tools and skills in e-commerce significantly enhanced business growth and customer engagement. Chen and Lee (2023) argued that graduates skilled in digital tools, such as online marketing, CRM, and e-commerce, experienced higher rates of business survival and growth compared to those without these skills.

Graduates envisioned with other professionals or entrepreneurs to leverage technical skills and create impactful self-employment opportunities

The findings of this study showed that the majority of the respondents (71.97%) agreed that technical graduates envisioned collaborating with other professionals or entrepreneurs to leverage technical skills and create impactful self-employment opportunities while 19% disagreed and 10.1% remained neutral as shown in Figure 1.7. Results revealed that technical graduates envision collaborating with other professionals or entrepreneurs to leverage technical skills and create impactful self-employment opportunities.

Figure 1.7: Graduates Envision with Other Professionals or Entrepreneurs to Leverage Technical Skills and Create Impactful Self-Employment Opportunities



Qualitative data indicated that collaboration between technical graduates and other professionals or entrepreneurs provided numerous benefits that greatly improved self-employment prospects. It was noted that technical graduates typically possessed strong skills in areas such as engineering, IT, or design. Therefore, teaming up with professionals from different fields (like marketing, finance, or business management) enabled them to merge complementary abilities, resulting in the development of more comprehensive and competitive business solutions. Elia et al. (2019) further emphasized that teams that blend technical expertise with business management skills tend to create more marketable solutions.

Thus, partnerships between technical graduates and professionals in business management and marketing greatly increased the chances of successful innovations. These partnerships led to the creation of solutions that not only met technical requirements but also aligned with market needs, resulting in more competitive results. By utilizing their complementary skills, teams can tackle complex challenges effectively, as seen in initiatives like sustainable campus decarbonization.

Conclusion

Although government technical graduates have benefited from specific courses, experiences, and entrepreneurship workshops that supported their entrepreneurial mindset and practical abilities they perceived a lack of sufficient institutional support

in developing key attitudes for self-employment highlighting a gap that needs addressing. Increased guidance, mentorship, and organized programmes could enhance their readiness and success in self-employment activities. Strengthening institutional support would help bridge the gap between technical education and practical entrepreneurial outcomes for graduates.

Recommendations

Based on the study's findings, the following recommendations are made to multiple key stakeholders who have influence over policy, education, financing, and free enterprise:

i) Establish continuing professional development programmes that allow graduates to continuously update their knowledge, skills and attitudes. Workshops, online courses, mentorships and seminars on emerging trends and technologies should be made readily available to support lifelong learning.

ii) Create dedicated support systems within technical educational institutions that deliver ongoing assistance to their graduates as they navigate self-employment challenges. This can include advisory services, access to resources, and tailored support for entrepreneurial ventures.

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Rethinking Digital Competence in Higher Education: Are Academic Staff Members Prepared for the Digital Age?

Kija Steven Magembe, Institute of Adult Education

Email: stevenkmagembe2001@gmail.com or kija.magembe@iae.ac.tz

Abstract

This study examined the digital competence of academic staff in Tanzanian Higher Learning Institutions (HLIs), focusing on confidence in using digital tools for teaching and research, barriers to adoption, and the effects of gender, rank, and institution type on advanced skills. A mixed-methods descriptive survey involved 40 academics from four HLIs (two public and two private). Data from questionnaires and interviews were analysed using SPSS and thematic analysis. Findings showed 68% had moderate competence, 20% high, and 12% low; 72% performed basic tasks, while 38% had advanced skills. Male staff (Mean = 0.612, SD = 0.181) reported significantly higher confidence than female staff (Mean = 0.373, SD = 0.181), $t(38) = -4.18$, $p < .001$. ANOVA revealed significant rank differences ($p < .05$; $F = 3.15–4.55$), with junior staff performing better. Private institutions outperformed public ones. The study recommends improving infrastructure and providing targeted training for female and senior staff.

Keywords: Digital competence, digital age, academic staff, higher learning institution

Introduction

In today's digital era, society is experiencing rapid transformation driven by advances in information and communication technologies (ICT), which are reshaping education, work, and social interactions. Traditional literacies have become insufficient for effective participation in modern society, making digital competence an essential skill for learning, communication, problem-solving, and employability. The European Commission (2018) defines digital competence as the creative, critical, and responsible use of ICT for learning, work, and social engagement. It encompasses a range of abilities, including digital literacy, collaboration, creativity, and citizenship, enabling individuals to confidently and responsibly interact with digital technologies across diverse contexts.

In higher education, digital competence has become indispensable for academic staff who are expected to integrate digital tools into teaching, design online and blended learning, conduct technology-driven research, and perform administrative duties through digital platforms. Beyond technical know-how, digital competence involves pedagogical understanding, ethical awareness, and the ability to foster students' digital literacy (Janssen et al., 2013; Tejada & Pozos, 2018). Globally, it is increasingly

recognised as a key element of professional development and a cornerstone for preparing students to succeed in an increasingly digital labour market (Cabero et al., 2020). However, the level of digital competence among educators varies widely across contexts, influenced by access to infrastructure, institutional support, and individual motivation.

In Tanzania, ongoing efforts to integrate ICT in higher learning institutions reflect the country's commitment to digital transformation in education. Despite this progress, the extent to which academic staff possess and effectively apply digital competence remains uncertain. Many lecturers still face challenges such as limited confidence, inadequate training, unreliable internet connectivity, and insufficient institutional support. These challenges raise concerns about the readiness of Tanzanian higher learning institutions to fully harness the potential of digital technologies for quality teaching, research innovation, and effective student engagement. Understanding the current state of digital competence among academic staff is therefore critical for informing institutional strategies, policy frameworks, and professional development initiatives.

Theoretically, this study is grounded in the Technological Pedagogical Content Knowledge (TPACK) framework proposed by Mishra and Koehler (2006) and the UNESCO ICT Competency Framework for Teachers (UNESCO, 2018). The TPACK model emphasises the intersection of technological, pedagogical, and content knowledge, arguing that effective teaching with technology requires the balanced integration of all three. It provides a useful lens for evaluating how educators design, implement, and assess digital learning experiences. Complementing this, the UNESCO framework conceptualises digital competence as a developmental continuum encompassing three progressive stages: technological literacy, knowledge deepening, and knowledge creation (Falloon, 2020). Together, these frameworks offer a comprehensive theoretical foundation for analysing academic staff's digital competence in higher education, focusing on both skill acquisition and pedagogical application.

Empirical studies from different regions highlight that while academic staff increasingly engage with digital tools, gaps in competence persist. In Chile, Claro et al. (2018) found that teachers possessed basic ICT skills but lacked advanced competencies such as digital content creation and data privacy. Similarly, Mishra et al. (2020) reported that Indian university faculty adapted to online teaching during the COVID-19 pandemic but were constrained by inadequate infrastructure and resistance to change. In Europe, Redecker (2017) emphasised the growing adoption of the European Digital Competence Framework but observed persistent challenges

in integrating digital tools pedagogically. Across Sub-Saharan Africa, research indicates that instructors typically possess foundational ICT skills, such as using email and word processing, yet struggle with advanced digital tasks like e-assessment, multimedia design, and data visualisation due to limited infrastructure and training opportunities (Gudmundsdottir & Hatlevik, 2018; Mpungose, 2020; Wali et al., 2023).

Within Tanzania, studies have shown both progress and constraints in ICT adoption among academic staff. Mtebe and Raisamo (2014) reported that lecturers were motivated to use e-learning but hindered by insufficient training and weak policy support. Shayo and Tilya (2019) identified disparities in digital competence across gender, institutional type, and discipline, while Mgaiwa and Mhando (2022) highlighted infrastructural barriers such as poor internet access and the absence of ICT policies. Additional studies (Lubua, 2018; Sanga et al., 2020) noted heavy workloads and generational differences as contributing factors to slow digital adoption. Collectively, these findings suggest that while Tanzanian academic staff show willingness to adopt digital tools, their effective integration into teaching, research, and administration remains limited by systemic and contextual challenges.

Despite the growing body of research on ICT in higher education, empirical gaps persist in understanding the confidence, specific capabilities, and contextual barriers shaping digital competence among Tanzanian academic staff. Most existing studies have focused on infrastructure and technology adoption rather than on measuring levels of competence, exploring demographic variations, or identifying strategies for improvement. This study, therefore, seeks to fill these gaps by systematically assessing the digital competence of academic staff in Tanzanian higher learning institutions. Specifically, the study aims to examine their confidence in using digital tools, determine differences in competence based on gender, institution type, and academic rank, and identify challenges affecting their engagement with digital technologies.

Accordingly, the specific objectives of this study are:

i) To examine the level of confidence of academic staff in using digital tools;

ii) To analyse whether significant differences exist in digital competence across demographic and institutional factors (gender, type of institution, and academic rank); and

iii) To identify the key challenges faced by academic staff in adopting and utilising digital technologies in higher learning institutions, as well as strategies for improving digital competence.

Methodology

This study employed a mixed-methods cross-sectional design to assess the digital competence of academic staff in Tanzanian higher learning institutions. Four universities (two public and two private) were purposively selected to capture variations across ownership and management structures. The target population included academic staff engaged in teaching, curriculum development, and student support. A sample of 40 participants (10 from each institution) was drawn using proportionate and purposive sampling to ensure representativeness and relevance to digital teaching practices.

Data were collected through a structured questionnaire and semi-structured interviews. The questionnaire, adapted from the European Framework for the Digital Competence of Educators (DigCompEdu). Questionnaires were distributed via Google Forms in 2024. To complement survey data, interviews with 8–12 purposively selected participants explored experiences, challenges, and perceptions of digital tools. Instruments were validated through expert review and piloted with eight academic staff.

Quantitative data were analysed using SPSS, applying descriptive statistics (frequencies, means, standard deviations) and inferential statistics (t-tests and ANOVA) to examine differences by institution type, gender, and academic rank. Qualitative data from interviews and open-ended question items were thematically analysed using open coding (Strauss & Corbin, 1990). Participants were informed about the purpose of the study and their rights, and written informed consent was obtained. Confidentiality and anonymity were maintained throughout the research process.

Results and Discussion

Confidence in Using Digital Tools

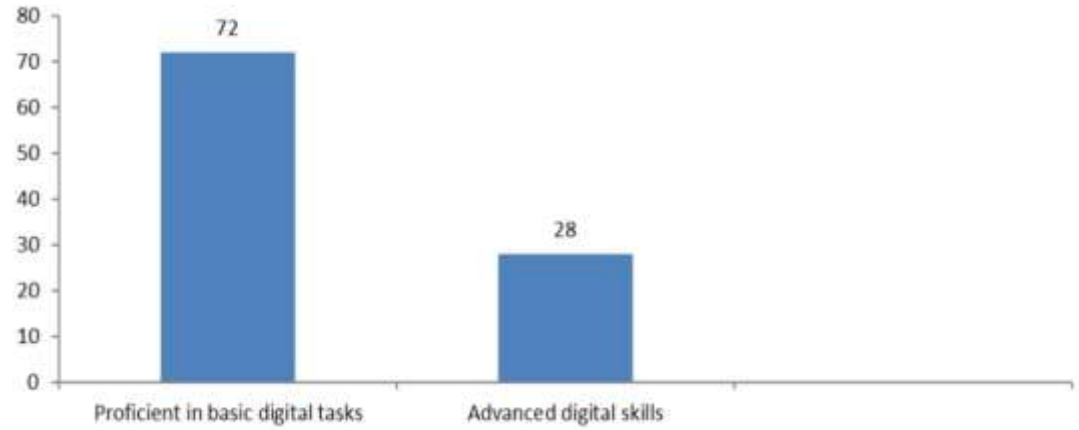
The majority of respondents (68%) reported moderate confidence in using digital tools for teaching, communication, and research. Approximately 20% indicated high confidence, while 12% expressed low confidence, as illustrated in Figure 1.

Figure 1: Digital Confidence Levels of Academic Staff (%)

Digital capabilities (skills and proficiency) of academic staff in integrating digital tools into their academic functions.

Regarding digital capabilities, 72% of respondents reported proficiency in basic digital tasks, including email communication, internet browsing, document editing, and creating online presentations. In contrast, only 38% demonstrated advanced digital skills, such as using virtual learning environments, e-learning platforms, online assessment tools, and data analytics software for research (e.g., LMS, online grading systems, and data visualisation tools).

Figure 2: Digital Skill Proficiency



Relationship between gender, institution type, academic rank and digital competence

Gender Differences in Digital Competence

This study examined the relationship between gender and academic staff's digital competence, focusing on confidence in using digital tools for teaching (e.g., Zoom, Learning Management Systems). Responses to the statement "I feel confident using digital tools for teaching" were coded as the proportion of "Yes" responses out of a total of 20 items per respondent, serving as indicators of individual digital competence levels. Female staff reported a mean proportion of "*Yes"* responses of M = 0.373, SD = 0.181, reflecting relatively lower confidence, while male staff had a significantly higher mean proportion of M = 0.612, SD = 0.181, indicating higher confidence levels. A summary of the descriptive statistics is presented in Table 1.

Table 1: Mean and Standard Deviation of Confidence Using Digital Tools by Gender

Gender	N	Mean Proportion (Yes)	Standard Deviation
Female	20	0.373	0.181
Male	20	0.612	0.181

Further, an independent samples *t*-test was conducted to compare the digital competence of academic staff by gender, specifically their confidence in using digital tools for teaching (e.g., Zoom, LMS). Results indicated that male academic staff (M = 0.612, SD = 0.181) reported significantly higher confidence than female staff (M = 0.373, SD = 0.181), $t(38) = -4.18$, $p < .001$, with a large effect size (Cohen's $d = 1.32$). The results, presented in Table 2, indicate a statistically significant gender gap in digital competence, with male staff demonstrating greater confidence in using digital teaching tools.

Table 2: Results of the Independent Samples T-test on Digital Competence of academic staff by Gender

Survey Statements	*t-value*	*df*	Sig. (2-tailed)	Mean difference
1. I feel confident using digital tools for teaching (e.g., Zoom, LMS*).	-4.18	38	<0.001	-0.239
2. I can troubleshoot basic technical problems when using digital platforms	-3.75	38	0.001	-0.220
3. I am confident in evaluating and selecting appropriate digital resources	-4.25	38	<0.001	-0.253
4. I can effectively support students' digital learning needs	-4.25	38	<0.001	-0.257
5. I feel confident in using social networking	-3.933	38	0.000	4.750
6. I am confident in using Interpersonal Communication tools	-3.552	38	0.001	4.47
7. I can competently use digital tools for a assessment and feedback systems	-3.754	38	0.001	-0.223

*Learning Management Systems (LMS): Blackboard, Moodle, WebCT, Platforms supporting online courses, etc

Findings from the independent samples t-test revealed notable gender disparities in academic staff's self-reported confidence in using digital tools for teaching. For the item *"I feel confident using digital tools for teaching (e.g., Zoom, LMS)"*, a significant difference emerged, $t(38) = -4.18$, $p < .001$, with one gender showing higher confidence. Likewise, significant gaps were identified for *"I can troubleshoot basic technical problems when using digital platforms"*, $t(38) = -3.75$, $p = .001$, and *"I am confident in evaluating and selecting appropriate digital resources"*, $t(38) = -4.25$, $p < .001$.

The item *"I can effectively support students' digital learning needs"* also indicated a significant difference, $t(38) = -4.25$, $p < .001$, suggesting greater perceived capability among one gender. Particularly large differences appeared in *"I feel confident in using social networking"*, $t(38) = -3.93$, $p < .001$, *Mean* difference = 4.75, and *"I am confident in using interpersonal communication tools"*, $t(38) = -3.55$, $p = .001$, *Mean* difference = 4.47, reflecting markedly higher confidence in one gender, likely males.

Lastly, *"I can competently use digital tools for assessment and feedback systems"* also displayed a significant gender-related difference, $t(38) = -3.75$, $p = .001$, *Mean* difference = -0.223. Overall, the results indicate that male academic staff tend to demonstrate

substantially greater confidence across multiple dimensions of digital competence compared to female staff.

Gender Differences in Digital Competence

Generally, Independent samples *t*-tests revealed statistically significant gender differences across all seven statements assessing digital competence ($p \leq .001$), with *t*-values ranging from −3.55 to −4.25. In each case, male academic staff reported higher confidence than female staff in using digital tools for teaching, troubleshooting, evaluating resources, supporting students' digital learning, engaging in social networking, using interpersonal communication tools, and applying digital tools for assessment and feedback. These results indicate consistently higher self-reported digital competence among males across all measured domains. Taken together, these results indicate a consistent and statistically significant pattern of gender-based differences in digital competence. Specifically, male academic staff appear to exhibit higher levels of confidence across all domains of digital tool usage for teaching, learning, communication, and assessment.

Digital Competence of Academic Staff According to Different Academic Ranks

The relationship between Digital Competence of academic staff and Academic Ranks is shown in Table 3.

Table 3: Results of the One-Way ANOVA Test on Digital Competence of Academic Staff and Academic Ranks

Survey Statements		Sum of squares	*df*	Mean square	*F-value*	Sig.
1. I am confident in using digital tools (e.g., Zoom, LMS) for effective teaching and learning	Between Groups	15.32	5	3.06	4.38	0.003
	Within Groups	23.78	34	0.70		
	Total	39.20	39			
2. I actively use digital resources to enhance my academic research.	Between Groups	14.05	5	2.81	3.72	0.009
	Within Groups	25.72	34	0.76		
	Total	39.77	39			

3. I am proficient in using digital communication tools (e.g., email, social media) for academic collaboration.	Between Groups	13.10	5	2.62	3.15	0.021
	Within Groups	28.26	34	0.83		
	Total	41.36	39			
4. I can troubleshoot basic technical issues related to digital platforms independently.	Between Groups[a]	14.40	5	2.88	3.68	0.010
	Within Groups	26.65	34	0.78		
	Total	41.05	39			
5. I can design and deliver online courses using learning management systems effectively.	Between Groups[a]	15.80	5	3.16	4.22	0.004
	Within Groups	25.50	34	0.75		
	Total	41.30	39			
6. I regularly update my digital skills to keep pace with new educational technologies.	Between Groups[a]	16.25	5	3.25	4.55	0.002
	Within Groups	24.30	34	0.71		
	Total	40.55	39			
7. I am confident in analysing and interpreting data using digital software tools.	Between Groups[a]	13.55	5	2.71	3.36	0.017
	Within Groups	27.40	34	0.81		
	Total	40.95	39			
8. I use digital platforms to share academic materials and collaborate with colleagues and students.	Between Groups[a]	14.00	5	2.80	3.40	0.015
	Within Groups	27.35	34	0.80		
	Total	41.35	39			

9. I can evaluate and select appropriate digital resources to support curriculum delivery.	Between Groups	15.10	5	0.75	4.10	0.005
	Within Groups	25.60	34	3.08		
	Total	40.70	39			
10. I am capable of using collaborative digital tools to enhance academic teamwork. I am capable of using collaborative digital tools to enhance academic teamwork.	Between Groups	15.40	5	3.08	4.10	0.005
	Within Groups	25.00	34	0.74		
	Total	40.40	39			

Note: Compared groups are: tutors, assistant lecturers, lecturers, senior lecturers, associate professors and professors.

The one-way ANOVA examining digital competence across six academic ranks (Tutorial Assistant, Assistant Lecturer, Lecturer, Senior Lecturer, Associate Professor, and Professor) revealed statistically significant differences for all ten measured statements, with *p*-values below 0.05. This confirms that academic rank is a significant factor influencing perceived digital competence. The Between-Groups sum of squares and mean squares indicate that much of the variance in competence scores is attributable to rank differences rather than individual differences within ranks. Corresponding *F*-values, ranging from approximately 3.15 to 4.55, further substantiate the meaningfulness of these differences. Significant rank-related differences emerged for statements covering multiple domains: confidence in using digital tools for teaching, active use of digital resources in research, proficiency in digital communication, technical troubleshooting, online course design, continuous skills updating, data analysis, sharing academic materials, evaluating digital resources, and using collaborative tools. Although the Within-Groups sums of squares suggest some individual variability within ranks, the magnitude of the differences between ranks was greater.

Post-hoc analysis (Tukey's HSD) showed that the largest gaps occurred between junior academic staff, particularly Tutorial Assistants and Assistant Lecturers and senior staff (Senior Lecturers, Associate Professors, and Professors). Interestingly, junior staff consistently reported higher levels of digital competence, whereas senior staff demonstrated comparatively lower confidence and skill in applying digital tools across teaching, research, communication, and collaboration. Differences among senior

ranks were minimal or statistically non-significant, suggesting a plateau in digital competence at higher career stages.

Overall, the findings point to an inverse relationship between academic rank and perceived digital competence, underscoring the need for targeted, rank-sensitive professional development initiatives. In particular, institutions may benefit from designing digital skills training and mentorship programmes tailored to senior staff, focusing on both foundational and applied digital competencies to strengthen capacity in digital teaching and research practices.

Difference between Public and Private Institutions: Academic Staff in Digital Competence

An independent sample *t*-test was performed to see whether there was a difference between public and private Institutions' academic staff in digital competence, as shown in Table 4.

Table 4: Results of the Independent Samples T-test on Institution Type (Public vs Private)

Statements	*t-value*	*df*	Sig. (2-tailed)	Mean difference
1. I feel confident using digital teaching platforms (e.g., Zoom, Google Classroom) in my institution.	2.40	38	0.021	0.6
2. I have access to reliable digital tools and resources needed for my academic work.	3.10	38	0.004	1.1
3. I am proficient in troubleshooting common technical problems encountered in digital teaching.	1.80	38	0.078	0.5
4. I regularly use digital tools to create and manage student assessments.	2.75	38	0.009	0.9
5. I actively participate in online academic collaboration using digital communication tools	3.25	38	0.003	1.0
6. I am able to effectively integrate digital resources into my research activities.	1.20	38	0.237	0.2
7. I receive sufficient training and support to improve my digital skills at my institution.	2.90	38	0.006	0.8
8. I am confident in using digital platforms to provide feedback and communicate with students.	2.45	38	0.019	0.7

The Independent samples *t*-tests showed significant differences in digital competence between academic staff from public and private institutions for most statements ($p < .05$), with mean differences ranging from 0.6 to 1.1. Private institution staff reported higher confidence in using digital teaching platforms, managing assessments, engaging in online collaboration, accessing reliable tools, receiving digital skills training, and providing digital feedback to students. No significant differences were found for troubleshooting technical problems ($p = .078$) or integrating digital resources into research ($p = .237$). These findings suggest that private institutions' greater ICT investments and structured digital training programmes contribute to higher digital readiness, whereas public institutions face bureaucratic delays in implementing digital reforms.

Challenges in Using Digital Tools

In the open-ended section of the survey, respondents highlighted several major challenges to adopting digital technologies. The most frequently cited was inadequate infrastructure (75%), including unreliable internet connectivity, outdated computers, and a shortage of digital teaching aids. Limited institutional support (64%) was also reported, encompassing a lack of regular training, insufficient technical assistance, and minimal incentives for digital innovation. Half of the respondents (50%) noted a digital skills gap, particularly among senior academic staff, as a barrier to effective technology use. Additionally, heavy workloads and time constraints (47%) were identified as limiting opportunities for continuous learning and experimentation with digital tools. Table 5 summarises these challenges.

Table 5: Challenges Faced in Using Digital Tools (N = 40)

Challenge	Frequency (%)	Percentage	Descriptions
Inadequate infrastructure	30	75	Unreliable internet, outdated computers, and a lack of digital teaching aids
Limited institutional support	26	64	No regular training, poor technical assistance, and a lack of incentives
Digital skills gap	20	50	Low competence, especially among senior academic staff
Heavy workload and time constraints	19	47	Limited time for continuous learning

Note: Percentages are calculated based on the total number of respondents (N = 40). The total frequency exceeds N because respondents could report more than one challenge.

The findings in Table 5 indicate that inadequate infrastructure and limited institutional support are the most significant barriers to adopting digital technologies, affecting the

majority of academic staff. The digital skills gap, particularly among senior staff, further constrains effective technology use, while heavy workloads and time limitations reduce opportunities for continuous learning and experimentation. Collectively, these challenges suggest that both institutional investment in infrastructure and targeted professional development are essential to enhance digital competence among academic staff.

Strategies for Improving Digital Competence

Thematic analysis of interview data indicated four major strategies proposed by academic staff for improving digital competence in HLIs, namely: regular digital literacy training tailored to academic tasks; improved ICT infrastructure and reliable internet connectivity, development of institutional digital competence frameworks; and peer mentoring practice. Participants also emphasised the need for structured training designed for academic work. As one participant stated: *"We need structured training sessions that focus on practical tasks like online grading, creating interactive learning materials, and using research databases effectively…"* (Participant 3).

The challenge of inadequate infrastructure was also evident: *"Even if we have skills, without stable internet and functional computers, it's difficult to implement what we know"...* (Participant 11).

Institutional-level planning was recommended by some respondents:

"The university/institute should have a clear framework that defines digital skills required for teaching, research, and administration so that everyone works towards the same standard" ……. (Participant 17).

Others highlighted peer learning: …. *"Sometimes learning from a colleague is easier; setting up peer mentoring groups could help us share ideas and solve problems faster"* …… (Participant 25).

Finally, several participants called for a combination of strategies to ensure sustainability. As one noted: *"We need both infrastructure and continuous capacity building one without the other will not bring lasting change"* … (Participant 34). Themes and representative Quotes on strategies for improving digital competence are presented in Table 6.

Table 6: Themes and Representative Quotes on Strategies for Improving Digital Competence

Theme	Representative Quote	Participant
Regular digital literacy training tailored to academic tasks	"We need structured training sessions that focus on practical tasks like online grading, creating interactive learning materials, and using research databases effectively."	3
Improved ICT infrastructure and reliable internet connectivity	"Even if we have skills, without stable internet and functional computers, it's difficult to implement what we know."	11
Development of institutional digital competence frameworks	"The university/Institute should have a clear framework that defines digital skills required for teaching, research, and administration so that everyone works towards the same standard."	17
Peer mentoring and communities of practice	"Sometimes learning from a colleague is easier; setting up peer mentoring groups could help us share ideas and solve problems faster."	25
Integration of multiple strategies for sustainability	"We need both infrastructure and continuous capacity building; one without the other will not bring lasting change."	34

Note: Quotes are drawn from interview responses of academic staff participating in the study

Discussion

Confidence in Using Digital Tools

The findings revealed that most academic staff exhibited moderate confidence in using digital tools. This supports findings by Mtebe (2015) and Chigona et al. (2019**)** that academic staff in Sub-Saharan Africa often lack skills for interactive e-learning systems and data-based teaching. Similarly, the finding was consistent with the findings of most scholars (Bwire et al., 2020; Cabero-Almenara et al., 2021) who indicated that the teaching competences of the teachers were low to moderate. Sánchez-Caballé et al. (2022) findings indicated that the university teachers' degree of digital proficiency is intermediate. These studies show that teachers have low or intermediate levels of digital proficiency and therefore require adequate training to update their digital skills.

The findings of the hypothesis test show a statistically significant gender gap in the digital competence of academic staff, with males consistently reporting higher confidence across various domains of digital tool usage. Male academic staff demonstrated higher digital proficiency than females, which aligns with previous studies on gender digital gaps. This finding is not consistent with that of Guillén-

Gámez et al. (2021), who discovered no appreciable gender disparities in the level of digital competence of teaching personnel.

The t-test results indicate a consistent and statistically significant pattern of gender-based differences in digital competence. Specifically, male academic staff appear to exhibit higher levels of confidence across all domains of digital tool usage for teaching, learning, communication, and assessment. The t-test results confirmed gender-based disparity, suggesting a need for more inclusive training strategies that target female academics. The findings align with previous research indicating that gender can influence the adoption and use of educational technologies. Irrespective of the results above, it is worth noting that male academic teachers scored slightly higher. This coincides with the conclusions drawn in the study by Dominguez-Castillo, Cisneros-Cohernour, and Barberà (2018), where female teachers showed a lower level of digital competence development than their male counterparts, and Raso et al. (2015), who found that male teachers felt more autonomous to use ICT's than their female colleagues. In the same vein, Nedungadi et al. (2018) stated that men included ICT's in their teaching to a greater extent, i.e. ICTs were part of their day-to-day teaching in the classroom, and their level of development was consequently higher. This may be because female teachers, even today, continue to have less support for tech training (Sánchez & Sánchez,2017). Addressing these gaps is crucial, especially as higher education increasingly relies on digital tools for teaching, learning, and assessment in both physical and virtual learning environments.

Academic staff from private institutions showed higher mean scores, possibly due to more ICT investment. Public and private institutions operate under distinct administrative and financial systems, which influence the availability and quality of digital tools and support services for staff. Public Institutions: Tend to be larger, more bureaucratic, and reliant on government funding, which may delay investment in digital infrastructure and staff training (Sife, Lwoga, & Sanga, 2007). Private Institutions: Often smaller and more agile, with competitive pressure to innovate and adopt digital technologies more quickly to attract students (Eze et al., 2018). Leadership is often traditional and risk-averse, slowing digital transformation. In many cases, digital innovation depends on externally funded projects rather than internal vision (Lwoga, 2014). Public institutions in developing countries often experience delays in technological upgrades due to budgetary constraints and bureaucratic procurement processes (Bingimlas, 2009). According to Lwoga (2014), academic staff in Tanzanian public universities generally possess moderate digital competence, especially in basic ICT skills, but lag in advanced and pedagogical digital competencies. Public universities may lack sustained and structured professional development

programmes for improving digital literacy (Ngololo et al., 2012). Private universities are driven by competition and student expectations to adopt modern learning platforms (Unwin et al., 2010). Staff in private institutions often report better access to e-learning tools and ICT support (Komba & Ng'umbi, 2017). Many private institutions integrate mandatory digital skills training during onboarding or through continuous professional development (CPD) programmes (Mtebe & Raisamo, 2014).

Komba and Ng'umbi (2017) conducted a comparative study in Tanzania and found that private university lecturers had higher self-rated digital competence than their counterparts in public universities. They attributed this to better ICT policies, administrative support, and incentives in private universities. Eze et al. (2018**)**, in a multi-country study in sub-Saharan Africa, found that private institutions were quicker in adopting Learning Management Systems (LMS) and integrating online learning compared to public ones, owing to flexibility in budgeting and decision-making. Mtebe and Raisamo (2014**)** examined LMS use in Tanzanian universities and concluded that while public universities had the infrastructure in place, usage was low due to inadequate training and negative attitudes toward digital tools among staff. Institutional Theory suggests that differences arise from the norms and structures governing organisations. Public institutions often follow traditional bureaucratic models, while private institutions adapt rapidly to environmental changes. The Technology Acceptance Model (TAM**)** (Davis, 1989) also applies: staff in private institutions perceive greater usefulness and ease of use of digital tools due to supportive environments, while staff in public institutions may not.

The findings of this study highlight several strategies that can enhance digital competence among academic staff in higher learning institutions. Participants emphasised the importance of regular and tailored digital literacy training, designed to align with academic tasks such as online teaching, research dissemination, and student engagement. This echoes previous research, which stresses that continuous professional development in digital skills improves confidence and pedagogical innovation (González-Sanmamed et al., 2017). Tailored training ensures that faculty not only gain generic ICT knowledge but also acquire skills directly applicable to teaching and research contexts.

Another strategy identified is the improvement of the ICT infrastructure and internet reliability. Limited access to up-to-date technological resources and unstable internet connectivity were reported as major barriers. The study supports earlier evidence suggesting that infrastructure is a prerequisite for meaningful digital transformation in higher education (Tondeur et al., 2021). Institutions that invest in robust ICT facilities

create enabling environments for staff to experiment with and adopt digital tools more effectively.

The development of institutional digital competence frameworks was also noted as a critical step. Establishing clear guidelines and standards for digital competence ensures that all staff have a shared understanding of expectations and available support mechanisms. Such frameworks also foster accountability and provide benchmarks for professional growth, consistent with the European Commission's DigCompEdu framework (Redecker, 2017).

Furthermore, participants suggested peer mentoring and communities of practice as sustainable strategies. Academic staff are more likely to adopt and sustain digital practices when supported by colleagues through mentorship, collaboration, and shared experiences. This finding resonates with social learning theories that highlight the role of peer support and collective knowledge building in professional development.

Finally, institutional incentives and policy support were mentioned as motivating factors. Recognition, rewards, and workload adjustments for those who engage in digital innovation encourage wider adoption. This aligns with studies indicating that digital transformation requires not only skill development but also institutional culture change and leadership support (Kirkwood & Price, 2014). Generally, the strategies discussed indicate that improving digital competence among academic staff requires a multi-faceted approach that combines individual capacity building, institutional infrastructure, supportive policies, and collaborative learning environments. By integrating these strategies, higher learning institutions can strengthen teaching, research, and service delivery in an increasingly digital academic landscape.

Digital competence across ranks

The ANOVA results for all 10 statements show statistically significant differences in digital competence scores across academic ranks (p-values all < 0.05). This indicates that academic rank is associated with varying levels of self-reported digital competence among staff. Studies (Ferrari, 2013; Ng, 2012) show that younger academics, especially those in tutorial or assistant lecturer roles, tend to have a better grasp of digital tools due to growing up in a tech-rich environment. According to Redecker (2017), early-career educators are more willing to experiment with new digital teaching methods and platforms, including Learning Management Systems (LMS), blended learning, and educational apps. However, their pedagogical integration of digital tools may still be developing, especially without formal digital pedagogy training (Tondeur et al., 2017).

According to the Technology Acceptance Model (TAM) (Davis, 1989), perceived usefulness and ease of use affect technology adoption. This helps explain why younger

or early-career academics are more inclined to adopt digital tools they perceive them as easier and more beneficial for career development. Conversely, senior academics may not perceive as much added value in changing their established practices.

Challenges in Using Digital Tools

Several key challenges were reported, such as inadequate infrastructure (75%), such as unreliable internet connectivity, outdated computers, and a lack of digital teaching aids. Limited institutional support (64%), including the absence of regular training, poor technical assistance, and a lack of incentives for digital innovation. These findings mirror the works of Sanga et al. (2020) and Lubua (2018**),** who identified infrastructure and institutional support as key limitations in Tanzanian higher education.

Research implications for higher learning institutions

Universities must prioritise investment in advanced digital infrastructure to support both lecturers and students, including improved internet connectivity, access to e-learning platforms, and software licenses for educational tools. The findings highlight the importance of lecturers' ability to access and use digital resources effectively. Universities should ensure that all lecturers have access to high-quality digital tools, such as online learning platforms, educational software, and multimedia resources. By providing a robust digital environment, universities can empower lecturers to integrate these tools into their teaching practices, which will, in turn, enhance student learning value.

Universities need to actively develop digital competencies for lecturers to meet job requirements. This involves implementing training programmes, fostering professional growth, and aligning recruitment and employment practices with strategic planning. Additionally, universities should apply policies that motivate lecturers, encourage dedication, and foster creativity. Furthermore, universities need to enhance international integration and collaborate with leading pedagogical training institutions both globally and regionally. This will create opportunities for lecturers to exchange knowledge and develop their digital competencies within the context of Industry 4.0 and digital transformation.

Universities should foster a culture that encourages the adoption and innovation of digital technologies in teaching. This requires leadership to actively promote and support the integration of digital resources and teaching strategies across departments. Universities can foster collaboration by establishing digital innovation hubs where lecturers exchange best practices, explore new technological tools, and share digital

teaching strategies. These hubs can be supported by interdisciplinary teams that assist with digital integration across various disciplines and faculties.

Universities need to establish mechanisms and policies, and create favourable conditions to attract and utilise both domestic and foreign investment for training and developing lecturers' digital competencies in the digital era. To more effectively mobilise investment resources for digital competency development in higher education, universities must uphold their responsibilities to the state, learners, and society. Additionally, universities should ensure transparency in their operational structures and achieve financial autonomy.

Conclusion

This study assessed the digital competence of academic staff in Tanzanian higher learning institutions, focusing on their confidence, skills, and challenges. The findings reveal that most staff possess moderate confidence and basic digital skills, yet significant disparities exist based on gender, academic rank, institution type, and age. Key challenges, including inadequate infrastructure, limited training, and institutional barriers, persist, particularly in public universities.

Gender-based differences are pronounced, with male staff consistently demonstrating higher confidence in using digital tools across teaching, research, and communication tasks. These disparities highlight the need for targeted interventions to ensure equitable development of digital competencies and promote inclusive, efficient, and future-ready teaching practices.

Digital competence also varies by academic rank. Junior staff, such as Tutorial Assistants and Assistant Lecturers, tend to be more digitally fluent, while senior staff, including Professors and Associate Professors, often lag in operational skills, though they may contribute to strategic digital initiatives. Bridging this gap requires sustained institutional support, professional development, and a culture of digital innovation across all ranks.

Institutional type further influences digital competence. Private universities generally demonstrate higher adoption and integration of digital technologies due to stronger infrastructure, supportive policies, and innovation-oriented cultures. Public institutions face structural and financial barriers that limit technology adoption. Addressing these disparities necessitates investment in digital infrastructure, professional development programmes, and initiatives to foster a culture of digital innovation among academic staff.

Overall, the study underscores that training and institutional support are critical predictors of digital confidence and capability. By implementing targeted interventions, higher learning institutions can enhance the digital competence of their academic staff, ultimately improving teaching, research, and communication in an increasingly digital educational environment.

Recommendations

Based on the findings, the following recommendations are proposed by this study:

i) To enhance digital competence among academic staff, universities must prioritise investment in advanced digital infrastructure, including reliable internet connectivity, access to e-learning platforms, and licenses for educational software. Ensuring that lecturers have high-quality digital tools enables them to integrate technology effectively into teaching, thereby improving student learning outcomes.

ii) Universities should also actively develop staff digital competencies through structured training programmes, continuous professional development, and alignment of recruitment practices with strategic digital goals. Policies that motivate lecturers, foster creativity, and support professional growth are essential. Collaborations with leading pedagogical institutions, both regionally and internationally, can provide opportunities for knowledge exchange and skill development in line with Industry 4.0 and digital transformation initiatives.

iii) Fostering a culture of digital innovation is critical. University leadership should actively support the integration of digital resources and teaching strategies, including the establishment of digital innovation hubs. These hubs can facilitate interdisciplinary collaboration, sharing of best practices, and experimentation with emerging technologies across faculties.

iv) Finally, universities should implement mechanisms and policies to attract and efficiently utilise both domestic and foreign investments in digital competency development. Upholding transparency, ensuring financial autonomy, and fulfilling responsibilities to the state, learners, and society will strengthen the institutional capacity to prepare academic staff for effective participation in the digital era.

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Informal Learning Experiences of Obafemi Awolowo University Students Concerning Internet Fraud

Adejoke Clara Babalola, Obafemi Awolowo University, Nigeria

acbablo@oauife.edu.ng or jokebablo@gmail.com

Abstract

This research identified the learning experiences of Obafemi Awolowo University students on internet fraud and highlighted their coping. A case study research design was adopted for this study among undergraduate students of Obafemi Awolowo University, Ile-Ife, Osun State. Twenty undergraduate students were selected using purposive sampling technique. An in-depth interview guide was used to collect data. Data was analysed using interpretive content analysis. The results showed that catfishing and Ponzi schemes among others schemes were the most common types of internet fraud amongst students in Obafemi Awolowo University. Students were scammed primarily through social media platforms like WhatsApp and Facebook. Additionally, some experienced scams related to fake investment platforms and fake online vendors. As a coping strategy, students have learned to verify the legitimacy of online offers and investments, avoiding impulsive decisions driven by peer pressure or enticing promises. Participants not only learned from personal experiences but also from observing the experiences of peers and family members. This study therefore emphasized the importance of safeguarding personal information, avoiding sharing sensitive details online.

Keywords: Cyber Fraud, Online Scams, Social Media Platforms, Personal Experiences, Fraudulent Schemes

Introduction

The internet has revolutionised the way people communicate, do business, and carry out various activities (Castells, 2001). Unfortunately, this has also led to an increase in cybercrimes such as internet fraud. Internet fraud, also known as online fraud or cyber fraud, is a form of fraudulent activity or deceptive activity that involves the use of the Internet to deceive victims (Furnell, 2002; Mead, 2015). As technology continues to advance, internet fraud has become a significant concern globally, impacting individuals, businesses, and society at large (Mead, 2015). It typically involves the use of email, social media, websites, or other online platforms to deceive or scam individuals or organizations for financial gain (Wall, 2007).

Common types of internet fraud include phishing, identity theft, advance-fee fraud (419 scams), online shopping scams, investment scams, and romance scams (Furnell, 2019; Shantz & Kim, 2018). Phishing scams involve fraudsters posing as legitimate entities to deceive individuals into revealing personal information or financial details.

Students may receive fraudulent emails, messages, or website links disguised as official communications from universities, banks, or online services. Phishing scams aim to gain unauthorized access to sensitive data or steal financial resources (Jain & Tyagi, 2016). Identity theft entails stealing personal information for financial gain. Online shopping scams lure victims into purchasing non-existent goods, and investment scams promise unrealistic returns. Advance fee fraud, commonly known as "419 scams," involves enticing victims with promises of substantial financial gains or inheritances in exchange for an upfront fee or personal information. Students may receive emails or messages from fraudsters claiming to offer scholarships, grants, or employment opportunities, but ultimately request payment or personal details before delivering the promised benefits (Adeyemi & Olaoye, 2019). Students often engage in online shopping, making them susceptible to scams involving counterfeit products, fraudulent websites, or non-delivery of goods. Fraudsters may create fake e-commerce platforms, offer unrealistically low prices, and collect payments without delivering the purchased items. This type of fraud can result in financial losses and disappointment for students (Jain & Tyagi, 2016). Fraudsters may create fraudulent online services that target students seeking assistance with academic assignments, essay writing, or exam preparation. These services may offer plagiarized or low-quality work, charge excessive fees, or fail to deliver the promised services. Students seeking academic support may fall victim to these scams, resulting in wasted money and compromised educational integrity (Adeyemi & Olaoye, 2019)

Methods employed by fraudsters include the use of fake websites, malicious software (malware), social engineering, and impersonation (Lee, Leung, & Lee, 2014; Wall, 2019). Fake websites mimic legitimate platforms to collect sensitive information, while malware infiltrates victims' devices to steal data. Social engineering exploits psychological manipulation to deceive individuals into taking actions that benefit the fraudster. Impersonation involves posing as a trusted entity to deceive victims into sharing information or funds (Smith & Grabosky, 2001). Fraudsters employ various malicious software and hacking techniques to gain unauthorized access to individuals' devices or networks. They may distribute malware-infected files, exploit software vulnerabilities, or use phishing methods to acquire login credentials. Once compromised, students' personal information, financial data, or online activities may be exploited for fraudulent purposes (Jain & Tyagi, 2016). Fraudsters employ social engineering techniques to manipulate and deceive individuals. They may use psychological tactics to gain victims' trust, exploit their vulnerabilities, or create a sense of urgency to prompt immediate responses. Social engineering techniques can involve impersonation, emotional manipulation, or the exploitation of personal relationships to extract sensitive information or financial resources (Jain & Tyagi, 2016). Fraudsters

often impersonate reputable institutions, businesses, or individuals to gain credibility and deceive victims. They may create fake websites, email addresses, or social media profiles that closely resemble legitimate ones. Impersonation and spoofing techniques aim to deceive students into believing they are interacting with trustworthy entities, thereby increasing the likelihood of falling for scams (Adeyemi & Olaoye, 2019). It is a prevalent issue in Nigeria, with young adults and students being the most involved in this illegal activity, becoming a major concern for law enforcement agencies, educational institutions, and the public at large (Olumide, Abayomi-Alli, & Bambade, 2019).

One reason why some students are involved in internet fraud in Nigeria is the lure of quick and easy money (Agbele, Adagunodo, & Aluko, 2018). With high unemployment rates and limited opportunities, some students see internet fraud as a way to make money quickly and escape poverty (Arogundade & Aderibigbe, 2020). Fraudsters are motivated by financial gain, personal vendettas, or ideological reasons. Financial motivations are prevalent, as fraud can lead to substantial profits for criminals (Shantz & Kim, 2018).

Several factors have been identified as contributing to students' involvement in internet fraud. These include peer pressure, financial needs, family background, and the desire for quick wealth (Agbele et al., 2018; Arogundade & Aderibigbe, 2020). Financial pressures faced by students, including tuition fees, living expenses, and the desire for a luxurious lifestyle, make them vulnerable to fraudulent schemes that promise quick financial gains. Economic hardship and the lack of adequate financial support systems can exacerbate students' susceptibility to engaging in fraudulent activities. Furthermore, the influence of peer groups and social networks plays a significant role in the propagation of Internet fraud among students. Some students may be drawn into fraudulent schemes or cybercrime due to the influence of their friends or acquaintances. Social norms within student communities, where fraudulent behaviour may be glamorized or seen as a pathway to success, can reinforce and normalize engagement in such activities. The desire for social acceptance and the pressure to conform to peer expectations contribute to the adoption and perpetuation of internet fraud (Davis, 2017; Adeyemi & Olaoye, 2019; Oloyede & Adekola, 2020)

Another yet a great factor is the desire for high grades which can push some students to resort to cheating, plagiarism, or other fraudulent practices to achieve better grades (Thompson & Lewis, 2021). Also, Students generally have easy access to technology and the internet, which can provide them with the means to commit cybercrimes without significant technical barriers (Davis, 2017). Again, the advancement of technology and the widespread use of the internet have facilitated the growth of

Internet fraud among students. Online platforms and social media provide avenues for fraudsters to target and manipulate potential victims, including students seeking financial opportunities or assistance. The anonymity and ease of communication offered by digital platforms create fertile ground for fraudsters to operate, making it challenging to detect and prevent Internet fraud (Adeyemi & Olaoye, 2019).

Another factor to consider is the lack of awareness. Some students may not fully understand the consequences of their actions or may not be aware of the seriousness of engaging in fraud or cybercrime (Anderson & Smith, 2016). The impersonal nature of the online world can lead individuals to feel less accountable for their actions, making them more likely to engage in cybercrimes. Engaging in cybercrime may also be seen as exciting or adventurous for some students, leading them to take risks for the thrill of it. Some students may also perceive cybercrime as a low-risk activity, assuming they won't get caught or face serious consequences if they do (William 2020).

Psychological factors also contribute to Internet fraud among students. Some students may be driven by a sense of entitlement, greed, or materialistic aspirations. Some even claim that they are getting back what the white men took from their fore fathers. Also, the senseless desire for immediate gratification and the belief that engaging in fraudulent activities will lead to financial success can override ethical considerations. Students may also experience cognitive biases, such as overconfidence or optimism bias, which can impair their judgment and make them more susceptible to fraudulent schemes (Oloyede & Adekola, 2020).

The consequences of internet fraud on the victim cannot be overemphasized. Internet fraud can lead to significant financial instability and losses for students' victims. Engaging in fraudulent schemes often results in financial losses as students invest money or fall victim to scams promising high returns. The losses incurred from interest fraud can destabilize students' financial situation, exacerbating their existing financial struggles forcing them to do some other unthinkable things. Students may face difficulties in meeting their basic needs, paying tuition fees, and managing their day-to-day expenses due to the financial losses incurred from fraudulent activities (Adeyemi & Olaoye, 2019). Also, Students who fall victim to internet fraud may accumulate substantial debts. Fraudulent schemes often involve loans, investment schemes, or credit-related scams, which can leave students burdened with high levels of debt. The debt burden resulting from internet fraud can also have long-term implications for students' financial well-being, affecting their credit scores, ability to secure loans in the future, and overall financial stability. The increased debt burden may also lead to psychological distress and strain on students' mental well-being (Oloyede & Adekola, 2020). Falling victim to fraud can evoke feelings of shame,

embarrassment, and guilt, which can negatively impact students' mental health. The financial losses and debt burden resulting from fraudulent activities can create significant stress, anxiety, and feelings of hopelessness among students. The psychological and emotional distress caused by internet fraud can further hinder their academic performance and overall well-being (Adeyemi & Olaoye, 2019). Experiencing internet fraud can erode students' trust in financial systems, institutions, and even interpersonal relationships. Students who have been victims of fraud may become more sceptical and cautious in their financial decision-making, which can lead to a reluctance to engage in legitimate financial opportunities. The loss of trust can impede students' ability to make informed and confident financial decisions, hindering their financial growth and future financial well-being (Oloyede & Adekola, 2020).

University students are a particularly interesting group to study about internet fraud, as they are often tech-savvy and have access to the internet for academic and personal purposes (Livingstone & Helsper, 2007). However, they may not have the necessary knowledge and skills to identify and avoid internet fraud, making them potentially vulnerable to this type of crime (Campbell & Gardner, 2018). Informal learning experiences significantly impact individuals' behaviours and actions, including involvement in illegal activities such as internet fraud. Informal learning plays a crucial role in shaping an individual's knowledge, skills, attitudes, and behaviours outside of formal educational settings. Unlike formal learning, which occurs within structured institutions like schools and universities, informal learning takes place through everyday experiences, interactions with others, and self-directed exploration (Richardson & Brown, 2020).

Smith (2005) opined that informal learning is a lifelong process whereby every individual acquires attitudes, values, skills and knowledge from daily experience and the educative influences and resources everywhere in his or her environment from family and neighbours, from work and play, from the market place, the library and the mass media. It is learning resulting from daily life activities related to work, family, or leisure and every other thing one engages in. In the same vein, Combs (1985) cited in Merriam, Caffarella. and Baugmgartner (2007) described informal learning as the spontaneous, unstructured learning that goes on daily in places like the homes and neighbourhood, behind the school and on the playing field, in the workplace, marketplace, library and museum, and through the various mass media. Informal learning is a contextual and situated process, occurring within real-life situations. People acquire knowledge from their environment, personal experiences, and interactions with others from day-to-day activities. For example, a student might grasp the intricacies of internet fraud through conversations with friends or by encountering

online scams. This type of learning is informal learning and when the student then intentionally goes out of their way to learn about these experiences, is self-directed and motivated by individual interests or immediate needs, rather than external demands. Individuals take the initiative to acquire skills and knowledge that captivate them. Consider a person who learns how to safeguard themselves from internet fraud after encountering a phishing attempt (Smith, 2012).

Moreover, Schugurensky (2000) cited in Merrriam et.al. (2007) categorized informal learning into three: self-directed leaning which is intentional and conscious; incidental learning which is unintentional but the learner usually becomes aware that learning had taken place after the experience; and socialization or tacit learning which is neither intentional nor conscious but learners can become aware of this learning later through retrospective recognition. The concept of self-directed learning prevails in educational technology as a way to differentiate learning, change the role of learners and teacher in the classroom, alter the time/place of learning, and revolutionise traditional schooling. Therefore, education, such as online learning opportunities, pedagogical shifts and availability of internet on mobile devices has put additional expectations on learners to take more initiative in their learning (Saxena, 2013). Self-directed learning is a type of learning in which learners are allowed to work on authentic problems and tasks of their own choice, and are still provided learning support in context to their problems. This learning approach increases the motivation of students to learn since they are the makers of their knowledge; they experience a sense of independence while learning (Saxena, 2013). Self-directed learning is a process when the individuals evaluate their learning needs, formulate goals, choose and implement proper strategies and analyse learning outcome. It also requires students to improve themselves and society (Annuar & Shaari, 2014, as cited in Rajan, 2015). Knowles et al. (2005) defined self-directed as learning that can be is seen as self-teaching, whereby learners are capable of taking control of the mechanics and techniques of teaching themselves in a particular subject. Merriam and Brockett (2007) cited Knowles (1975) who suggests that the term refers to a process in which individuals take the lead 'in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. In a later commentary on self-directed learning, Tennant (2006) cited Caffarella (1993) who pointed to three distinct ideas in the literature on self-directed learning: a self-initiated process of learning that stresses the ability of individuals to plan and manage their learning, attribute or characteristic of learners with personal autonomy as its hallmark, and a way of organizing instruction in the formal settings that allows for greater learner control.

An essential aspect of informal learning is the acquisition of tacit knowledge—knowledge that's challenging to convey through formal instruction (Smith, 2015). This type of knowledge is gained through practice, experience, and exposure to real-life situations. Tacit knowledge holds particular significance in understanding the subtleties of internet fraud and detecting potential scams. Understanding the role of informal learning experiences in internet fraud is vital for developing effective educational interventions and policies. By recognizing how individuals acquire knowledge about cybercrimes outside formal channels, educators, policymakers, and law enforcement can design targeted initiatives to raise awareness, promote responsible internet use, and reduce involvement in illegal activities like internet fraud. By exploring the informal learning experiences of OAU students around internet fraud, this will provide insights into how they learn about this issue and how they can be better equipped to protect themselves from cyber fraud in the future.

Understanding the informal learning experiences of OAU students around internet fraud is crucial for developing effective strategies to prevent and reduce this issue. By identifying why Obafemi Awolowo University students participate in internet fraud, policymakers and educational institutions can tailor interventions to address the root causes and discourage participation in internet fraud. Additionally, the learning experiences and coping strategies of Obafemi Awolowo University students on internet fraud, students may learn and take caution. Therefore, understanding the informal learning experiences of OAU students around internet fraud is crucial in developing effective strategies to prevent and reduce this illegal activity.

The article is therefore out to answer the following question:

i) What are the types of internet fraud among students at Obafemi Awolowo University?

ii) Why do students in Obafemi Awolowo University participation of in internet fraud?

iii) What are the informal learning experiences of students at Obafemi Awolowo University concerning internet fraud?

iv) What coping strategies do students at Obafemi Awolowo University employ when confronted with internet fraud?

Methodology

The descriptive case study research design was used. The case study provides information about the informal learning experiences of students who are undergraduates in Obafemi Awolowo University. The population for consists of

undergraduates who are students of Obafemi Awolowo University, Ile-Ife, Osun State. The sample for comprises 20 undergraduate students. Purposive sampling technique was used to obtain the sample from Obafemi Awolowo University. The data was analysed using interpretive content analysis.

Data Analysis

Question 1: What are the types of internet fraud among students at Obafemi Awolowo University?

The participants provided valuable insights into the various types of internet fraud they have known. During the course of this research, the researchers were able to find out the different perspectives of the participants as to what types and forms of Internet fraud exist. Their experiences can be categorized into distinct themes.

Catfishing (Yahoo Yahoo)

This emerged as one of the most prevalent types of internet fraud among the participants. They widely recognized catfishing, indicating its popularity within the student community. Catfishing involves creating fake online personas to deceive and manipulate individuals for various purposes. They use this false identity to establish relationships, gain trust, or manipulate people into various actions, such as sending money or sharing personal information.

R8 said:

"Under catfishing we have like plenty types, like you impersonate someone, act as someone where they use other people's profile to exploit people online and get things from them"

R9 said:

"I think the common one as regards Internet fraud that I know is yahoo yahoo (catfishing)"

R20 said:

"Catfishing has been one of the most popular type of fraud out there because almost everybody know what "yahoo yahoo" means".

From this view it could be seen that Catfishing is a popular type of internet fraud students are familiar with.

Ponzi Scheme

Findings showed that Ponzi schemes were another notable form of internet fraud experienced by participants. They shared personal experiences of being scammed through Ponzi schemes, underscoring the prevalence of this type of fraud within the

student population. Ponzi schemes involve promising high returns to investors but use funds from new investors to pay the earlier ones, creating a cycle of deception. This can be seen in the response of the participant below:

R14 said: "*Also Ponzi scheme is also among; you know how they pay you with the investment of another as your profit. I have been scammed before so I know. You just get up one day and you realize that the site is gone with your money hehe"*

Impersonation

Some participants reported instances of impersonation, where fraudsters assume the identities of others to deceive or defraud individuals. R11 said:

"My experience around it isn't that much cos I don't relate with them but I know that most of the internet fraud has to do with impersonating someone using that random picture to extort from other people"

Impersonation in the context of internet fraud refers to a deceptive practice where a person or entity pretends to be someone else or represents themselves as a trusted individual or organization online. Some Participants experience with impersonation are seen below.

R12 said:

"I encountered one personally some years ago because it happened to me. I was scammed by someone on Facebook who I thought was a girl not knowing the person was an impersonator and I keep sending money to a fake girl because of love"

R17 said:

"I might not be specific on the very types of it because I don't engage in it. But the Popular one I am familiar with has to do with impersonating another person to deceive people online and exploit them."

Online Vendor

Participants also highlighted the occurrence of online vendor scams. They shared experiences of being scammed by fake online vendors, underscoring the need for vigilance when engaging in online transactions. R2 said:

"...those who pretend as online vendors. They get scammed by buying their product and not getting it and you send the money to them"

An online vendor scam is a type of internet fraud where a fake or fraudulent online seller offers products or services for sale but never delivers the promised items, provides substandard goods, or engages in other deceptive practices to cheat customers.

Fake Investment Platform

Participants identified encounters with fake investment platforms, where deceptive schemes promise high returns on investments but ultimately lead to financial losses. Fake investment online platforms are designed to preys on individuals seeking investment opportunities.

R14 said: *"Internet fraud among students is not a new thing to me. Scamming people online, dating scams, fake online investment platforms are the types of internet fraud I can relate to."*

Hacking / Bank hacking fraud

Some participants described experiences related to hacking or bank hacking fraud, where cybercriminals gain unauthorized access to personal or financial information.

R8 said: *"And also hacking, fraudsters hack into government website or banking systems and steal money"*

R9 said: *"I think the common ones that I know is yahoo yahoo (catfishing) and I think Ponzi schemes and all these bank hacking frauds"*

R7 said: *" I don't know the general term they use for it but that of the BVN okay, and also sending you links online and asking you to click on the links to get a greater amount for them to be able to access your personal details. Mostly bank frauds"*

Dating scams

Participants recounted instances of falling victim to dating scams, where individuals form romantic connections online with the intention of deceiving for financial gain.

R12 said: *"Internet fraud to me is using different scam formats to exhort money from people especially the white folks like dating scams. Shey, you grab? And yeah, I have seen students engage in it and stuff. I have seen how someone I know used a celebrity picture to collect more than $200 from a client so he claimed"*

R14 said: *"Dating scams where you date people online in order to defraud them"*

Question 2: Why do students participate in Internet fraud?

The participants provided valuable insights into the frequency and motivations behind students' involvement in internet fraud. Participants predominantly identified males as more involved in internet fraud. Most estimated that a significant portion of students, ranging from 20% to over 50%, engage in these activities while the rest gave a higher percentage than 50. Their responses revealed several key factors:

Pressure from friends and families

Many students cited peer pressure from friends and family as a major influence leading them towards internet fraud. They described a societal expectation, especially for males, to provide for themselves and their families. This pressure sometimes drives them towards illicit means, as internet fraud is viewed as a quicker path to financial stability compared to legitimate means.

R5 said; *"Mostly due to economy pressure from their fellow guys seeing their fellow guys blow and everything, and we ladies at times cause that type of things"*

Peer pressure is the influence that peers, typically individuals of the same age group or social circle, exert on each other, encouraging conformity to specific behaviours, beliefs, or norms. Some of the participants relates to what it means to be pressured by families as a reason for engaging in internet fraud. R6 said: *"As we know in this kind of society, the males are expected to do more to provide food on the table and more of things like that. So, they try to look for how to get sources to get money, whether it is possible legal or illegal. And yeah, that's how I see more males do. Even though in school, some of them are not fathers too, but they find it like a responsibility for them to be ahead and look for a means which they try fraud"*

R7 said: *"Secondly, some do it because of their peer pressure. Like my friend is doing it, I want to do it."*

Quick Money

"Quick money" is one of the reasons why some students get involved in internet fraud. The allure of making money rapidly through fraudulent online activities can be tempting. The Participants described how many students engage in fraud because of the quickness of earning money as oppose to earning in a legit way.

R3 said: *"So people don't really have the choice, let me say. So they resort to those kinds of things to get easy and quick money".*

R18 said: *"Some students may engage in it to make quick money because to them, that is the fastest way to make money and survive".*

Financial support

Financial support is a common reason why some students, may be drawn to engaging in internet fraud. Some of the participants mentioned the need to support oneself in school which leads to engaging in internet fraud.

R7 said: *"Most of these guys that are going to internet fraud, they do it to earn money basically for financial assistance or financial backup in school"*

R4 said: *"Some participate to take care of themselves; some participate to sponsor themselves".*

R8 said: *"But most times, it's usually about money and trying to make ends means"*

R16 said: *"And sometimes in other cases, some students engaged in fraud to support themselves in school but I don't endorse it."*

Impression and Validation

Seeking validation from peers, particularly in the eyes of the opposite sex, was identified as a motivating factor for some students. They expressed a desire to attain a certain standard of living, believing it could only be achieved through fraudulent activities. R12 said: *"They want to acquire a lot of money and impress others, date the best girls on campus."*

Some of the participants described how trying to impress others and in seeking validation from others have made many engage in internet fraud.

R11 said: *"While some were into it to get more validated by ladies or guys"*

R4 said: *"Some are to show off"*

Set Standards

Some of the interviewees testified to the fact that there are some set standards to be met that made many students engage in fraud. Some wanting to live luxurious lifestyle set standards that can only be met through illegal hustling and engaging in Internet fraud.

R18 said: *"Also I think some people also do fraud to make some money and reach a certain standard they set for themselves, you know for example, some want to be riding a car and spending big every week so that's it"*

R8 said: *"It's usually about money and trying to reach their own standards."*

R19 said: *"Some to get luxurious lifestyles they cannot get through their income from parents or abusivess thereby setting some standards they want to meet by doing yahoo or any kind of fraud"*

Lack of Contentment

Greed and lack of contentment according to many of the interviewees has led many students to fraudulent acts. They described such students as been dissatisfied to the upkeep from their parents at home leading to the desire to seek for more through illegal means like Internet fraud.

R15 said: *"Generally speaking, many students that are into fraud because they lack contentment and they are not satisfied with the money they are collecting at home, they want more and they are ready to go the illegal way to acquire it".*

R8 said: *"And there is also greed. Greed is part of it. Some people don't actually need it because they want to be more than what they are supposed to be"*

Fun

A subset of participants mentioned that the thrill and excitement of engaging in internet fraud played a role in their participation. Two interviewees said that the fun and thrill behind staying on the internet anonymously and defrauding many has been a reason why some engage in Internet fraud. It gives them fun according to the interviewees.

R8 said: *"Some do it for fun. I have heard people doing it for fun"*

R4 said: *"Some just do it for fun"*

Situation of the Country

The challenging economic situation in Nigeria, characterized by high unemployment rates, was identified as a systemic factor contributing to students resorting to internet fraud. The lack of viable employment options compels some students to turn to fraudulent activities as a means of survival.

R3 said: *"I found most of them on the issue of money, unemployment and stuff like that. So, people don't really have the choice, let me say"*

According to the participants, the economic challenges coupled with unfavourable situation of the country have contributed to turning some students to internet fraud as a means of income.

R2 said: *"It's the situation of the country now. Everybody needs money. So, people always find ways to get money by all costs. So that's one of the reasons"*

R19 said: *"Many reasons, the state of the nation is not encouraging, and the economy of Nigeria is bad, which in turn affects the financial status of students from middle or low backgrounds"*

Question 3: What are the informal learning experiences of students at Obafemi Awolowo University concerning internet fraud?

Numerous participants reported falling victim to phishing emails, often designed to mimic legitimate organizations, enticing recipients to click on malicious links or

disclose personal information. These scams targeted individuals across various age groups, from unsuspecting teenagers to tech-savvy professionals.

Identity theft emerged as a prevalent form of internet fraud, where fraudsters would acquire personal information, such as social security numbers or bank account details, to commit financial crimes. Victims recounted the painstaking process of recovering their stolen identities and the financial havoc it caused. A substantial number of participants shared their experiences with fraudulent investment opportunities promising high returns. These scams ranged from cryptocurrency schemes to bogus stock investments. Victims often invested significant sums, only to realize the fraudulent nature of the schemes too late.

Romance scams were particularly heartbreaking, with participants recounting the emotional manipulation and deceit they endured. Fraudsters impersonated potential partners on dating websites and slowly built trust before requesting money or personal information. Victims suffered not only financial losses but also emotional distress.

The interviewees talked about their experiences both the ones they experienced personally and also second-hand experiences relating to others. Most Participants have something to say about being scammed most on social media like WhatsApp and Facebook while a number of participants got scammed from investment on fake platforms.

R2, R10 and R13 attested to the fact that they scammed on betting sites by unscrupulous individuals posing as betting sites agents or representatives. R1 described how her friend got defrauded by a strange person who asked her to open a sportybet (betting site) account and deposit some money to the new account to get double of her deposit. These was the experiences of R2, R10 and R13 although R10 was able to realize the fraud before it happened.

R1 said: *"We both got a message from one number that we don't know, and the guy was like, different numbers actually but they were talking about the same thing. They were like okay, do you have a sporty bet account if you don't have can you open the account. It is a betting platform so what they want you to do is you fund your betting account with your ATM card, after funding it they will give you a link to one website. You will then fill in your details, it felt so real actually because it was something one could easily fall into since you're like currently broke and all that, so I was like this thing is too good to be true. I think she deposited two thousand naira and she had like four thousand naira in her bank account, and immediately she dropped all the details they wiped everything from her account and the sporty bet account"*

R10 said: *"I was sent a message on WhatsApp for an irresistible offer to earn free money. All I needed to do was to fill my details (phone number and password of my sportybet account) to the site*

the scammer sent me the link and submit and be awaiting payment. I don't know the site had hidden keylogger that can capture my account details and send it to the scammer. I almost submitted my details on the site and submit if not for some eye opening that just occur to me. I left the site immediately that day and confronted the guy. He blocked me when he knew that I had known"

R2 said: *"Someone on WhatsApp promised to double my money in my betting account, so I paid for it and nothing happened. The person I paid to blocked my number and I could not reach the person anywhere, that's when I knew I got scammed"*

Two Respondents also described the experiences they had from investing on platforms that didn't later pay them or returned their capital. Some interviewees also explained how they got defrauded on social media like WhatsApp and Facebook from persons who promised them giveaways or high returns on their money invested.

R4 said: *"The name is News Payer. When I joined OAU, I guess when I was just becoming a student, I can't remember the year, I invested a little bit, planning to rip return after a month, but I didn't see any money they were just pressuring me to refer people'*

R5 said: *"There was this time, 2020, COVID period, I decided to do a little investment into this rackstarly stuff, It was really popular at that time I invested in 40k, but I couldn't get my money back That was the time their internet stuff went somehow I couldn't get my money back So, I did not like that"*

R14 and R7 narrated how both got scammed on Facebook and WhatsApp respectively.

R14 said: *"It was a post on Facebook. I thought the investment was legit and I was carried away. The scammer used the account of one of my friends to make the post so I thought it was my friend unknowingly to me that his account has been hacked. I was promised quick returns on my investment in few hours. You see, I have sent the money and it was after a while I knew I have been scammed when I didn't get any response again. Unfortunately, my friend's account was hacked and that made the scammer take that advantage to scam me"*

R7 said: *"I think it was around last year and I got scammed 5000 because it was more like a true WhatsApp. It was like a WhatsApp giveaway. If you pay a certain amount of money, they will help you double the money. It was more like a way to prey on students I sent the guy money and it was like 2000 Naira. The money is from 5000 above and he refunded my money. In a way that gave me a form of confidence that this is legit. I had to borrow money to add to my 2000 Naira and I sent him the money. He stopped replying to my texts and I tried calling. That's when I figured out that I have been scammed"*

A number of the interviewees also described how they got scammed or nearly got scammed when they ordered some things online.

R6 said: *"I have a friend who has an experience. She sells skincare products from Oriflame. And then she met a link online. And I thought, don't go through this link. She was like, it's Oriflame, everybody does Oriflame, she's going to get it through there. And then she ordered the products, close to 200K. And wa-boom, they brought plastics for her. And it was not even the products she ordered for. It was not even Oriflame. It came with a very funny spelling. It was Ore, O-R-E-Flame".*

R1 said: *"I was told that I won a phone like that online and that I should pay shipping fee to Ife. That shipping fee was 5K. So, I was like, if the shipping fee is 5K, pay the 5K. When you give me the phone, I'll give you the 5K. Because they don't have an office, nothing. It's just one person that was running it, so I told the person I was not interested"*

The interviewees narrated the experiences they had from fake bank officials leading to them getting defrauded. Some related with giving out their bank details unknowingly to a scammer.

R8 said: *"There was a case where someone told me they were scammed. How they did it was they acted like a bank personnel member. They called the person and they told them something is wrong with their account. They are there to help them resolve it. And they asked for the details of the account like account number, the numbers on the ATM, CVV, other stuff and the pin to their ATM. So, when the person sends it, they withdraw all his money and he has to go to the bank and change the card or block the account or do something.*

R3 said: *"So my mum, she has been called once, it's more than once actually, but let me just give the experience. Somebody called her and told her that her brother needed money, something, something. Then she had to go to a POS stand and then she transferred money to the person. Then she tried calling the number afterwards, but she was blocked".*

What are the experiences of the participants around the internet fraud? Furthermore, with regards to the learning experiences, which are the foundational concern of this research project the interviewees were asked what knowledge, skills and attitudes that they have learned from the experiences they had, either personal or second-hand experiences. Most of the participants agreed to have learned one or two lessons from their experiences and from those they had from other people.

Participants consistently reported heightened awareness of online security practices following their experience with internet fraud. They recognized the importance of robust password management, avoiding suspicious websites, and regularly updating antivirus software. The knowledge gained from their victimization contributed to an increased sense of personal responsibility for digital safety. Findings showed that internet fraud victims developed a heightened sense of scepticism regarding online interactions. Many expressed difficulties in trusting others, both online and offline. Suspicion extended to various aspects of life, including online transactions, social

interactions, and email communications. Participants' experiences profoundly influenced their perception of trust in the digital age. The emotional impact of internet fraud was profound, with participants describing feelings of anger, shame, and anxiety. Despite these emotional challenges, many reported the development of coping strategies. These included seeking support from friends and family, engaging in self-reflection, and accessing professional counselling services. The experience served as a catalyst for emotional growth and resilience.

Participants learned the importance of financial vigilance through their encounters with internet fraud. They reported adopting practices such as regularly monitoring bank statements, scrutinizing financial transactions, and seeking immediate redress in cases of suspicious activities. These newfound financial habits were a direct response to their victimization and represented a significant shift in behaviour.

R4 learned that safeguarding private information that are not meant to share to unknown persons online is very important. Safeguarding private information from the internet is crucial to avoid scams.

R4 said: *"...when you get scammed, you get unhappy. Lesson, I have learnt from this is that you safeguard important information that you are not supposed to share."*

R10 said: *"... I learned from my own experience that it is always good to hide your bank details like bank accounts, passwords and other important details of your life from social media or internet."*

R5 said it taught her not to venture into something one is not really sure of, whether a business or an investment online. R6 also learned to confirm the legibility and truthfulness of any business or investment online before venturing into it. According to Adams, 2020, "In a digital age, vigilance and cyber security awareness are essential ". This confirmed the fact that necessary diligence and consciousness are needed to avoid Internet fraud. Having enough information about the things of interest on the internet is also crucial to avoiding being scammed.

R5 said*: "The lesson I learnt is to not venture into something you are not really sure of that is not backed up by the Nigerian government by law, that doesn't really have a stable office or something like that"*

R6 said: *"What I have learnt is before you do anything online, make sure it is true. Don't just bump into it because of peer pressure or you want to do it your own way. You believe you have enough information. Its better you have someone who has done it before or you know it is real information from the direct source.*

R10 said that it taught him not to be carried away by irresistible juicy and too-good offers online. He affirmed greed as one of the things that made people fall victims of

internet fraud. R1 learned not to believe in things that seem rather too good to be true on the internet.

R10 said: *"Also I have learned to avoid all these juicy offers on the internet trying to give you the impossible. It's greed that makes many people fall victims of scams".*

R1 said: *"...first things first, don't believe things that's seems too good to be true"*

Furthermore, R7 said: *"What I have learnt is that it's not all links that are true. Because most links on the internet now, they are just there to fraud you"*

In addition, it was also noted that not building trust or trying to trust people on the internet can as well save many from getting defrauded.

R14 said*: "I have learned not to trust anybody online again because they might not be real. Impersonation is what makes people fall for scams most times"*

By far the most common learning experience acquired by the participants in this research endeavour was not disclosing or giving out their personal details to random people online and without due consultation. This was also emphasized according to Jones, 2020 that sharing personal information, such as your Social Security number or credit card details, can make you vulnerable to identity theft and online scams. It's essential to exercise caution and follow best practices for online privacy and security.

R8 said: *"Well, I have learnt not to give out your personal details. You have to be conscious of these things and guide them properly"*

R1 said: *"...never drop your personal details with anybody, especially those ones that link back to your bank".*

R9 said: *"You have to be very careful and pay attention to things because things might seem real from afar. Once you pay attention to details, you will find out that those things are actually scam. I have learnt to pay more attention and not give out my details"*

R3 said: *"Actually from this I have learnt that even when a strange number calls you and then gives you information, you should first confirm it before doing any other thing"*

Students' encounters with internet fraud, though challenging, serve as valuable learning experiences. They contribute to the development of digital resilience and equip individuals with the knowledge and skills needed to navigate the online world securely.

On the flip side, students who unfortunately suffer negative consequences due to internet fraud, such as financial loss or identity theft, undergo a different form of reinforcement. These negative experiences serve as negative reinforcement, discouraging risky online behaviours. Such individuals are more likely to become vigilant online, as they aim to avoid the negative outcomes associated with internet

fraud. Furthermore, learning from internet fraud encounters involves a process of shaping behaviour over time. Students gradually develop the habit of practicing secure online behaviour through reinforcement and feedback from their experiences.

Question 4: What are the coping strategies to avoid falling victims of Internet fraud?

The interviewees expressed views about the different coping strategies that can be adopted to avoid falling to online scams and internet fraud. Coping strategies to avoid internet fraud refer to the actions and techniques individuals can use to protect themselves from falling victim to online scams, phishing attacks, identity theft, and other forms of internet fraud. Keeping software, operating systems, and applications up to date is a preventive measure against vulnerabilities that fraudsters exploit. Cultivating a sceptical mindset and being vigilant when encountering suspicious emails or offers was identified as a coping strategy. Questioning the legitimacy of unexpected online communications can prevent fraud. Verifying the identity of online contacts and websites was another effective strategy. Participants reported that they often cross-checked the legitimacy of emails, websites, or social media profiles to confirm their authenticity.

R18 said putting passwords to everything on his devices has been a strategy that had really helped him so far to avoid getting scammed online. Putting passwords on devices is a fundamental cyber security measure to help prevent internet fraud. Passwords act as a barrier that restricts unauthorized access to your devices, ensuring that only authorized users can use or access the information stored on them. This is a crucial aspect of protecting your personal and financial information online.

R18 said: *"It's only someone who isn't aware of their gimmicks or covetous that is likely to fall to the hands of the fraudsters, I password anything that needs to be password, I don't engage in anything that looks like scam."*

R18 further said that being contented is also a coping strategy to avoid getting defrauded online because sometimes greed makes some people get scammed. R1 also made the same point.

R1 said: *"Well, I have always tried to guide my heart diligently like the Bible says against quick wealth. I am contented with what my parents give me and I know the kind of people I move with".*

R18 said: *"I'm not carried away with freebies that night cost me my money, and I'm contented with what I have through my legitimate source or hustle."*

R6 and R7 said they always make it a point of duty to install antivirus on their phones and devices. Also very needful to always check up with links before opening them on the device or phone.

R6 said: *"First thing I do is, in any of my devices, I install antivirus because that is one way you could get your information. Also, I try to check up the links and gather enough information. I don't do anything that doesn't have a sole name, something that I can trace you to".*

R7 said: *"... install antivirals on your system. Because all these links that they use for fraud, they are always a corrupt one. And also, I guess that there are some links that each link has HTTP... So, if some links don't have S, that means it's not security conscious or something. So don't just click on any links. Basically, don't click on any links that you see on the internet. Be sure of the links you want to click on so as to avoid all of this".*

By far the most common coping strategies adopted by the participants in this research endeavour are doing due research or investigation before doing any business or transaction online. Also, not sharing important phone details such as passwords and bank details is a very good coping strategy. Some participants explained how they move away from people who they known to be fraudsters just to be safe. While a few also mentioned that it is very important to always safeguard their devices and being careful with unknown people online.

R15 said: *"I can't fall victim of them because I have always kept a distance from whoever I know that is into internet fraud or yahoo. Don't say because they are your friend, they can't defraud you"*

R1 said: *"Okay, once I see strange numbers these days, and I see that the messages that they are sending is like a broadcast message I just block them directly because the moment you start reading, you start thinking that it might be true, so I just block them straight up. And I watch the way I gather with people, so that when they start saying some things you will not start thinking and then avoid people that will pressure you".*

R4 said: *"For me, I don't share my things, my password, I don't safeguard my laptop with pins and patterns. I also have multiple security on my phone. I don't share my data on other people's systems. I don't log in to my Gmail account to another person's system. That way, they have access to you indirectly".*

R9 said*: "I don't believe anything if it's not coming directly from the original source. I will make sure I reach out to my bank first to confirm if it's directly from the bank"*

R17 said: *"I believe people should stand on their guard always when they are online doing things. Don't go into much conversation with strangers and don't send any codes from your phone to anybody online".*

The informal learning experiences of students regarding internet fraud revealed several key insights;

Awareness and Exposure: A significant finding was that most students had some level of awareness and exposure to the concept of internet fraud. This awareness often stemmed from personal experiences or stories of friends and family falling victim to online scams. However, the depth of knowledge varied widely, with some students having a vague understanding and others demonstrating a more profound awareness.

Peer Influence: Findings showed that peer influence plays a critical role in shaping students' perceptions of internet fraud. Many students reported learning about online scams through discussions with their peers or online forums. This informal learning often took the form of cautionary tales shared by friends who had encountered fraud or scams themselves.

Fear and Caution: One noteworthy finding was that students' informal learning experiences tended to make them more cautious when engaging in online activities. The fear of falling victim to internet fraud was a common sentiment, which had a positive effect on their online behaviour, such as being cautious about sharing personal information and verifying the authenticity of websites.

Psychological Impacts: Some participants reported experiencing heightened anxiety and mistrust in online interactions due to their informal learning about internet fraud. They felt that this newfound awareness had affected their overall online experience and well-being.

Educational Gaps: Despite their informal learning, findings identified gaps in students' knowledge and skills related to internet fraud. While they had some awareness, many lacked a comprehensive understanding of the evolving tactics used by cybercriminals, as well as legal and technical aspects of online security.

Conclusion

To sum up, the findings have given understanding of how Obafemi Awolowo University students learn about internet fraud in informal ways. The common types of fraud, like catfishing, Ponzi schemes, and online vendor scams have. These experiences taught them to be more careful and sceptical when they're online. We also found that some students turn to internet fraud because they face tough economic situations and societal pressures. They want to be financially stable and fit in socially, which leads them towards these activities. This shows us that there are bigger problems at play that contribute to internet fraud among students. Despite facing scams, participants showed impressive strength and adaptability. They learned to protect their

personal information, double-check before making online deals, and be cautious. These skills not only kept them safe from scams but also helped them navigate the online world more responsibly.

In conclusion, on students' informal learning experiences around internet fraud underscores the critical role of awareness, peer influence, online resources, and the need for formal education in shaping their understanding and preparedness to combat cyber threats. These findings have implications for educational institutions and policymakers to address the gaps in cybersecurity education and empower students to navigate the digital landscape more securely.

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An exploration of Nigerian female university students' challenges and learning from body shaming experiences

Femi-Aderinto Adedolapo Modupe, Obafemi Awolowo University, Nigeria.

Email: aaboderin@oauife.edu.ng

Abstract

Body shaming is a widespread problem with serious repercussions that affects people. This study identifies the forms of body shaming experienced by female undergraduates in Nigeria, at Obafemi Awolowo University (OAU) and the contexts they occur, it explores the impact of body shaming on the wellbeing of participants and the lessons garnered to cope with the experiences. This qualitative study adopted the descriptive case study research design. A semi-structured interview guides elicited information from 12 undergraduates in OAU. Thematic analysis was used to identify key themes that emerged from participants' lived experiences of body shaming. Findings revealed instances of body shaming among undergraduates. Body shaming experienced impacted dimensions of participants' wellbeing. Participants learnt to cope with body shaming by practicing self-love and acceptance; seeking support; trivialising mockery; engaging in education and sensitization. These coping strategies reflect participants' informal, experiential and transformative learning which align with lifelong learning principles. Participants are able to develop personal agency and adaptive skills which are helpful beyond formal education setting through informal and reflective processes. This study concludes that unmanaged body shaming could have long-term effects. Support group creation and awareness-raising efforts should be intensified to help students better cope with and combat body shaming.

Keywords: body shaming, wellbeing, undergraduates, learning, lived experiences

Introduction

Globally, individuals have and continue to be subjected to judgemental, negative comments or remarks about their physical appearance or features in public and private spheres. The emotions that follow after a person that is body shamed are often deep yet hidden, unpleasant and sometimes life threatening. Body shaming is perceived to be an unrepeated act where someone directs often negative unwanted opinions/remarks on a target's body without necessarily meaning to cause harm but which is nevertheless interpreted negatively by the target. Furthermore, body shaming could occur online as well as offline, and it can take many forms, from well-intentioned counsel to malicious insults. (Schlüter et al., 2023). While body shaming cut across gender, race, religion and other parameters, one of the most affected by the phenomenon is the youth (Deviantony, Fitria, Rondhianto & Pramesuari 2024).

Additionally, providing a compendium of global body image statistics for female children and teenagers based on various researches, Linardon (2024) reported that around 50% of 13-year-old American girls reported were unhappy with their bodies, with this number growing to nearly 80% by age 17. They also reported that nearly 80% of young teenage girls exhibited fears of becoming fat. They likewise reported that body image was listed in the top 4 concerns for young women. Among the youth populace in Nigeria, young females are more susceptible to body shaming for reasons such as striving to fit the complex and multidimensional cultural and societal conventions surrounding body image as frequently influenced by traditional beliefs, contemporary beauty standards, and the growing influence of social media in their formative years. One of the settings where a high concentration of young females is found in Nigeria is within tertiary institutions.

There, there is a growing concern about the prevalence of body shaming among female undergraduates. Okoli, Moneke, Onuchukwu and Obi (2023) for instance, reported that females were more exposed to body shaming than males with social playing a major role in perpetuating it. Navigating the aforementioned while juggling the demands of academic life poses peculiar difficulties for female undergraduates. Despite the growing awareness of this problem, there appears to an under reportage of the lived experiences of female undergraduates who have experienced body shaming and the attendant impacts on their self-perception, mental health, and social interactions through qualitative research especially within a Nigerian context. It is equally essential to impress the need for the creation of support networks and interventions that effectively lessen the adverse effects of body shaming especially in higher institutions of learning. This study therefore aims to: identify the forms of body shaming experienced by female undergraduates in Obafemi Awolowo University (OAU) and the contexts in which they occur; explore the impact of body shaming on the wellbeing of female undergraduates in the study area and examine the lesson(s) the female undergraduates learnt to cope with body shaming experiences in Obafemi Awolowo University. The following research questions guided this study: What are the forms of body shaming experienced by female undergraduates in OAU and where do they occur? What is the impact of body shaming on the wellbeing of female undergraduates? What lessons have the body shamed learnt to cope with their experience in OAU?

Literature Review

Forms of Body shaming and their impact on well-being in Higher Institutions

Literature is replete with various forms of body shaming that are prevalent in higher institutions and how they impact young people. Providing insights from different contexts and settings, authors identified weight-related body shaming to be a prevalent form of body shaming in higher institutions. For instance, speaking from a Malaysian University context, Zulkifli, Lati and Idris (2023) identified that body weight or size is the most prevalent issue among undergraduates. From an Italian perspective, while upholding other empirical evidences that body weight is the most common reason that youths are teased and bullied, Cerolini, Vacca, Zegretti and Lombardo (2024) submitted that body shaming and weight stigma perpetrated by peers and family members is prevalent among adolescents. It was reported that more female adolescents reported higher eating disorder symptoms, body satisfaction and weight bias. Saxena, Mathur, and Jain (2020) reported that while women are often body shamed for being either too fat or too thin, men are typically body shamed for their muscularity and body structure.

In Mustafa, Mahat, Shah, Ali, Mohideen & Mahzan (2022), the study reported that the most identified form of body shaming was name calling due to body shape, followed by bad comments of one's weight and/or height followed by negative remark about skin complexion. Similarly, Moneke, Moneke, Onuchukwu, and Obi (2023) while reporting that female undergraduates were most affected by body shaming in a Nigerian University in Awka, also affirm that the prevalent form of body shaming among undergraduates was either related to facial look or complexion. They noted that social media played a critical role on the prevalence. Furthermore, Chen and Todd (2005) cited in Moneke, Moneke, Onuchukwu, and Obi (2023) highlighted that apart from fat-shaming, other forms of shaming may include shaming for, height, hairiness, hair colour, body shape, looks, and may include of tattoos and piercings or diseases that leave a physical mark on such as person. Irrespective of the form or dynamic of body shaming, it leaves an impact, some more profound than others on the victim.

Previous studies have shown that there are both short- and long-term impacts of body shaming on the body shamed. For instance, Cerolini,Vacca, Zegretti and Lombardo, 2024; Saxena, Mathur, and Jain, 2020; Zulkifli, Lati and Idris, 2023 submitted that body shaming affects young adults and has the potential to contribute to negative body image/body dissatisfaction, resulting to low self-esteem, eating disorders, emotional distress, mental health issues, other psychological health issues including consequences that could pose harm or risks to the victims' future and well-being and adversely

affected students' academic performance. Mustafa, Mahat, Shah, Ali, Mohideen & Mahzan (2022) reported the impact of body shaming to include depression which could lead to suicidal ideation, anxiety, mental illness and body dysmorphia.

Having established that body shaming has consequences on adolescents and young adults in higher institutions, knowing the spaces, contexts and/or settings where they occur is equally important.

Spaces, contexts and/or settings where body shaming occurs for young adults.

Examples of these spaces, contexts and/or settings include but are not limited to social media/online spaces, peer and other social interaction sites. Social media which refers to web-based applications including internet sites such as Meta's Facebook and Instagram, X (formerly Twitter), YouTube, Yelp, and innumerable blogs that promote the creation and exchange of user-generated content. Social media serves as an informal network of online venues – public and private, paid subscription and free, large and small while serving a variety of purposes including wielding cultural influence on fashion and food trends, family and adolescent health issues, world news and local events, political and community action events (Ashar, 2024).

Hiding under the cloak of anonymity and pseudonymity as asserted by Australian Government, eSafety Commissioner (n.d.), social media users can hide or disguise their identifying information, such as their real name, age, location and data use for negative behaviours to harm or abuse others online in form of cyberbullying and adult cyber abuse. Additionally, Lin, Labent, Chin & Chan (2024) affirm that social media cultivates the risk of becoming the platform that spreads negative body images, possibly leading to body shaming. The prominence of social media as a tool for body shaming among young adults and in higher institution is alarming. For instance, a study by Mondol (2024) showed that while 66.45% of students were faced with body shaming, 42.76% of these incidences occurred on social media.

Furthermore, Zulkifli, Latif & Idris (2023) reported that more than half of the university student respondents in a Malaysian struggled with their body image which is highly suspected to have happened due to social stigma or ideal beauty standards promoted on social media. Similarly, findings in Moneke, Moneke, Onuchukwu & Obi (2023) showed that social media has played a critical role in incessant form of body-shaming as over 73% of university undergraduates have been body shamed on social media. These findings show the normalization of body shaming within virtual spaces and highlight social media as an enabler of body shaming behaviours.

Peer and social interactions

Settings which provide the avenue for adolescents and young adults to interact and mingle with others in public spaces such as with peers/colleagues, lecturers and others found in schools and Higher Education Institutions during academic and extracurricular activities and in private spaces such as within social circles like friend groups, romantic relationships, student hostels, sporting/fitness spaces, cultural or religious gatherings, and within the family/home contexts to name a few where body-related stereotypes and exclusion are reinforced and body shaming perpetrated. This assertion is affirmed in Deviantony, Fitria, Rondhianto and Pramesuari (2024) that the phenomenon of body shaming among adolescents is deeply rooted in societal norms and peer interactions. Apart from, from peers, they affirm that the family and media were main sources of body shaming.

The findings in Kenny, O'Malley-Keighran, Molcho & Kelly (2017) showed that both male and female adolescents revealed that the peer environment is characterized by a significant pressure to conform to appearance expectations, and deviations from such expectations lead to negative peer experiences for them. Affirming that body shaming occurs within HEIs, Nnamchi, Ike, Okafor, Ogba, Obunukwu & Agu (2024) attest that constant interaction with peers was among the contributors to undergraduates' apparent discontent with their body parts. Gam, Singh, Mana, Kar & Gupta (2020) cited in Zulkifli, Latif & Idris (2023) described the extent to which body shaming goes among peers while reporting that students with different physical appearance from the majority are body shamed and neglected by others. Additionally, Iftitania (2021) cited in Zulkifli, Latif & Idris (2023) recognise that body shaming is perpetrated by community members, including those close to the body shamed, such as family members, friends, schoolmates, teachers, and colleagues. The report on the findings of a study by University of Toronto researchers of students who are now retired female Canadian national team athletes and Olympians showed that all of them experienced body-related emotional abuse in form of negative verbal comments about their bodies, body monitoring, forced restrictions of food and water, public criticism of the body, and punishment when body-related standards were not met as perpetrated by their coaches. These experiences had long-term detrimental effects on the athletes (Damjanovic, 2021; Willson & Kerr, 2022).

Apart from examining the settings and sites where body shaming occurs among young adults, especially in HEIs, it is imperative to explore what they have learnt to do in response to and making sense of their body shaming experiences.

Young Adults' Learning to Cope with body shaming experiences

As it has been established, body shaming experiences can result to stress for adolescents and young adults due to the unpleasant experiences associated with it (Deviantony, Fitria, Rondhianto and Pramesuari, 2024; Kudlová, Hollá, Turzík & Hrkotáčová, 2024). It is therefore not out of place for the body shamed to devise means to cope with the experience. Coping which involves the acquisition, adaptation and application of knowledge and skills to address stressors and the mechanisms adopted to manage stress are deeply rooted in learned behaviours, shaped by familial and past traumatic encounters. Therefore, recognizing prevalent stress reactions is crucial for crafting effective coping strategies (Bondarchuk, Balakhtar, Pinchuk, Pustovalov & Pavlenok, 2024).

Findings in different studies show that adolescents and young adults adopt different coping mechanisms and strategies to manage body shaming. For instance, Smith-Jackson, Reel & Thackeray (2011) reported that first-year young adult college students who have developed negative body image perhaps as imprinted by media, societal and peer pressure opted for exercising, healthy eating, appearance changing, talking to friends or family, religion/spirituality, spending time alone, getting out and doing something, and self-acceptance as coping strategies. Gam, Singh, Manar, Kar and Gupta (2020) reported that students result to absenteeism to avoid being criticised or body shamed by their peers in the school.

Bondarchuk, Balakhtar, Pinchuk, Pustovalov & Pavlenok (2024) explained that although coping mechanisms varied among individuals, they could be categorised into two, first, as problem-focused mechanism which is aimed to alter the situation. Here, individuals seek to understand the problem, strategize solutions, and prepare for action when faced with a stressful situation. Secondly, they could be categorised as emotion-focused mechanism which aims to manage emotions. Individuals who adopt this mechanism endeavour to restore emotional equilibrium through humour, denial, positive reframing among others. The findings in Ismail & Abdussalam (2022) that explored the body shaming experiences of adolescents in Kannur district, Malabar reported that adolescents adopted emotion focused and problem focused coping strategies to deal with body shaming. While the emotion focused strategies adopted addressed regulating negative emotional reactions to stress anxiety like loving oneself, writing down emotions, feelings and positive affirmations, ignoring body shamers and self-acceptance/self-love, the problem focused coping strategy adopted entailed leveraging the support of others like parents or friends to cope with or solve the problem confronted as a result of body shaming.

Additionally, in Arumugam, Manap, Mello & Dharinee (2022), results showed that the body shamed adopted self-compassion which helped to cope with body shame by having more respect for themselves and feeling self-conscious about their appearance to be more confident with themselves. All the aforementioned efforts of coping with body shaming result in learning since it entails the acquisition of knowledge and attitudes through their experiences. Learning is seen as the process of growth and development in which the learner acquires a body of knowledge, attitudes and skills, develops and internalises ideas and applies them to life contexts. It involves measurable and relatively permanent changes in behaviour resulting from experience (Kasemsap, 2017; Kakongoro, 2019).

Within the adult education context, learning could be acquired formally, non-formally or informally. Formal learning is described as the knowledge, skills and attitudes acquired within defined curricula of educational institutions, under the control of teachers or educators leading to some form of official recognition or qualification. Non-formal learning occurs in settings such as workshops or during other training activities delivered in a semi-structured format because it affords adults the means to meet a specific or momentary need for systematic instruction, while informal learning is described as experiential, incidental and/or unstructured, non-institutional learning. Here, new knowledge, understanding, skills, or attitudes which people undertake whether consciously or unconsciously are either construction, co-constructed, or acquired (Hrimech, 2005; Livingstone, 2000; Marsick & Volpe, 1999; Mejiuni, Cranton & Táíwò, 2015).

Although studies have separately examined issues that revolve around body shaming across different ages, genders and contexts, there appears to however be limited research that explores how body shamed young adults learn to cope with their experience based on the body part being targeted, the spaces where the body shaming occurred and the effect of body shaming on them. This study aims to address the gaps in literature by exploring the nature of body shaming, the contexts in which they occur, its impact on university undergraduates and the dynamics of learning body shamed university students acquire to navigate through as well as cope with their experience for immediate and lifelong adaptability.

Methodology

This is experiences of body shamed university undergraduates in Obafemi Awolowo University, Ile Ife, Nigeria. The case study as a methodological research approach is used to generate an in-depth understanding of a contemporary issue or phenomenon in a bounded system. It also allows for an in-depth investigation into an individual,

group, or event to gain an understanding of a real-life phenomenon (Coombs, 2022). Participants were purposively selected having experienced body shaming as undergraduates in Obafemi Awolowo University. The sample consisted of 12 final year female undergraduates selected using convenience sampling technique from the Faculties of Education, Arts, and Engineering being the faculties with the highest number of undergraduates willing to participate in the study.

Data were gathered from participants using semi-structured interviews. Interviews conducted were audio recorded with the participants' consent and lasted approximately7minutes per participant. The interview guide consisted of open and probing questions about the body shaming experiences of participants.

Informed consents were duly sought from and given by the participants before the commencement of the interview. Additionally, participants were assured of confidentiality and anonymity. To this effect, pseudonyms were either chosen by participants or assigned by the researcher. The data collected were analysed using thematic analysis which followed Braun and Clarke's (2006) six phases for thematic analysis involving familiarising with data, generating initial codes, searching for themes, reviewing, defining and naming themes and producing the report.

Several strategies were employed to show trustworthiness- credibility, transferability, dependability and confirmability in this qualitative research as stipulated in Lincoln and Guba (1985).To ensure credibility which shows that the findings of the study reflect participants' experiences and perspectives in an accurate manner, the researcher, in addition to engaging with participants closely to acquire in-depth understanding of their experiences, conducted member checking to ensure the accuracy and validity of the interpretation of participants' experiences. Also, we engaged in peer debriefing with colleagues to minimize the researcher's personal bias.

To satisfy the criteria of transferability, which seeks to ensure the applicability of the study findings to other contexts, rich and thick descriptions of the research context were provided by the researcher. Doing this allowed readers to judge whether or not this study's findings were applicable to similar contexts or situations. Furthermore, to ensure dependability in establishing the merit of this research as consistent and repeatable in similar conditions, the researcher adopted an auditing approach which entailed keeping complete records of the phases of the research process from detailing research decisions taken, processes for data collection and analysis. Additionally, colleagues served as auditors to ascertain that proper procedures were followed and the degree to which theoretical inferences can be supported. For confirmability, which shows that the researcher did not allow personal biases to sway the conduct of the research and its derived findings, the researcher ensures to report participants'

experiences as contained in the well-organized, stored and backed up recordings and transcriptions obtained from the study.

Results and Discussion

The biographic details of participants are presented in this section. From the data collected, themes were generated while the analysis and discussion of findings were done based on these themes.

Table 1 presents the biographic details of the participants in this study. All participants are identified by pseudonyms to prioritise anonymity and confidentiality identify all participants. Since religion is not the basis for recruitment, the predominance of Christian participants was not intentional but coincidental. Also, four participants who were in final year, either in parts four or five were selected respectively from three Faculties in the University which suggests that they would have amassed significant experiences in the course of their academic pursuits.

Glowie is a 24-year-old single Christian at the 400 level of the Faculty of Education. She is shamed for having Alopecia, a condition that causes partial or complete hair loss. As a student, she mostly gets body-shamed by her friends at gatherings and roommates in the hostel. She experiences name-calling where she is called bald, mammy water. She feels bad when her body is shamed. She attests to being physically, socially and spiritually impacted by body shaming. She has learnt to outsource for support by joining a support group of people with alopecia. She learnt to love herself when she realized that hair growth products were not working for her condition. Additionally, she has learnt to enlighten people about her condition.

Nancy is 22 years old. She is a Christian, single and in part four in the Faculty of Education. She is body-shamed for having small breasts, which is not commensurate with her age and class. She experienced body shaming from friends and colleagues in school. In response to body shaming, she used to stuff her bra with socks, tissue paper and clothes to make her breasts appear bigger. She gets to be called flat chest, a guy by her body shamers. She attested that she is physically and emotionally affected by body shaming. For example, she did not find it easy to mingle with people. Spiritually, she constantly prayed to God to help her condition. She attested to having learnt to cope by loving herself and leveraging the support of her friends, who assure her that she has a nice shape. She learnt online that people who are not busty are good-looking and appreciated. She explored putting "*kuluso*" (an insect believed to have the ability to increase breast size when rubbed/ applied on the breast) on her breasts; she wears two bras and intends to buy breast enlargement oil when she can afford it. Despite

being restricted to wearing baby tops because of her breast size, she has learnt to love her shape.

Love is a 23-year-old Christian, single, part four student in the Faculty of Education. She experienced body shaming for being thin by friends, colleagues, and older people in school and other contexts. Being body-shamed makes her feel terrible, sad and angry. She attests to being mentally affected by her experience; she experiences stress from thinking about what to do to gain weight. She has learnt to motivate herself to feel self-confident. Additionally, she sought resources about food to help her gain weight and follow a dietary routine. She has changed her perspective about body shaming from thinking that being body shamed was because people wanted the best for her to realising that the most important thing is feeling confident in oneself.

Love has learnt to sensitise others who are body shamed to learn from her not to live a life based on how people view or judge them but rather to live for themselves and their happiness. She equally wants people who body shame others, such as mates, colleagues, and younger ones, to know that they are hurting others (knowingly or unknowingly by their actions.

Maggie is a 24-year-old 500-level Christian student in the Faculty of Technology. She is engaged. She attests to being shamed for being thin countless times by children, adults, her younger siblings, and her parents at home, also she is also shamed by her fiancé. She is occasionally weighted down when body-shamed. She has learnt that there are different body sizes; therefore, she has learnt to love herself and flaunt what she has. She is also aware that body shaming cannot stop; it has always been and will always be. She has grown a thick skin towards body shaming, though she momentarily asks herself, wouldn't she add a little flesh?

Ada is a 23-year-old single Christian 400-level finalist in the Faculty of Arts. She has experienced body shaming for being slim especially by her cousins, younger siblings at home as well as by a few of her friends. She attests that all her siblings (younger and older) are bigger than she is. She was nicknamed dry bone, long neck " and "*tirin gbeku*" (gaunt /emaciated person) to depict the extent to which she is skinny. She was constantly reminded that her collarbone was very prominent. Ada gets emotionally disturbed for being constantly asked, "Why are you like this? Why are you like that? This spoils her mood. Also, socially, she allows others to take the lead, even in things she would love to do or has fresh ideas about, because she fears that she would be looked down upon; it kills her ego. She does not interact much. She has learnt self-discovery- knowing who she is and realising that even if she grew fatter, people will still talk as you cannot satisfy people. Apart from these, she has learnt to eat healthy and love herself.

Bisi is a 25-year-old married 400-level Christian student in the Faculty of Arts. She is body-shamed for her curved/bow legs. She recalls being insulted in the neighbourhood by some guys. In response to their insults, she insulted them as well. Additionally, Bisi identified to have been body shamed by her in the lecture hall by her classmates whom she tagged "hungry looking male class mates." They call her names like C. Ronaldo (a sarcastic way to refer to her as the footballer Christiano Rolaldo) because of her legs.

To cope with body shaming, Bisi has learnt to fight back at her shamers rather than laugh it (the shaming) away whenever she is body shamed. In addition, she has learnt to love herself. Her husband was attracted to her because of her legs.

Tolani is a 21-year-old single 500-level student in the Faculty of Technology. She is a Christian and believes that she is wonderfully and fearfully made. She recounts that she was body shamed for having a small nose, which expands whenever she smiles. She experienced body shaming within the church context when she was called "small nose", "tiger nose" and "expanding nose" in public. She felt bad and embarrassed because all eyes were fixed on her. Additionally, she recollects being body-shamed by friends when they socialise and course mates in the university. Her well-being has been affected because being body shamed leaves her feeling bad and embarrassed. Due to this, meeting people is often embarrassing as the first thing they notice about her is her small nose. Being body-shamed makes her self-conscious about having a small nose; she gets embarrassed when people want to confirm if she has a small nose. Tolani has learnt to cope with body shaming by accepting and loving herself since there is nothing, she can do to adjust her nose.

Tito is a single, 23-year-old Christian. She is in 500 level in the Faculty of Technology. Her body shaming experience started when she was admitted into the University when she began to gain weight in her bid to recover from an illness. Many people assumed that she was pregnant because her stomach was big. Her body shaming experience often occurred within the home and school contexts by neighbours, siblings, and course mates. She has been called "fat pig" by her shamers before.

Tito noted that she cannot wear certain clothes/dresses because of her stomach, so she resorted to wearing waist trainers, which she has been using since part 2 to feel comfortable. Tito noted that she had been on a self-discovery journey and confessed to loving being thick and chubby but purchased the waist trainers as a solution to her big stomach. Additionally, Tito has learnt to follow a healthy eating routine. She has also learnt to love her body and to face her body shamers rather than feeling depressed.

Banke is a single 23-year-old Christian 400-level student in the Faculty of Arts. Banke experienced body shaming because of her height. She is short, although she is not a dwarf. She feels odd when she goes to church or other outings and this results in wearing high-heeled shoes. However, since she cannot wear high-heeled shoes to lectures, she appears short, which she does not like. In the home and school contexts, she is often body-shamed by her sisters and friends, respectively. They called her "Maltina bottle" and "brief in height" by her shamers. Banke feels bad when she is body shamed, socially, she lost her self-confidence in school and the public. She has learnt to cope and live with body shaming by accepting herself the way she is: "this is me!" In addition, she has learnt to ignore people's comments about her height. Banke has also grown to love high-heeled shoes, she has them in different colours to match her clothes. Apart from these, she made friends with other equally short people to see the best in themselves.

Banke used to feel bad and left out among her course mates who tell her that although she is a finalist, she does not look like one (recounting this experience made her teary), now, however, she feels okay about herself, she has learnt to see herself as the best in her own body to avoid depression.

Biola is a 22-year-old single Christian. She is a final year undergraduate in the Faculty of Technology. She has been body-shamed on several occasions for her height and stature by her friends and random people who are taller than her. Since she is short, she is referred to as "such a small girl". Her friends also call her "smally". Biola feels restricted when she wants to participate in activities because she reminds herself that "you are short, will they allow you…?" She feels restricted from socialising freely. She copes with body shaming by laughing along with her body shamers to trivialise their action. It was her way of shaking off the shaming from her mind. She also attends motivational programmes to build up her self-confidence. She has learnt to wear high heels more. She equally insults those who insult her about her height.

Millie is 22 years old. She is a Christian, single and a final-year student in the Faculty of Education. Although she loves her body and has high self-esteem, she has experienced body shaming for being thin, particularly because of her visible collarbone and skinny legs. She described that the hole in her collarbone can retain water when poured into it. She has been told by people not to wear leggings because it makes her legs look thin. She has been body-shamed at school by her mates and by adults in other settings. They call her toothpick, chicken legs, the girl with the well in her neck. Being body-shamed makes her a little uncomfortable but she has learnt to walk away from/overlook/ignore body shaming. She sometimes corrects others who body shame her. Having explored several ways to ass to her body mass without success, she

has come to realise that she did not choose the body she was born with, she no longer gets concerned about what people say about her.

Funke is a 24-year-old single Christian in her final year of undergraduate studies in the Faculty of Arts. Funke experienced body shaming because of her protruding eyes, especially by males in the school. They call her *oju yobo* (bulging eyes/pop eyes). She feels bad when her body is shamed. She has learnt to be self-confident to cope with body shaming. Being body-shamed has helped her empathise with others being body-shamed.

Table 1: Participants' Biographic Details

S/N	Participant's Pseudonyms	Age	Religion	Marital Status	Faculty	Level
1	Glowie	24	Christianity	Single	Arts	400
2	Nancy	22	Christianity	Single	Education	400
3	Love	23	Christianity	Single	Education	400
4	Maggie	24	Christianity	Single (engaged)	Technology	500
5	Ada	23	Christianity	Single	Education	400
6	Bisi	25	Christianity	Married	Arts	400
7	Tolani	21	Christianity	Single	Technology	500
8	Tito	23	Christianity	Single	Technology	500
9	Banke	23	Christianity	Single	Arts	400
10	Biola	22	Christianity	Single	Technology	500
11	Millie	22	Christianity	Single	Education	400
12	Funke	24	Christianity	Single	Arts	400

Research Question one: What are the forms of body shaming experienced by female undergraduates in OAU and where do they occur?

The themes and statements from participants on the forms of body shaming and the contexts where they occur are presented in Table 2. Analysis showed that participants experienced body parts and physical features-based shaming and verbal body shaming, name calling and other expressions while the shaming occurred within academic, home, family and romantic relationships, public spaces and social circles contexts with respective body shamers.

Table 2: Forms of body shaming and the contexts of occurrences

	Theme	Statements from Participants
Forms of body shaming	Body parts and physical features-based shaming	*I was body shamed for having a very* ***small breast or no breast*** *at all for my age and class* *I was shamed for my nose…I have a* ***small nose*** *and it is open up whenever I smile…it does expand* *I was body shamed for my eyes.* *I have this condition called* ***alopecia****…****loss of hair****…mostly people around me body shamed me.* *It started when I entered university… I added weight…I had a* ***big stomach*** *I have been body shamed for* ***my height and stature****; my body shaming is that* ***I am short*** *people insult…because I have cute* ***curved legs*** *although it is called* ***bow legs*** *but I call it that* *I was body shamed for my body…people will be like, you are* ***too thin****; I have been body shamed a countless time because I am a* ***slim*** *person; it comes regularly because…I am a* ***very slim person****; a part of my body that has been…shamed, it will be my* ***collar bone*** *and my legs, because I have a very* ***thin legs*** *while my collar bone is very obvious… pour water here(collar bone) and it will…hold it in.*
	Verbal body shaming, name calling and other expressions	***Mammy water (****sarcastically inferring the participant exchanged her hair for something else in the marine kingdom****); flat chest; dry bone; long neck; expanding nose; tiger nose; fat pig; smally; chicken legs, C. Ronaldo, tirin gbeku (gaunt person); Maltina bottle, "toothpick; oju yobo (pop eyes); You need to eat more, add flesh; you are too thin***
Contexts of occurrence of body shaming	Academic Context	***my roommate in the hostel once in a while; colleagues in school; my course mates*** in the university***;*** *they are mostly guys (males) in the school; I have been body shamed in the lecture hall by some hungry looking male classmates*
	Home, Family and romantic relationship contexts	***my extended members… when we go for family occasions also body shamed me; my younger siblings and my parents at home; my fiancé; haaa my cousins, yes! ; my neighbours at home***
	Public Spaces	***I boarded a bus*** *and … a woman dragged her child so that her child would not touch me … I could tell the child wanted to come to me and be like* ***aunty what happened to your hair;*** *we closed from school* ***I was walking home, some guys behind me where insulting me*** *because I have cute curve legs although it is called bow legs;* ***I was in church****…when a small boy collected my bottle, when I asked him to return it,* ***he said you wouldn't leave here with your tiger nose.***
	Social circles	*Most of* ***my friends*** *that know about it; basically,* ***my friends body shame me; friends*** at gatherings.

Body Parts and Physical Features-Based Shaming

Alopecia, small breasts, a small nose, height, stature, bow legs, and thinness were among the physical characteristics and body parts for which participants reported experiencing shame. These experiences are consistent with research by Zulkifli, Lati, and Idris (2023) and Moneke et al. (2023), who reported comparable instances of body shaming among college students based on appearance and body size. Body shaming is also described by Schlüter et al. (2023) as unwelcome or disparaging remarks about one's body that are frequently interpreted as deeply hurtful even though they may not be intended to cause harm.

Verbal Body Shaming, Name-Calling, and other Expressions

Name-calling such as "flat chest," "dry bone," "long neck," "expanding nose," "fat pig," "chicken legs," "C. Ronaldo," *tirin gbeku* (Yoruba for a gaunt person), "toothpick," and *oju yobo* (describing pop eyes) were among the demeaning and hurtful verbal remarks that participants reported hearing. Other remarks included "You need to eat more" and "You are too thin". These phrases demonstrate the way in which verbal abuse serves as a kind of body shaming. These results are in line with Mustafa et al. (2022), who found that negative comments and name-calling are frequent forms of body shaming among young people.

Contexts of Occurrence of Body Shaming and Shamers

Findings showed that participants reported experiencing body shaming in multiple contexts. Roommates, colleagues and course mates especially the male ones were frequently the offenders, and the academic environment—including residence halls, lecture halls, and the larger university community—was a prominent setting. This is consistent with the findings of Kenny et al. (2017), who discovered that body shaming is fuelled by peer pressure in educational environments, especially when students deviate from appearance standards. Important contexts included the home and romantic relationships, where participants experienced shame from partners and family, frequently reinforcing negative stereotypes. Deviantony et al. (2024) found that family is a major source of body shaming, and this supports their findings. Both strangers and members of the religious community participated in public places like streets, churches, and buses. In line with Deviantony et al. (2024) and Kenny et al. (2017), social circles—friends and peers—also made a contribution, highlighting the impact of peer expectations and societal norms on appearance-related pressure.

Research Question two: What is the impact of body shaming on the wellbeing of female undergraduates?

Table three presents the impact of body shaming on participants as social; emotional and psychological; self-esteem and identity impact; and spiritual questioning.

Table 3: Impacts of body shaming on female undergraduates' well being

Theme	Statements from Participants
Social impact	*I have to wear two bras to make it (her breasts) look big…I* **became an introvert…no unnecessary mingling with people***…only when important; I feel like there is no point ,* **let me just stay back and not interact that much***…so* **becoming a shadow of myself…I allow others take the lead…it kills my ego;** *I have been* **restricted to socialise freely; when everybody is going out, you can't because you will feel like I don't want to…it is when people will be like, "see this slim girl!…it is now like a stigma; I could not have friends like others**
Emotional and Psychological Impact	**I feel down** *once in a while when* **it (shaming) gets to me***;* **Stress…because on the long run you start thinking** *that "***what can I do to gain weight?...it has really affected me mentally;** *It* **affected me so bad that I will be down, depressed because I used to have hair but now I no longer have hair; It wasn't really nice** *having to deal with the fact that* **you have people frequently asking you, 'why are you like this? It just spoils my mood…automatically you have ruined the whole day for me?'; I feel bad and embarrassed** *most times…***everyone wants to confirm if I actually have a very small nose; Ha! In front of everybody, I really felt bad and embarrassed** *because all eyes were fixed on me;* **I feel bad** *(when body shamed)"; just a little bit hurt*
Self-esteem and identity impact	*I* **feel less of myself having a small nose***, so I am always* **conscious of it** *which I cannot change; there are sometimes I will want to do something and I have to consider that* **guy you are short will they allow you? Can you go in for that?***; I* **lost my self-confidence especially when in school and the public***; Although I love my body,* **being body shamed makes me a bit uncomfortable***.*
Spiritual questioning	*It affected me spiritually to the extent that I* **wrote it in my prayer point and my everyday prayer that God should help me***, I am a human like others, so* **why having a flat chest?***; I* **did not want to go to Church again because I felt God did not exist***,* **"why will He allow such a thing to happen to me?"**

Social Impact

Due to body shaming, participants reported social disengagement and decreased engagement in public and academic contexts, frequently avoiding social interactions and remaining silent. This supports the findings of Schluger (2025), who pointed out that body shaming can cause anxiety, depression, and a desire to avoid places and situations where shaming might take place such as schools or other contexts. Zulkifli,

Latif, and Idris (2023) found that body-shamed undergraduates experience social isolation as a result of feeling pressured to achieve an ideal body, avoiding social interaction, and continuously worrying about how others see them. The participants' feelings of isolation are consistent with their findings.

Emotional and Psychological Impact

Participants who were subjected to body shaming experienced profound emotional and psychological repercussions, frequently becoming depressed or in a bad mood. These results resulted from emotions of shame, rage, and embarrassment brought on by people's public scrutiny of their bodies or physical characteristics. Similar effects were noted by Mondol (2024), who discovered that body-shamed undergraduates in Bangladesh frequently experienced emotional distress, depression, and inferiority. These results also support those of Zulkifli, Latif, and Idris (2023), who found that body shaming among youth has serious psychological and even physical repercussions.

Self-esteem and Identity Impact

The findings showed that because of their experiences with body shaming, participants frequently doubted their identity and value(self-worth). Deviantony, Fitria, Rondhianto, and Pramesuari (2024) found that body shaming has a negative impact on self-esteem, especially for those who are trying to fit in with their peer group. These emotional struggles are consistent with their findings. Other people's opinions and judgements add to stress and a negative body image in such vulnerable situations.

Spiritual questioning

The results showed that while some participants sought assistance from God as a result of body shaming, others wondered why God permitted the shaming to happen or why He allowed the condition that caused the shaming to happen to them. In reaction to the emotional distress brought on by body shaming, participants wrestled with their faith, reflecting a moment of spiritual questioning.

Research Question three: What lessons have the body shamed learnt to cope with their experience in OAU?

Findings showed the lessons participants had garnered to cope with their body shaming experiences to include: self-love, acceptance, care and confidence building; seek support; shifted perspectives; nutrition, healthy living, and body enhancement efforts; trivialise and/or walk away from mockery; confrontation and resistance; as well as education and sensitization.

Theme	Statements from Participants
Self-Love, Acceptance, care and Confidence Building	*I tried getting oils for hair growth but they were not helpful for me…until I understood my condition; when I gained self-confidence, I stopped using wigs and covering my hair; I do not feel bad or let it get to me. I feel this is me and I cannot change it. So, I now have positive perspectives towards body shaming because I cannot change it, it is a condition; I used to feel bad and left out…but now I feel okay with myself…I have learnt to see myself as the best in my own body and improve myself emotionally to avoid depression; Initially, I didn't like my legs: "why is my leg like this?" but as time went by, I actually realised that they are cute, the cutest part of my body right now, because my now husband, it was my legs that actually attracted him, he said he likes my legs, so then he made me realize that one man's meat is another man's poison; I motivate myself, I feel confident in myself …in my body, I feel confident in who I am because I know that okay it is not about my body but about me. So I feel confident in who I am regardless of what is going on around me and all; Self-discovery worked, this is who I am, this is how I am. No matter what anybody tells me, it still doesn't change the kind of person I am. Even if I grow fatter than I am now, people will still talk, you cannot satisfy people, so just be yourself. I learned to admire my body, the self-esteem, confidence because nobody will do that for you; Before, I lost my self-confidence, but I helped myself and accepted myself the way I am: 'this is me!' So, I stopped allowing people's comments get to me; I learnt to appreciate myself; Before, I did not like my body, because I had to buy baby tops…I never knew I had a nice shape…now, I really feel dope, good of myself…I love my shape; I have learnt to have confidence in myself and it has really helped me to deal with body shaming; I motivate myself, I feel confident in myself…in my body, I feel confident in who I am because I know that okay it is not about my body but about me. So, I feel confident in who I am regardless of what is going on around me and all; I attend motivational programmes to build up my self-confidence.*
Seeking Support	*I joined a support group of the people that have alopecia where we meet and talk about it stuffs and help each other to increase our self-esteem and I no longer go around with wigs, I flaunt my bald head with pride; I have short cute friends so we see the best in each other.*
Shifted perspectives	*when it all started and I started realizing this is body shaming. I do feel bad about it like I said it got to me and all. This is bad and I used to feel like body shaming is right. Like my perspective then was that body shaming is right, they all want the best for me by telling me to add weight but later when I realized that whether you are being body shamed or not, is about you feeling confident in yourself. Then I realised that body shaming is not something that should be happening but it is happening and very paramount which is not meant to be.*
Nutrition, Healthy living, and Body Enhancement Efforts	*I wear two bras and intend to buy breast enlargement oil; My love for heels is not from this place! I have a lot of colours for different clothes. I wear heels more; I started to surf the internet that "how can I gain weight?" So, I started following a routine on food that will help me in gaining weight. I also learned how to know and eat food that help in gaining weight. I learnt more about food; When it was getting to me two years ago, I started to surf the internet that "how can I gain weight?" So I started following a routine on food that will help me in gaining weight. I also learned how to know and eat food that help in gaining weight. I learnt more about food*
Trivialise, walk away from mockery	*When I am body shamed, it is either I walk away, overlook it and continue with my conversation to walk away from/overlook/ignore body shaming; one of the things I did was to flow with it. I learn to laugh along, it's your problem. I try to take it away from my mind not to keep thinking about it when people*

Confrontation and Resistance	*I am someone that grew up with high esteem so when you say nonsense I give it to you hot, I don't let it get cool at all, so whenever I am body shamed I retaliate immediately, I give it to you, I don't even laugh it away with you. So, I don't feel any less of myself, I stand my ground.* *When someone body shames me and I smack back with full force, they will definitely not try that with you again ; When someone body shames me and I smack back with full force, they will definitely not try that with you again; For me I decided, rather than to let it get to me and get depressed, I choose to face those that body shame me; I stood my ground to not let it get to me; If you insult me, I will also insult you back, before I used to tolerate it, but now, I don't let it get to me.*
Education & Sensitization	*I will tell them to live for themselves…don't live your life on how people are judging you or viewing you, for instance, they are saying I am fat, they are saying I have stomach, they are saying I am too fair, they are saying I am this, I am that. Don't live your life based on people's expectations and how they want you to be, but live it on who you are and who you want to be. Carry yourself well. Give yourself this self-charisma! This is me and make people understand that if they cannot deal with it, they are on their own, deal with it yourself and be confident the way you are; People that body shame their mates, colleagues, younger ones and probably older people. They feel okay probably they are saying it for fun, but… it takes a lot from the person being body shamed unknowingly to the people saying it. They should accept the person for who he or she is and just live with it because body shaming is a really bad thing and it's even common among learned people (elite) which is not supposed to be; admire yourself, slim, fat, short, tall, or whatever people have used to make you feel less of yourself — try not to fall for it. Look at yourself in the mirror everyday and be like, "I am beautiful." If you are too fat, you can go online, talk to people, learn how you can burn your fat. But don't give up — still tell yourself, "I am beautiful and wonderfully made by God."; I have learnt to tell people: "do not focus on what people say to the extent that it will make you uncomfortable or let it get to you. Be good and let God be your motivator, because even in the Bible it is said that we are created in the image of God so therefore I am created in God's image and thank him for what I have; I do not think body shaming can go into extinction; it has always been and will always be so, we should be able to live with it and stop having headache about it so be yourself and be fine; ...the mother dragged the child, I had to educate her that alopecia is just a condition not a disease because I was stigmatised…so, I could feel the tension was relieved; people can be really insensitive in some areas. So, I let them know they do not treat people like that," be nice to people, it could be you tomorrow."*

Self-Love, Acceptance, Care and Confidence Building

Over time, participants came to develop confidence, self-love, and acceptance as personal coping mechanisms for body shaming. These initiatives represent emotionally focused coping mechanisms found by Ismail and Abdussalam (2022). In a similar vein, Arumugam et al. (2022) discovered that people who were body-shamed developed self-compassion and gained more respect of themselves. Choosing to value one's body instead of resenting it promotes body positivity and lowers emotional tiredness, so fostering resilience and self-compassion according to Schluger (2025) and *Preventing and Combating Body Shaming* (2022).

Seeking support

Results reveal that participants actively sought means of coping with body shaming by means of official and unofficial support groups comprising people having like experiences. These groups helped them to understand their reactions and feelings. Merino et al. (2024) underline that these kinds of gatherings provide venues to exchange coping mechanisms and experiences. Analogously, Schluger (2025) discovered that having a safe outlet to communicate feelings connected to body shaming greatly helps people control the anxiety and shame that usually accompany it.

Shifted perspectives

The results from the analysis showed that experiences such as those garnered from body shaming have a possibility of bringing about a shift in previously held perspectives. For instance, participants attested to shifts from accepting body shaming remarks as well-meaning to realising its damage. This change is in line with the idea of critical consciousness as proposed by Freire (1970) which involves processes which enables individuals to take action against system of oppression having analysed and understood these systems. They had shifted their views from seeing body shaming as right to accepting themselves for whom whether they are body shamed or not and in spite of societal pressures. As highlighted in Spinner (2022), dancers develop this resilience by challenging body norms and embracing their bodies' inherent worth, regardless of appearance. Also, Choate (2005) cited in Chauhan (2024) identified that a good perception of one's physical appearance, effective strategies to cope, were among the five-factor model for body image resilience.

Nutrition, Healthy living, and Body Enhancement Efforts

The results showed participants' personal response to body shaming, characterised by persistent efforts to use multiple bras, interest in breast enhancement products, dedication to wearing heels with colour-coordinated outfits, attempts to gain weight through internet research and adopting dietary changes. This pattern shows how body shaming can lead to self-directed changes geared towards perceived inadequacies rather than self-acceptance.

Trivialise, walk away from mockery

The results showed participants choosing to respond to, laugh off, ignore, or mentally detach from circumstances to preserve her emotional well-being, thus reflecting an emotional-focused coping mechanism in response to body shaming. This aligns with

Bondarchuk et al. (2024), who categorise such strategies under emotion-focused coping aimed at restoring emotional balance.

Confrontation and Resistance

Retaliating immediately and standing one's ground portrayed participants' assertive response to body shaming, thereby exhibiting a high sense of self-esteem and an unwillingness to accept negative judgments. This approach resonates with Onditi's (2023) observation, which portrayed a higher assertive level among adolescents to utilise direct revenge as a means of coping with cyberbullying. Although in their submission, being assertive could deter future instances of body shaming, it could also lead to increased conflict, thus signifying the complicated nature of the adopted coping mechanisms.

Education & Sensitization

The findings reflect the importance of education and awareness-raising by participants to cope with body shaming. Participants' learning to cope with body shaming has not only helped them develop self-confidence and self-acceptance as highlighted in Ismail & Abdussalam's (2022) description of emotion focused strategies by not allowing other people's opinion define or affect them. It has also translated into becoming educators who intentionally share information and providing insights to others about certain health and body-related conditions like alopecia based on their lived experiences. Participants lived experiences have led to the construction of knowledge, development of and internalisation of ideas which they apply to life contexts such as reducing stigma and correcting misconceptions (Kasemsap, 2017; Kakongoro, 2019). This is in tune with the principle of experiential and informal learning in adult education.

Given that this study set out to provide insights into the underreported lived experiences, coping and learning outcomes of body-shamed Nigerian female undergraduates, the findings showed that body shaming manifested in a variety of forms, and occurring in a variety of contexts and settings could have far reaching effects on the body shamed especially when unmanaged. Nevertheless, the efforts to cope with body shaming often brought about meaningful learning experiences. These experiences could be drawn upon to foster lifelong learning whereby individuals are equipped to adapt acquired knowledge, skills and attitudes to manage body shaming to other related life challenges.

Recommendations

Based on the findings in this study, the following are recommended:

1. Targeted awareness raising and sensitisation campaigns should be organised especially for male students, lecturers, roommates, family members, and religious community leader about what constitutes body shaming, tolerance for diversity in appearance and human dignity particularly in academic, religious and domestic spaces.
2. The establishment and enforcement of anti-body shaming policies and anonymous body-shaming reporting channels in universities to reduce incidences of body shaming.
3. The establishment of university, student and organizational-led support mechanisms who in their different capacities help students address body image concerns, express feelings within a safe space and equip them to better cope with body shaming experiences and build a healthy self-esteem.
4. Universities should intentionally include within their curriculum, course contents that focus on body image, remarks and labels that constitute body shaming and their immediate and long-term impacts. Students should be equipped with continuous lifelong skills that will enable them to not only deal with body shaming but to adapt the knowledge gained to similar situations in future.
5. The involvement of religious leaders is encouraged to provide spiritual support or faith-based coping strategies to students who are driven to question God or His existence due to their body shaming experiences.
6. Formal, non-formal and informal structures should be put in place to consciously and unconsciously help students build self-confidence, self-love, acceptance. These structures should be aimed at enhancing students' self-reflection and storytelling skills, resistance of oppressive societal norms and harmful stereotypes and ability to make sense of their lived experiences to educate others informally.

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From Classroom to Marketplace: Undergraduate Entrepreneurship as a Pathway to Lifelong Learning and a Learning Society at Obafemi Awolowo University, Ile-Ife. Nigeria

Tajudeen Ade Akinsooto, Obafemi Awolowo University, Nigeria

Email: *akinsootota@oauife.edu.ng or tayoakinsooto@gmail.com*

Abstract

This study investigated the role of undergraduate entrepreneurship in fostering lifelong learning and contributing to the development of a learning society at Obafemi Awolowo University, Ile-Ife. The study identified the barriers faced by student entrepreneurs, examined how personal characteristics influenced these barriers, explored the coping strategies they adopted, and assessed the forms of institutional support that could enhance entrepreneurial engagement. A qualitative research approach was employed using a descriptive case study design. Fifteen undergraduate entrepreneurs were selected through purposive sampling, and data were gathered through in-depth, semi-structured interviews that were audio-recorded, transcribed verbatim, and analysed using interpretive content analysis. The findings revealed five major barriers: difficulty in balancing academic and business responsibilities, limited access to financial resources, challenges in networking, bureaucratic constraints, and negative peer perceptions. Personal characteristics such as age, gender, socio-economic background, and financial literacy further shaped students' entrepreneurial experiences. Despite these challenges, students adopted coping strategies including time management, prioritisation, reliance on family and peer support networks, mentorship, and outsourcing. The study concludes that undergraduate entrepreneurship reflects experiential and lifelong learning processes consistent with Kolb's Experiential Learning Theory. It recommends that the university strengthen financial support mechanisms, enhance practical entrepreneurship education, review administrative policies to better support student businesses, leverage alumni networks for mentorship and investment opportunities, promote gender-inclusive practices, and prioritise student well-being to build a more supportive entrepreneurial ecosystem.

Keywords: Lifelong Learning, Entrepreneurship, Informal Learning, Learning Society, Nigeria

Introduction

Entrepreneurship plays a critical role in national development by driving innovation, job creation, and economic growth. In developing countries such as Nigeria, entrepreneurship is increasingly seen as a viable pathway to economic empowerment, particularly for the youth. Scholars define entrepreneurship not only as the creation of new ventures but also as the ability to identify, evaluate, and exploit opportunities in innovative ways (Venkataraman, 1997; Shane & Venkataraman, 2000). According to

Suleiman (2006), entrepreneurship involves the willingness and ability to seek investment opportunities and establish and run enterprises successfully. The entrepreneurial spirit is therefore considered a prerequisite for building a resilient and self-reliant society, especially in contexts with limited formal employment opportunities.

Entrepreneurship education has emerged as a pivotal tool for addressing Nigeria's pervasive graduate unemployment and stimulating economic innovation. Undergraduates who possess entrepreneurial attributes, values, and mindsets exhibit higher venture creation outcomes compared to their less entrepreneurial peers (Dada, Adegbuyi, Ogbari, Salau, Atolagbe, Onayemi, & Oladotun, 2023). Specifically, Dada et al. (2023) emphasise the need for universities to cultivate robust entrepreneurial cultures through practical, hands-on learning opportunities. At Obafemi Awolowo University (OAU), proposals to establish a dedicated entrepreneurship institute and revise the curriculum underscore a shift toward performance-based skills development and idea generation (Obafemi Awolowo University [OAU], 2023).

Building on these national initiatives, OAU, located in Nigeria, stands out as a leading institution of higher learning in West Africa, with a strong emphasis on academic excellence and innovation. The university hosts a vibrant community of student entrepreneurs who are eager to turn their ideas into reality, and it is recognised as one of the top five Nigerian universities producing startup founders (Alabian Team, 2021). According to Moronkeji (2024), OAU serves as a cradle for Nigerian tech titans, fostering an entrepreneurial ecosystem where students are encouraged to challenge norms, push boundaries, and explore latent opportunities. Despite this supportive environment, students still face numerous challenges in translating their ideas into successful ventures, highlighting the need for structured support systems to enhance entrepreneurial engagement.

However, systemic barriers persist across Nigerian universities, including curricular limitations, scarcity of experiential learning platforms, and inadequate institutional support, even at OAU (Nwambam, Nnennaya, & Nwankpu, 2018; Sheyin, 2025; Sulaimon, 2020). Empirical evidence from undergraduate students at OAU and other Nigerian institutions shows that while entrepreneurial awareness is relatively high, actual venture creation remains low due to limited resources and weak support mechanisms. Experiential teaching methods, known to stimulate entrepreneurial interest and startups, are still underutilised in many universities (Adelowo, Joshua, & Ilevbare, 2018; Olokundun, Moses, Iyiola, Ibidunni, Ogbari, & Borishade, 2018; Nwambam, Nnennaya, & Nwankpu, 2018).

Many universities continue to operate within rigid academic models that do not adequately support or nurture entrepreneurial growth. Ajaegbu (2012) and Adebayo (2013) observe that most Nigerian institutions offer curricula that lack a strong focus on entrepreneurial skill development, which is essential for preparing graduates to traverse the job market effectively. Similarly, Bamiro (2014) argues that a key factor contributing to graduate unemployment in Nigeria is the misalignment between academic programmes and the nation's socio-economic needs. Schwede, Heisler, and Harteis (2025) note that "although vocational teachers, company trainers, and inter-company trainers generally acknowledge the importance of cooperation, inconsistencies in learning content and sequencing persist, as curricula and training plans remain not only vague but also non-binding due to a lack of monitoring mechanisms" (p. 20). Enstroem and Schmaltz (2024) report that employers recognise that educational curricula often fail to meet the evolving demands of the workforce, and many graduates feel inadequately prepared, both technically and emotionally, for real-world job expectations.

While previous studies have identified general barriers to undergraduate entrepreneurship in Nigerian universities, there remains a need for context-specific, updated, and in-depth investigation at OAU. Specifically, existing studies do not fully explore how personal characteristics influence these barriers, the coping strategies students employ, or the role of institutional support in fostering entrepreneurship. Therefore, the overall purpose of this study is to investigate the role of undergraduate entrepreneurship in fostering lifelong learning and contributing to the emergence of a learning society at Obafemi Awolowo University.

Study Objectives

In response to the gaps identified, this study seeks to:

1. identify the barriers to entrepreneurship among undergraduate students at Obafemi Awolowo University.
2. examine the impact of personal characteristics on the barriers faced by students.
3. explore the coping strategies students employ to overcome entrepreneurial challenges.
4. investigate institutional support systems and strategies that can enhance student entrepreneurship.

Theoretical Framework

This study is grounded in Kolb's Experiential Learning Theory, which was first introduced in 1984. The theory conceptualises learning as a continuous process rooted in experience. According to Kolb, experiential learning involves a four-stage cycle: concrete experience, reflective observation, abstract conceptualisation, and active experimentation. Learners acquire knowledge through active involvement in a task, reflection on that experience, formulation of insights, and the application of new strategies in real-world contexts.

Kolb's model is particularly relevant to entrepreneurship education, where learning often occurs outside traditional classroom settings through hands-on engagement with business activities, problem-solving, and self-directed decision-making. In this framework, undergraduate entrepreneurs are not passive recipients of knowledge but active participants who learn by doing, going through uncertainty, adapting to real-time challenges, and refining their strategies through trial and error.

This theory supports the exploration of entrepreneurship as a pathway to lifelong learning. The undergraduate entrepreneurs in this study develop entrepreneurial competencies such as time management, critical thinking, adaptability, and financial literacy through their direct business experiences. These experiences align with the stages of Kolb's learning cycle: establishing and managing small businesses on or near campus reflects concrete experience; evaluating challenges such as balancing academics with business, or facing financial constraints and gender bias, represents reflective observation; reframing problems, forming insights, and planning new strategies, such as outsourcing and networking, illustrates abstract conceptualisation; and implementing those strategies in real time and learning from the outcomes demonstrates active experimentation.

By applying Kolb's theory, this study frames student entrepreneurship as experiential and lifelong learning in action, emphasising how informal and non-formal learning processes contribute to the construction of a learning society within the university environment and beyond. This theoretical lens provides a foundation for interpreting the experiences of undergraduate entrepreneurs in this study. By viewing their entrepreneurial journeys through Kolb's learning cycle, the findings of this research can be better understood as processes of experiential and lifelong learning.

Methodology

This study employed a descriptive case study research design to investigate the role of undergraduate entrepreneurship in fostering lifelong learning and contributing to the emergence of a learning society at Obafemi Awolowo University. The case study

approach was chosen because it offers detailed, in-depth knowledge and a holistic understanding of the phenomenon being examined (Yin, 2018; Stake, 1995; Merriam & Tisdell, 2016). The population of interest was undergraduate entrepreneurs at Obafemi Awolowo University, Nigeria. Due to the targeted nature of the research and the mobility of the population, a purposive sampling technique was used to select 15 student entrepreneurs from the university, ensuring a diverse and information-rich sample. In-depth interviews were used to collect data, with a carefully designed interview guide organised into six sections: profile information, common barriers to entrepreneurship, personal characteristics influencing barriers, coping strategies, potential solutions, and implementation of proposed initiatives. Interviews were conducted in English, tape-recorded, and transcribed verbatim. Data collection took place over a period of three months, in 2023 allowing for prolonged engagement with participants and rich data collection. Interpretive content analysis was used to analyse the data. A coding system was employed to maintain anonymity and consistency, with each participant assigned a unique identifier (SE01-SE15). Themes and patterns were identified, and quotes and examples were used to support the findings.

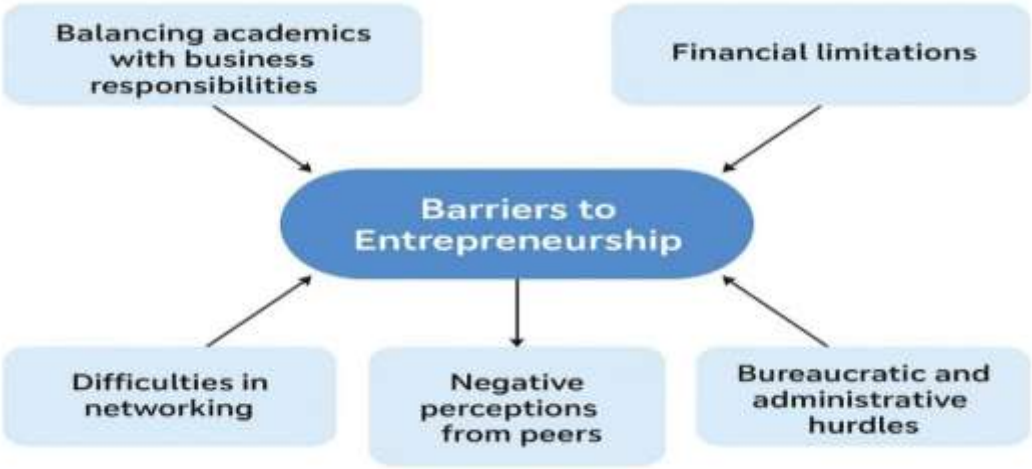
In order to ensure the rigour of this study, several strategies were employed. Credibility was established through prolonged engagement with participants, purposive sampling, and a focus on exploring challenges and strategies. Transferability was enhanced by providing a detailed description of the research context and sampling techniques, as well as identifying themes and patterns. Dependability was ensured through a systematic data collection and analysis process, the use of a coding system, and a transparent approach. Finally, confirmability was established by conducting data collection and analysis in a transparent and systematic approach, using tape recording and transcription, and grounding findings in data with quotes and examples.

Result and Discussion

Barriers to entrepreneurship among undergraduate entrepreneurs at OAU

Based on the participants' responses, the barriers to entrepreneurship among undergraduate entrepreneurs in the study context were categorised into five themes: (1) balancing academics with business responsibilities, (2) financial limitations, (3) difficulties in networking, (4) bureaucratic and administrative hurdles, and (5) negative perceptions from peers (Figure 1).

Figure 1: Barriers to Entrepreneurship Among Undergraduate Students at Obafemi Awolowo University (OAU)



Balancing Academics with Business Responsibilities

The majority of the respondents disclosed that balancing academics with business is a never-ending struggle demanding meticulous scheduling and substantial effort. They all highlighted the difficulty of juggling academics with business, citing instances where customers' orders clashed with personal schedules and how every day of their lives requires planning to create a balance to prevent one aspect from negatively impacting the other. As noted by SE02, "Running my business alongside my academics has always been challenging, especially during exams, to the point where I have to put things on hold." Similarly, SE05 remarked,

> Juggling academic responsibilities with business has never been an easy task. There were times when customers' orders clashed with my schedule. Times that academic pressures are too much, like during C.A., group work, which consumes a lot of time, require me to focus mainly on my academics.

SE06 further disclosed,

> I time myself a lot. I know what time I will be on campus, what time I will be back from campus, and the time I have to spend cooking, eating, and resting. I also have to time myself when I work and when I go to bed, and that can be quite overwhelming (SE06).

SE09, SE12, and SE13 all expressed difficulty, particularly during exams, when they had to temporarily pause their business activities. As SE09 shared, "It was so challenging that I had to put things on hold when I was about to write my final exams, just so I could focus on studying and complete my exams." These sentiments reveal the struggles undergraduate entrepreneurs face in balancing their academic

responsibilities with their business ventures, a theme that emerged as a significant barrier to entrepreneurship in this study.

The majority of the participants overwhelmingly expressed that balancing academics and business responsibilities is a constant and demanding struggle. This theme emerged as a significant barrier to entrepreneurship in the study, showing the need for support systems and strategies to help undergraduate entrepreneurs manage their responsibilities effectively. They call attention to the need for meticulous scheduling and significant effort to juggle both aspects of their lives. The challenges they face include: clashing customer orders with personal schedules; academic pressures, such as exams and group work, requiring focus on academics; time management struggles, including allocating time for studies, business, self-care, and rest; and feeling overwhelmed by the need to constantly balance both responsibilities.

Financial Limitations

The study revealed that most participants faced challenges securing funding for their businesses due to insufficient profits for reinvestment. SE06 shared, 'I wanted to sell fabrics, but I had to abandon the business idea because I needed the money for other pressing expenses.' Similarly, SE08 stated, 'My business only generates enough income for basic needs like food, transportation, and sustenance.' SE02, SE05, SE10, SE11, and SE15 all agreed that a lack of substantial capital hindered their businesses from scaling up and growing significantly. SE09 also added,

> I faced a lot of financial challenges. Funding was the major barrier, and in the line of business that I am in, you need actual funds. There were times that I had to outsource funds from third parties, and most of the time, it didn't go well (SE09).

The result shows the financial limitations faced by the participants in the study, which include: insufficient profits for reinvestment; inadequate funding for business growth; limited access to capital; and reliance on external funding sources. This stresses the importance of access to funding for business growth and development. It suggests that financial limitations can hinder entrepreneurial success and that innovative solutions or support systems may be necessary to overcome these challenges.

Difficulties in Networking

The results showed that some participants faced difficulties when trying to build proper connections. SE02, SE06, SE08, SE09, SE12, and SE14 indicated that forming these connections requires a proactive attitude, often involving extra effort. As SE08 shared, "Initially, I was judgmental and selective about who I connected with, due to my religious background. But I realised that those who didn't share my values were potential customers." SE09 remarked, "Networking isn't always easy; sometimes you

want to connect with people ahead of you, but they're also seeking connections with those ahead of them." P12 confessed, "I keep a small circle, and I rarely go out, so meeting new people with whom I have no prior relationship feels overwhelming." Similarly, SE13 added, "As students, we face rejection when approaching strangers, making it difficult to sell our products or ideas, just like door-to-door salespeople often face rejection before making a sale."

This result suggests that networking can be challenging, especially for students who may be introverted or have limited social connections. It emphasises the importance of a proactive and persistent approach to building meaningful relationships and establishing a strong network.

Bureaucratic and Administrative Hurdles

Two participants reported encountering obstacles with residence hall administrators, which hindered their entrepreneurial endeavours. SE02 stated,

> As a fresh student at the time, I had just started exploring my entrepreneurial interests. I had a client scheduled for a hair appointment that day, but I couldn't fulfil it because the hall warden unexpectedly showed up and challenged me. I was almost penalised, and it was then that I realised that students weren't allowed to conduct business in the residence halls. It was a surprising and unexpected obstacle.

SE10 also said, "The university has this policy of students not selling in the halls of residence, and whenever I need to make deliveries, I ensure I package my products well to avoid confrontations and unnecessary drama with the authorities.

The result shows a bureaucratic and administrative challenge that two participants faced in their entrepreneurial journey. Specifically, they encountered obstacles with residence hall administrators that hindered their business endeavours. This, therefore, suggests that university policies and administrative actions can pose challenges for student entrepreneurs. This, therefore, necessitates the need for universities to create a supportive environment that balances regulations with the entrepreneurial spirit.

Negative Perceptions from Peers

Three participants faced negative perceptions from their peers regarding their chosen business paths. SE03 stated,

> I've had people make remarks like: 'How much are you making from this petty business? How long do you plan to keep collecting small change? A friend even parked his car in front of my stall, got out, and asked me ridiculous questions.

SE08 stated,

> The majority of people hold a stereotype that hairdressers are promiscuous, while some don't openly admit it, others do. I try as much as possible to keep a positive mindset whenever my path crosses with these sets of people.

SE14 remarked, "*People approach me and make comments such as, 'Why is a girl involved in shoemaking? That's a guy thing."* This corroborates the findings of Akehurst, Alvarez, (2012), and Hackler & Mayer (2016) who refer to gender as a barrier to entrepreneurship due to discrimination and gender stereotypes, especially towards female entrepreneurs.

Impact of Personal Characteristics on Barriers Faced by Undergraduate Entrepreneurs

In line with the study objectives, the themes below have been identified based on the participant responses: age factor, gender barrier, socio-economic factor, and limited financial resources for student entrepreneurs from different socio-economic backgrounds.

Age Factor

Five respondents have highlighted the impact of age on their businesses, emphasising that there is a common misconception about student entrepreneurs due to their age. SE05 stated, "I am a furniture maker, and in my line of business, there is a prevailing preference for individuals of advanced age. They have this belief that older individuals possess a pool of experience and wisdom acquired over the years." SE07 shared,

> I've faced a lot of criticisms from older folks in my neighbourhood and even where I purchase my goods from; they never missed the opportunity to make snide remarks about my achievements, forgetting that I worked twice as hard as they did. They say that I am too young for the things that I have achieved.

SE12 added, "I am quite small, so some people feel I don't have what it takes to sell to them; some will even regard me with disdainful expressions when I attempt to promote my business and raise awareness." SE13 also said, "people are more receptive to the person that they are in the same age group with… once people see that you are small, there will always be that doubt underneath somewhere."

This analysis reveals that student entrepreneurs often face age-related biases and misconceptions that impact their businesses. These biases manifest in various forms, such as a preference for older individuals in certain trades, skepticism about young entrepreneurs' capabilities, and the assumption that experience and wisdom are tied to age.

SE05's experience as a furniture maker illustrates this bias, with clients preferring older artisans due to the belief that age correlates with experience and skill. SE07

encountered criticism and snide remarks from older individuals in their community and supply chain, who underestimated their achievements based on their age. SE12's account highlights how physical appearance, particularly being small in stature, can lead to doubts about one's business acumen and capability. This often results in disdainful attitudes from potential customers. SE13 echoed this sentiment, noting that people tend to be more receptive to peers in their age group and harbour doubts about younger entrepreneurs.

These narratives reveal the challenges young entrepreneurs face in gaining credibility and respect in their fields, necessitating efforts to challenge age-based stereotypes and support young business owners.

Gender Barrier

The interview results indicate that student entrepreneurs face gender-specific restrictions in certain fields. Three female participants shared their experiences entering male-dominated businesses, and two others corroborated this perspective. SE09 said,

> The kind of business that I do online is really more of a man's business; there are just a handful of ladies doing it. Even on campus, there are certain entrepreneurial journeys that some ladies might not want to embark on because they are male-dominated.

In addition, SE03 stated, 'I sell gadgets, and I often get questioned about my choice of business. There is also the issue of trust; they feel that because you are not a man, you can't sell quality products." SE13 also agrees, stating, "I am a woman with a shoe-making business, a field traditionally seen as male-dominated. I have lost count of the number of looks I get when people get a sniff that I am a shoemaker." In corroborating this perspective, SE11 said, "If a man engages in activities traditionally considered feminine, other men might not respect him, and vice versa." SE12 shared an example, stating that when people find out she is a barber, they often react with surprise. She said, "You tell people that you are a barber, and their initial reaction is one of surprise, typically indicated by the expression, oh, you're a girl and a barber."

This finding reveals the presence of gender-specific barriers that student entrepreneurs face. Female participants shared their difficulties in entering and gaining acceptance in male-dominated fields. For instance, SE09 noted the scarcity of women in her online business role, suggesting that the gender disparity might deter other women from pursuing similar entrepreneurial ventures. SE03 faced skepticism and trust issues due to her gender while selling gadgets, which is typically seen as a male domain. SE13 experienced frequent surprise and scrutiny as a female shoemaker, a profession traditionally dominated by men.

Male participants also recognised gender-related challenges. SE11 pointed out the lack of respect men might encounter when participating in traditionally feminine activities. This indicates that gender bias affects both sexes. SE12 provided a personal example of how her role as a female barber often elicited surprise and disbelief, reflecting societal expectations and stereotypes about gender-appropriate careers.

These accounts collectively show the significant impact of gender on the entrepreneurial experiences of students, revealing the ongoing challenges and biases that need to be addressed to foster a more inclusive entrepreneurial environment.

Socio-economic Factors

In addition to age and gender, socio-economic factors also play a significant role in the barriers faced by undergraduate entrepreneurs. The results show that student entrepreneurs from different socio-economic backgrounds often face challenges in obtaining financial resources for their business ventures, such as subsidised loans and grants. The findings also reveal how the economic environment influences the entrepreneurial journey of these students.

All the participants explained that the absence of well-grounded capital results in limited growth and expansion. Participant SE08 highlighted the challenge of accessing capital, especially for individuals from less affluent families. She shared, "Limited access to capital, especially if you are from a not-so-buoyant family, means that whatever proceeds you get from your business will be used for personal needs." Similarly, participant SE09 pointed out, "Limited access to well-grounded capital limits an entrepreneur's ability to start, operate, and grow a business." SE08 explained how the erratic economy affects her decision-making,

> The erratic nature of the economy requires me to put a lot of thinking and calculations into place because I wouldn't want to go from the lady with the cheapest egg price to selling expensive eggs. I have to do something that will benefit me and the people buying from me, even though the gain is discouraging.

SE09 discussed the difficulties of dealing with currency fluctuations:

> Looking at the economy, it is not encouraging to invest in some things; given the kind of business that I do, I deal in dollars, and there are a lot of times the exchange rate is not at all favourable. Politically, too, it is not favourable; there is a lot of change going around with the politics, and even in terms of education.

SE12 mentioned the impact of price fluctuation:

> The challenge lies in the economy. Prices for goods can fluctuate dramatically, causing misconceptions about my business. One moment, a product costs #2000, and suddenly it skyrockets to a much bigger price, creating a misleading impression.

SE02 shared concerns about restocking: "I sometimes hesitate to restock goods due to the way the economy is." Participants SE06, SE08, SE10, and SE13 also emphasised how unpredictable changes in commodity prices lead to unforeseen expenses, affecting their businesses. These socio-economic factors create additional challenges for student entrepreneurs, making it difficult to maintain stable operations and plan for the future.

The socio-economic environment significantly impacts undergraduate entrepreneurs, creating barriers that are deeply connected with their personal financial circumstances. Economic instability, such as fluctuating prices and unfavourable exchange rates, complicates their ability to manage and grow their businesses. Additionally, the political and educational climates contribute to the uncertainty, further challenging these young entrepreneurs.

The testimonies of the participants reveal how socio-economic factors compel them to be more strategic and cautious in their business decisions. For instance, Participant SE08 must carefully balance pricing to avoid losing customers, while Participant SE09 faces challenges due to currency fluctuations impacting her dollar-based business transactions. Similarly, Participant SE12 deals with the misconceptions caused by sudden price hikes, and Participant SE02 hesitates to restock due to economic uncertainty.

These socio-economic barriers highlight the need for supportive measures that can help mitigate the impact of economic instability on student entrepreneurs. By addressing these challenges, it is possible to create a more conducive environment for young entrepreneurs to thrive, regardless of their socio-economic backgrounds.

Level and quality of Education

The level and quality of education of an entrepreneur can influence an entrepreneur's ability to build networks, understand business concepts, conduct market analysis, and manage finances effectively. This can be deduced from participant SE03's statement, thus, "There is not enough financial know-how. I find it difficult to manage money; I don't know what percentage to put back into the business."

This participant acknowledges a deficiency in understanding financial principles and practices essential for business operations. This includes knowledge of budgeting, cash flow management, financial reporting, and investment decisions. In addition, the participant expresses challenges in effectively handling financial resources. This could involve struggles with budgeting income and expenses, tracking cash flow, or making strategic financial decisions that support business growth. Furthermore, the participant expressed uncertainty about how much of the business's earnings should be reinvested

into operations or expansion. This decision is crucial for sustaining and scaling the business but requires a solid grasp of financial analysis and planning.

This analysis, therefore, reflects an urgent need for improving financial literacy and skills in managing business finances effectively among student entrepreneurs. Addressing these challenges is vital for enhancing the financial stability and growth potential of the business.

Coping strategies to overcome the barriers that are faced by student entrepreneurs

Data analysis reveals that time management, prioritisation, support systems, and outsourcing are the coping strategies undergraduate entrepreneurs developed to overcome the barriers they faced in their entrepreneurial endeavours.

Time Management

The research findings revealed that one way student entrepreneurs navigate challenges is by utilising efficient time management strategies such as task organisation, setting reminders, and creating to-do lists. Five participants shared how they strategically timed their activities to navigate the challenges that they face. Participant SE03 shared, "I have a timetable. I know what days I have more classes and what days I have fewer classes. On the days that my classes extend to evenings, I know that I can only be at the shop by nightfall." This indicates a strong awareness of her time commitments and the ability to plan her business activities around her academic schedule. In the same vein, participant SE05 also shared,

> I time myself. I know what time I will be on campus, what time I will be back from campus, and the time I will spend cooking, eating, and resting. I also have to time myself when I work and when I go to bed; that way, I would not overrest or be too tired to go to campus the next day.

This means that this participant does not rest too much or become overly tired, maintaining a balance that allows her to meet both academic and business demands effectively. Participants SE07, SE08, and SE10 find that effective time management enables them to strike a balance between their academic commitments and business pursuits. Participant SE07 mentioned, "Because people knew that I was a student, coupled with the fact that I sell my eggs at a cheap price, they still come around when I get back from campus." This indicates that she effectively manages her time to balance her academic responsibilities with her business operations. Participant SE08 also emphasised the importance of time management, highlighting how it allows her to attend classes, study during breaks, and manage her work effectively. She shared, "Time management really helped me. When it is time for class, I attend class, and in

the time between my classes, I study and then go back to work." This shows the importance of using breaks efficiently to maintain productivity in both academics and business. The participant SE10 approach differs slightly from others in the study. She shared her unique coping strategy, highlighting her ability to multitask without easily getting fatigued. She shared, "One thing I have noticed about myself is that I multitask. I can do multiple things without getting fatigued easily, and since business is like my niche, I combined everything with passion." Additionally, she said,

> What I do before leaving for class every morning is to check and write down the orders that I have for that day, package the ones that have been paid for, and try to figure out when they would like to get it then take them with me to class so that I wouldn't be attending to customers when I am supposed to be in class.

For this participant, this proactive approach to organising her day helps her maintain a balance between her academic and business commitments.

Prioritisation

Three respondents pointed out the importance of prioritisation in coping with the challenges they face as student entrepreneurs. They emphasised the need to adapt their priorities based on different situations, such as academic demands, business tasks, and personal activities, which enables them to handle these challenges successfully. Participant SE05 illustrated this by stressing the principle of focusing on high-priority tasks according to their importance and urgency. Participant SE05 said,

> Priorities shift. There are times when academic pressures are not too much, and I get to focus on making crafts. Other times, like during C.A. (Continuous Assessment) and group work, which consume a lot of time, require me to focus mainly on my academics.

This means that Participant SE05's priorities as a student entrepreneur change based on the demands of academic and business activities. When academic pressures are low, this participant can dedicate more time to her business, specifically to making crafts. However, during periods of high academic demand, such as Continuous Assessment (C.A.) periods and group work, which are time-consuming, she needs to prioritise her studies over their business. This flexibility in prioritisation allows her to effectively manage both their academic and entrepreneurial responsibilities. Similarly, participant SE09 shared that,

> It's about the principle of knowing what to prioritise at any given time; the balance came from understanding how and when to manage my time. I was actually involved in a lot of activities: I was active in church, in a relationship, and I was the president of the last administration in my department. Despite all this, I still graduated with very good grades.

This statement shows the participant's ability to prioritise and manage his time effectively, allowing him to balance multiple responsibilities and activities while maintaining academic success. Participant SE13 shared her experience:

> I am a student of architecture, so time is always a problem, and that's why I get my goods from home. Since my customers mostly place their orders before I resume, I would have figured out how and when I would have the goods delivered.

This participant, SE13, can cope with the challenges faced as a student entrepreneur by strategically sourcing her goods from home and negotiating an agreement with her customers regarding order placement and delivery schedules. By doing so, she can balance her academic demands and personal business without one interfering with the other.

All three participants (SE05, SE09, and SE13) emphasise the critical role of prioritisation in managing their dual roles as students and entrepreneurs. They recognise the need to adjust their priorities based on varying demands such as academic workload, business tasks, and personal commitments. This adaptive prioritisation allows them to effectively allocate their time and resources to meet these challenges.

Support Networks

In addition to the various coping strategies employed by student entrepreneurs to manage the challenges posed by academic demands and their entrepreneurial pursuits, the interview findings reveal the critical role of diverse support networks in nurturing and sustaining their entrepreneurial endeavours. These networks include family support as a foundation, friendship networks and peer support, sibling support and inspiration, mentorship and role models, and outsourcing.

Family Support as a Foundation

Participants SE02, SE03, SE06, SE07, and SE08 attribute a significant portion of their entrepreneurial success to the unwavering support of their mothers. This support includes financial assistance, valuable advice, and ongoing encouragement. Participant SE03 expressed, "My family, particularly my mom, played a significant role. She has given me financial support, valuable advice, and tips on managing my business." Such familial support not only provides practical resources but also emotional stability and confidence, crucial for coping with the challenges of starting and running a business.

Friendship Networks and Peer Support

Participants SE04 and SE05 explain the supportive role of friends who refer clients and encourage them to step out of their comfort zones. This is evident in what

participant SE04 said: *"The type of friends that I made during my university days, coupled with the connections I got through them, kept me involved and motivated in my work."* This peer support network not only expands their business opportunities through referrals but also serves as a source of motivation and accountability. Friends who share similar ambitions and experiences can provide practical insights and emotional encouragement, fostering growth and resilience in their entrepreneurial endeavours.

Sibling Support and Inspiration

Like others, participants SE10, SE11, and SE15 had the support of their brothers, who served as strong pillars both financially and as inspirational figures. They explained the invaluable support they received from their brothers, emphasising the role of family as a vital support system. Participant 10 shared, *"When I look at him and see how hardworking he is and the strides he has been able to accomplish because of the effort that he has put into his work, I just feel motivated."* Participant SE10 also shared that *"all my family members form my support network, always looking out for me, especially my brother; he excels in business and various other things."*

These participants draw strength from their brothers, who serve as both financial backers and inspirational figures. Their brothers' success stories and work ethic inspire them to strive for similar achievements. This familial bond reinforces their commitment to entrepreneurship and provides them with mentors within their immediate family circle, enhancing their determination and perseverance.

Mentorship and Role Models

Participant SE09 expressed the significance of mentorship in his entrepreneurial journey, noting, "*I specifically follow people who have achieved the kind of result that I want. Learning about their beginnings, their challenges, and the different tactics they employed in navigating their challenges keeps my motivation high."* By learning from successful individuals who have achieved similar goals, SE09 gains insights into effective strategies and tactics. Understanding the challenges and triumphs of mentors motivates them to persist through difficulties and adapt their approaches to achieve desired outcomes.

Outsourcing

Two participants expressed that outsourcing offers flexibility. They emphasised that outsourcing tasks saves time, allowing students to balance their studies and business activities, which enables students to maintain their overall wellbeing, both physically and mentally. Participant 7 expressed:

> Although I am not particularly sociable, my social life has been quite limited, primarily because my business demands most of my time. However, I have recently managed to balance both aspects to some extent by employing people to handle my business on an hourly basis. This arrangement allows me to dedicate time to other important matters.

Participant 8 also added

> I believe that for students to effectively manage their time and achieve a work-school-life balance, they should consider outsourcing jobs. As a hairstylist, I outsource jobs that are not within my free schedule, and I still get my commission. Students should not think that they can do everything alone; it is important to delegate tasks to other people.

These participants explain the important aspect of effective time management: the willingness to delegate and outsource tasks. This approach allows individuals to focus on their priorities, improve productivity, and maintain a better overall balance in their lives.

Strategies and Initiatives that can be Developed for Addressing the Identified Barriers to Entrepreneurship among Undergraduate Entrepreneurs

The findings of this research reveal strategies and initiatives that can be developed to address the barriers to entrepreneurship identified by participants. These barriers fall under the following themes: financial support and resources, academic accommodation, entrepreneurship curriculum enhancement, networking and connections, and streamlining administrative processes.

Financial Support and Resources

The significance of the university providing financial support to student entrepreneurs was mentioned by all participants. This support could be in various forms, including granting access to funding opportunities, establishing partnerships with banks, offering low-interest or interest-free loans, or providing training programmes related to entrepreneurship. This support would enable them to launch businesses without the burden of significant debt or reliance solely on investor funding. Moreover, it would facilitate business expansion and provide a financial safety net post-graduation. Participant SE05 shared that,

> You will be surprised at the number of people who have innovative ideas, but never got the chance to actualise them because of this financial barrier. I feel giving student entrepreneurs' equal access to funding opportunities allows talents and innovations to shine.

Participant SE15 in the same vein, established that,

> Students should be granted funding opportunities; not only will this help them in expanding their businesses, it will also give them a safe space, something they can fall back on outside the four walls of the university.

This means that granting funding opportunities to student entrepreneurs will supports business growth, provide financial security, and foster a robust entrepreneurial culture within the university. It will also equip students with the resources and skills needed to succeed both during and after their academic journey, ultimately contributing to a dynamic and innovative economy.

Participants SE06, SE07, SE08, and SE10 recommended fostering collaboration with banks and investors as well as providing grants for student entrepreneurs. Participant SE10 expressed that organising pitch competitions where student entrepreneurs can present their business ideas to secure financial support, mentorship, and networking opportunities would greatly benefit the students. She shared,

> There are organisations on campus that tell students to pitch up their business ideas, and if they can win the hearts of the judges, they fund their businesses. If the university could partner with these organisations, it would be of great advantage to the students.

Advocacy for Flexibility and Time Management

Some of the participants argued that flexible timetables would ease the challenges of balancing academic commitments with business activities. Participants SE04, SE10, SE14, and SE15 shared the opinion that scheduling lectures on weekends is unnecessary because weekends should be designated as personal time for students. Participant SE04 believes that having weekends off will allow student entrepreneurs to take adequate rest, which is essential for their mental and physical health, as well as improve their focus, creativity, and productivity in the upcoming week. He expressed,

> I see no reason why classes should be scheduled on weekends; weekends should be for students to unwind and take a break from their busy week. Let them have the time to engage in other activities outside academics. This will go a long way in enhancing their thinking skills and overall well-being.

Participant 10 shared the same view, stating that, "Fixing a flexible timetable from Mondays-Thursdays/Fridays will help students balance their academics and every other activity they are doing and not get choked up."

Emphasis on Well-being and Academic Integrity

Some participants expressed a diverse opinion on the idea of creating flexible timetables to reduce the workload of student entrepreneurs. Participants SE01, SE02, SE03, SE06, SE07, SE08, SEO9, SE11, SE12, and SE13 expressed concern that providing flexible schedules might lead to a lack of seriousness about studies among

students and could divert the university from its primary purpose as an educational institution. Instead, they suggest that students should independently find ways to balance their academic pursuits with extracurricular activities. This is evident in what participant SE07 said, "I don't think there is anything like the university cutting down on their class schedules; the university will always be a university. Students who intend to run a business should figure out a way to balance academics with their businesses." Participant SE07 further shared that if at all, there will be compromises, and they should be made by the lecturers. This participant stated:

> I don't think there is anything the university can do about that because the university has a curriculum and they won't because of some students with other interests set another curriculum; Students came to the university to study, if they have other interests aside their academics, they should know how to balance the interests with their academics and if anything, it should come down to the lecturers to be lenient with students.

Participant SE11 showed the need to uphold the academic standards regardless of some students' choice to pursue interests outside their studies, as this might negatively impact students who are not interested in business. She expressed,

> I wouldn't stand for that, actually, because this is an institution of learning. If the university starts to lessen the criteria on our learning process, what about people who don't care about business? Does that mean they will not get the amount of educational balance they should get? I personally feel that the person who has other interests outside academics should figure out a way of balancing the two.

The view expressed by Participant SE11 shows the integrity of the educational institution by arguing against lowering academic standards to accommodate extracurricular activities. The primary purpose of a university is to provide quality education, and reducing academic rigor could disadvantage students focused solely on their studies. This means that students with external interests, such as business ventures, should manage their time effectively without expecting the institution to adjust its criteria.

Institutional Support and Networking for Student Entrepreneurs

Participants SE04 and SE013 have a slightly different perspective on the role of the university in providing financial support to student entrepreneurs. Participant SE04 believes that the university does not have the full authority to offer financial assistance to students. Instead, they can serve as intermediaries between the government and the students. He shared, *"The university's effort will be limited here; the university can only act like a middleman between the government and the students."* Participant SE13, on the other hand, believes that the university could leverage its alumni network to facilitate introductions

with alumni, enabling aspiring student entrepreneurs to gain access to a wider network of investors and credibility. She shared, *"Universities could leverage their alumni networks and get them to speak to aspiring entrepreneurs. Students could build valuable connections and meet potential investors."*

Participant SE04's perspective shows that universities can advocate for student entrepreneurs by negotiating with government bodies to secure funding programmes directed towards students. This could involve scholarships, grants, or special loan schemes designed to support young entrepreneurs. Participant SE13's perspective indicates that universities can leverage their alumni networks to provide mentorship, networking, and investment opportunities.

In addition, all the participants expressed the need for the university to permit students to run their businesses regardless of existing university rules. They believe that with the rise in unemployed graduates, the university should now, more than ever, actively encourage and support student entrepreneurs to reach the pinnacle of success in their entrepreneurial pursuits. Participant 5 shared:

> Under no circumstances should business be illegal in the halls of residence. The university should provide students with opportunities to explore a world beyond the walls of the university, make them feel that they are a priority, and recognise and reward them for a job well done.

This means that running businesses should be allowed in university halls of residence, advocating for institutional support for student entrepreneurs. They believe that the university should offer opportunities for students to engage in entrepreneurship, ensuring they feel valued and acknowledged for their efforts.

Flow Diagram of Student Entrepreneurship Development

The entrepreneurial experiences of students in this study can be understood as a sequential process. The journey begins with learning, both formal and informal, through which students acquire entrepreneurial knowledge and skills. This phase naturally gives rise to challenges, such as financial constraints, balancing academics with business, and limited institutional support. In response, students develop coping strategies, drawing on personal resilience, peer networks, and innovative approaches. These are further reinforced by support systems, including family, mentors, and institutional structures. Ultimately, the interplay of these factors leads to broader developmental impact within and beyond the university. This progression is visually represented in Figure 2.

Figure 2: Flow of Student Entrepreneurship Development - from learning, through challenges, coping strategies, and support systems, culminating in developmental impact

Conclusion

This study investigated the barriers to entrepreneurship among undergraduate students at Obafemi Awolowo University (OAU), the influence of personal characteristics on these barriers, the coping strategies adopted by students, and the institutional support required to enhance entrepreneurial engagement. The findings show that a complex interaction of academic, financial, socio-economic, administrative, and interpersonal factors shapes undergraduate entrepreneurship at OAU. Students face significant constraints such as the struggle to balance academic workloads with business responsibilities, limited access to capital, challenges in networking, restrictive university regulations, and negative perceptions from peers. Personal characteristics, including age, gender, socio-economic background, and level of financial literacy, further shape students' experiences, with younger entrepreneurs and women in male-dominated fields facing additional layers of bias and discrimination. Despite these challenges, student entrepreneurs demonstrate resilience and agency through innovative coping strategies such as effective time management, prioritisation, reliance on family and peer support networks, mentorship, and outsourcing where possible. The study also reveals a strong desire among students for more institutional support, especially in areas of funding, access to networks, entrepreneurship education, and less rigid administrative policies. Students recognise that while universities must uphold academic standards, institutions can still create enabling environments that support entrepreneurial initiatives and contribute to the development of a learning society. The findings collectively emphasise that undergraduate entrepreneurship at OAU constitutes both a learning experience and a modality of lifelong learning, in accordance with Kolb's Experiential Learning Theory. Students learn, adapt, experiment, and grow through real-world entrepreneurial challenges. Strengthening the support ecosystem for student entrepreneurs will not only improve individual business outcomes but also enhance innovation, reduce graduate unemployment, and contribute to national development.

Recommendation

Based on this study's findings, it is recommended that universities strengthen their support systems for student entrepreneurs by expanding access to funding sources such as grants, low-interest loans, and partnerships with financial institutions. Entrepreneurship education should be improved through practical, hands-on learning experiences and targeted financial literacy training to help students run their businesses more effectively. The university should also implement clear administrative policies that support student enterprises while maintaining academic standards, including guidelines on permissible business activities on campus. Enhancing mentorship programmes, leveraging alumni networks, and promoting gender-inclusive practices will further enrich the entrepreneurial ecosystem. Lastly, prioritising student well-being by offering lecture-free weekends and stress-management resources will help students better balance academic and entrepreneurial responsibilities.

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