



**FROM DATA TO ACTION: ENHANCING INSTRUCTIONAL
QUALITY AT KENYA ASSEMBLIES OF GOD EAST UNIVERSITY
THROUGH EVIDENCE-BASED PRACTICES**

DR. WANJIRU KINUVA; & ELIJAH MURIMI

EAST University, Nairobi, Kenya.

Corresponding Author: dvc.academics@east.ac.ke

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Abstract

This action research examines the landscape of instruction at Kenya Assemblies of God EAST University (EAST) in a bid to improve the quality of teaching and learning by using evidence-based strategies. Grounded in the principles of continuous improvement and informed decision-making, the study, through mixed methods surveys assessed the current instructional practices, barriers to quality education, professional development needs of faculty, and the role of technology on pedagogical transformation. The study analyzed a sample of 67 participants comprising 19 faculty members, 27 students, 13 administrators and 8 others. The most telling indicator of instructional inadequacy was the use of lectures as the predominant way of teaching (83.1%) and the rare use of advanced tools such VR/AR (18.5%). Though barriers to quality education were a number, the most notable were inadequate full time lecturers (27%) and moderate professional development indicated by 33.9% of the participants. Over 50% of the study respondents strongly expressed the importance of adequate professional development programs for faculty. The role of technology in pedagogical transformation drew a Mean of 3.5 out of a rating of 5; with the greatest barrier to integration being lack of faculty confidence in the use of technology. Findings showed gaps in faculty preparedness, inadequate use and compounding of instructional technologies, and need for structured support systems. The research provides another rationale for the importance of data use to reflect on instructional policies and practices. The results of the current study offer practical recommendations specific to the distinct context of EAST, which highlight the central importance of faculty professional development, technology integration and learner-centred pedagogies to achieve high quality instruction at EAST.

Keywords: Instructional quality, evidence-based practice, professional development, technology integration, higher education, teaching and learning, faculty development.

Introduction

In the dynamic landscape of higher education, the pursuit of quality instruction remains a central concern for institutions seeking to foster meaningful student learning experiences. At Kenya Assemblies of God EAST University (EAST), this concern has gained particular urgency in light of aligning the growing enrollment, digital transformation, and the need for faculty development with

its Strategic Plan. It is further driven by the need to offer relevant and high quality education that responds to the fast changing personal and societal needs of the 21st Century. Contemporary students are active participants; demanding flexible, personalized, and technology-integrated learning experiences. Due to rapid technological change and an increasingly complex global job market, learners expect education that equips them with practical skills, critical thinking, and digital confidence to navigate real-world challenges. Moreover, growing awareness around student well-being has underscored the need for universities to provide mental health support, social learning environments, and career-aligned pathways that ease transitions into employment or entrepreneurship (La Fleur & Dlamini, 2022). Therefore, addressing these dynamic learner expectations is not optional for EAST but essential to delivering relevant, high-quality education in the 21st century.

The teaching-learning process is a complex and multi-dimensional activity shaped by numerous institutional, pedagogical, and technological factors. Effective instruction does not occur in isolation; rather, it is the product of deliberate design, continuous reflection, and institutional support (Tight, 2023). At EAST, instructional practices have historically leaned toward lecture-based delivery with limited incorporation of active learning strategies and emerging technologies. Preliminary findings from faculty and student feedback revealed gaps in student engagement, learning assessment, and teaching innovation. These findings are not unique to EAST. Across sub-Saharan Africa, institutions face similar challenges linked to outdated instructional methods, insufficient professional development, and a lack of pedagogical adaptability (Nganga, 2022).

One of the foundational objectives of this research was to determine the current state of instruction at EAST. Through survey data it became evident that both students and faculty perceived a need for more learner-centered approaches. A majority of students expressed a desire for more practical, participatory, and feedback-rich learning environments. Faculty members, while generally committed, cited limitations in pedagogical training and time constraints as key barriers to instructional reform. These insights align with Pattison et al. (2024) findings that faculty perceptions of their teaching efficacy are deeply influenced by institutional support structures and access to ongoing professional development. Another objective focused on identifying specific impediments to quality instruction. These included insufficient technological infrastructure, inadequate orientation for new faculty, and limited opportunities for peer collaboration. In this context, professional development emerged as a critical area of concern. While EAST has made efforts to provide training, faculty responses underscored the need for more consistent, and personalized development programs. As noted by Kandiri et al. (2023), professional development that is contextually grounded and informed by data can lead to sustainable instructional improvements.

Technology's role in instruction was also explored, revealing a growing acceptance of digital tools among faculty, albeit with varying degrees of proficiency. The use of Learning Management Systems (LMS), online assessments, and blended learning models has increased since the COVID-19 pandemic, yet their integration remains inconsistent. Effective adoption of educational technology requires not just access, but also pedagogical understanding and institutional reinforcement (Bozkurt

et al., 2020). These realities point to the need for holistic strategies that combine technological training with curriculum redesign and administrative alignment.

This paper, therefore, represents the convergence of multiple strands of inquiry. By drawing on data gathered from across EAST's teaching and learning ecosystem, it aims to present evidence-based recommendations that are realistic, sustainable, and institutionally relevant. It reflects a core belief that lasting educational change does not emerge from isolated interventions but from data-informed, collaborative action. The sections that follow will unpack each research objective, culminating in a unified set of strategic recommendations to enhance instructional quality at EAST.

Literature Review

The pursuit of instructional excellence in higher education has become increasingly data-driven, shaped by dynamic shifts in pedagogy, technology, and institutional accountability. At Kenya Assemblies of God EAST University (EAST), efforts to improve teaching and learning demand a systematic approach that is both reflective and evidence-based. This literature review synthesizes research on instructional quality, faculty development, teaching and learning environments, and the integration of educational technology, providing a theoretical and empirical foundation for the study.

Institutional Self-assessment of Instructional Quality

The quality of teaching and learning in higher education is a key determinant of student achievements and institutional effectiveness. The quality of university education is determined by how well it equips learners with relevant knowledge, skills, and critical thinking abilities essential for professional growth and societal relevance. It should also nurture innovation, lifelong learning, social mobility, and economic development (Altbach et al., 2009; Teichler, 2014). Furthermore, high-quality education enhances student satisfaction, institutional reputation, and alignment with global standards (Kalam, 2023). Attaining these aims necessitates a comprehensive, evidence-based understanding of teaching and learning conditions, including curriculum delivery, faculty engagement, student participation, and institutional support. Further, research emphasizes the importance of aligning curriculum with industry needs, engaging innovative pedagogy, and ensuring resource availability (Biggs & Tang, 2011). At EAST, this calls also for evaluating how faculty integrate best practices and how students engage with learning experiences.

Okebukola (2012) stresses the need for regular review of university teaching practices to meet current standards and address both student and societal needs. High quality instruction calls for learner-centered pedagogy that promotes deep learning and critical thinking; aligned to government policy and personal growth (Smith et al. 2025 & Bhardwaj et al 2025). Technology integration is crucial for developing 21st-century skills and enhancing academic achievement and engagement (Ramaila & Molwele, 2023). It also supports collaborative and remote learning environments (Mdhlalose & Mlambo, 2023). Despite the dominance of lecturing in Kenyan universities, recent research highlights the superiority of active engagement, especially in the humanities and social sciences. Kozanitis and Nenciovici's (2023) meta-analysis revealed that such strategies have a moderate to large effect on student achievement, especially in smaller and upper-level classes. EAST

has recently emphasized faculty adoption of more participatory pedagogies aligned with Competency-Based Education (CBE). Student academic support services also significantly impact learning success, though their availability varies. Obi and Okeke (2013) and Omondi (2008) highlight their importance for student development and academic outcomes. Feng et al. (2025) further demonstrates their role in improving graduation and retention rates while increasing student satisfaction.

A self-assessment of teaching and learning at EAST is thus vital for quality assurance, strategic planning, accreditation, and student success. As Bailey and Jaggars (2023) note, evidence-based evaluations improve outcomes, while Leibowitz and Bozalek (2015) underscore their influence on institutional culture. Besides, Tight (2023) emphasizes their global relevance; making this Action Research both timely and essential.

Barriers to Quality Instruction

Despite its strong Mission and Vision, EAST faces challenges that undermine effective instruction, including limited resources, inadequate access to modern pedagogical methods, and insufficient faculty professional development among others. EAST's educational philosophy combines rigorous academic training with character formation, prioritizing servant leadership to prepare graduates for global leadership roles with integrity. However, several factors impede quality education in universities, such as outdated teaching methods, inadequate infrastructure, and limited technological resources (Zickafoose et al., 2024; Yusuf & Adebayo, 2019). Professional development is essential for improving teaching effectiveness (McDougall & Johnstone-Wilder, 2024; Al Lily et al., 2022); and the American Council on Education (2017) affirms its role in fostering engaging learning environments. Resource limitations also compromise innovation and academic excellence (Al Lily et al., 2022). Okebukola (2014) underscores faculty commitment as key to enhancing educational outcomes. Broader systemic barriers including financial constraints, bureaucracy, and governance issues have been documented across Sub-Saharan Africa (Quist, 2023; Wangenge-Ouma, 2017). Challenges also include the gap between academic theory and practice, driven by inadequate faculty training and limited exposure to evolving pedagogies (Maiyo et al., 2014), and overreliance on rote memorization rather than critical thinking (Yusuf & Adebayo, 2019). Omoniyi (2023) emphasizes integrating 21st-century employability skills such as critical thinking and digital literacy into curricula, a trend reflected in Makerere University's efforts to align curricula with employer needs (2024). Additionally, evidence from Means et al. (2013) highlights the effectiveness of blended and online learning when well implemented, stressing the need for pedagogical adaptation. The Commission for University Education (2020) advocates for robust quality assurance frameworks, while Biggs and Tang (2011) call for strategic reviews of teaching and learning practices to meet global education demands, supported by Baran et al. (2011) who note the shift toward interactive, technology-driven environments.

Besides, reliance on traditional methods and lack of continuous faculty development at EAST, may hinder interactive, student-centered learning. Self-assessment emerges as critical for fostering reflective practice and continuous improvement in higher education (Adachi et al., 2017; Craig &

Kay, 2021; McIver & Murphy, 2021). These considerations prompted the 2025 EAST action research to identify and address impediments to teaching and learning for strategic corrective measures.

Professional Development Needs of Faculty Members

The quality of teaching and learning in higher education is central to student success, shaping learners' knowledge, critical thinking, and innovation capabilities (Altbach et al., 2009; Teichler, 2014). Beyond academic growth, high-quality education promotes lifelong learning, social mobility, economic development, and contributes to building a competent workforce (Trust, 2025). It also enhances institutional image, student satisfaction, and alignment with global standards (Kalam, 2023). Given these far-reaching goals, institutions must regularly assess the status of teaching and learning through evidence-based analysis of key elements such as curriculum delivery, faculty engagement, student participation, and the institutional environment (Pattison, 2024).

Faculty members play a pivotal role in ensuring teaching and learning excellence. As such, understanding their evolving professional needs is essential for driving academic quality. Assessing faculty needs helps tailor training and development efforts to remain relevant and effective. Recent research underlines the importance of addressing gaps in pedagogical methods, research competencies, and leadership skills. A 2024 study by Kulal et al. demonstrated the value of aligning development programs with faculty needs, highlighting improved teaching effectiveness and adoption of modern instructional approaches. The study also revealed significant gaps between existing training initiatives and faculty expectations, emphasizing the need for personalized and stage-sensitive programs. Similarly, a 2023 South Korean study by Im et al. on faculty development in medical schools advocated for expanding and aligning programs with faculty roles and career stages. In Iran, Keshmiri and Parsa (2023) recommended adopting competency-based frameworks and broadening faculty development to enhance both individual growth and institutional performance. These studies affirm that needs assessments are not merely administrative tasks but strategic tools that inform sustainable, impactful development initiatives.

Effective faculty development should be ongoing, content-focused, and tied to student outcomes (Desimone, 2009). Green and Hearn (2013) found that faculty trained in modern teaching strategies demonstrated greater student engagement and classroom adaptability. Similarly, the American Council on Education (2012) observed that such training improves faculty effectiveness and student achievement. Evaluation and assessment practices also play a transformative role, influencing institutional culture and ensuring responsiveness to changing educational needs (Bailey & Jaggars, 2023; Leibowitz & Bozalek, 2023; Tight, 2023).

Integration of Technology into Instruction

Technology such as videos, e-books, podcasts, AR/VR, AI, can and is integrated in teaching/learning so as to enhance the quality of instruction. These technologies are integrated through learning management systems (LMSs), and conferencing platforms like Zoom, Microsoft Teams, Google Meet and so on. In university education, technology is increasingly becoming central

in facilitating dynamic, wide-ranging, and flexible learning experiences. This is because it supports varied instructional formats that cater to different learning preferences and enhances engagement through interactive and immersive methods. Learners and instructors can therefore profit from flexible, self-directed learning and access to a wide range of e resources. Technology promotes communication between faculty and learners, supports collaborative environments, and expands access to educational resources (Berge, 2002). Adeline (2024) agree with the notion of digital tools building stronger faculty-student relationships irrespective of locality to promote flexible and inclusive instruction. Coker and Mercieca (2023) highlight how digital access enriches learning through global collaboration while Means et al. (2013) found that e-learning tools improve outcomes by providing diverse and robust learning prospects. Baran et al. (2011) likewise underscore the support technology provides for personalized learning tailored to individual learner requirements. Artificial Intelligence and Virtual Reality are emergent technologies offering not only simulated experiences but intelligent tutoring, personalized feedback and experiential learning (Lampropoulos, 2025). On one hand Kohnke & Zou (2025) warn against overdependence on AI tools but recognize their efficacy in lesson planning and differentiated instruction. The employment of gamification and mobile in instruction motivates learning and student retention (Wang & Tahir, 2020). Meanwhile, adaptive learning systems use data to improve instructional delivery (Fontaine et al., 2019).

There is a range of available tools includes Adaptive Learning Tools (ALTs) which can be used to adjust content to various learner needs. Dela Cruz (2023) found that ALTs improved learner involvement and grades by responding to learning gaps. Collaborative Learning Environments (CLEs), such as Zoom and Google Classroom, encourage real-time teamwork and a sense of community. Access to Diverse Learning Materials (ADLM) supports diverse learning styles through varied digital resources. Online Flipped Courses (OFCs) boost learner involvement and knowledge retention (Al Karadsheh, 2024); while Synchronous Online Learning (SOL) cultivates technical and digital versatility (Lukashe et al., 2024).

Literature addressing instructional quality, faculty development, and technology integration is available. Nevertheless, notable gaps persist that justify the present study at EAST. First, even though the importance of evidence-based teaching and reflective institutional self-assessment (Bailey & Jaggars, 2023; Leibowitz & Bozalek, 2023) is present, the contextualization of these frameworks within faith-based or resource-constrained universities such as EAST, where values-driven leadership intersects with academic innovation seems to be largely missing. Additionally, the focus of existing research on professional development is apparently limited in attention to the unique pedagogical and leadership needs of faculty in theological and liberal arts institutions in Sub-Saharan Africa. Furthermore, although technology integration has been widely studied (Means et al., 2013; Baran et al., 2011), the literature appears to inadequately explore how faculty readiness, institutional culture, and infrastructural challenges collectively influence the uptake and sustainability of digital tools in small or mid-sized private universities. Moreover, the reviewed studies often emphasize outcomes rather than the processes of institutional improvement; ignoring the significance of self-assessment and action research can play in continuous instructional enhancement. These gaps

accentuate the need for an evidence-based, context-specific inquiry into the conditions, barriers, and opportunities shaping instructional quality at EAST.

Methodology

This action research was aimed at evaluating barriers of the instructional quality at Kenya Assemblies of God EAST University. A qualitative and quantitative descriptive research design was suitable for this Study (Creswell & Creswell, 2018; Kothari, 2014). The mixed-methods research design was used for its appropriateness in enabling the acquisition of both numerical data (quantitative) and in-depth insight (qualitative) relating to the instructional practices at EAST (Creswell & Plano, 2018; Tashakkori & Teddlie 2010). The Quantitative Approach was employed to gather data allied to the current status on instruction, faculty development and integration of technology into the instruction through structured questions/items. On the other hand, the Qualitative Approach collated sentiments and discourses by asking open ended questions to the faculty members, administrators, alumni and students. This collected comprehensive information on insights into the impediments to quality instruction as well as the prescriptions for improvement of the quality of instruction (Amberscript, 2023; Xiao et al, 2019).

The study targets a sample of 75 participants coupled to one questionnaire to the all the categories of respondents. The sample consisted of 20 faculty members, 30 students, 13 administrators and 12 alumni were expected to participate in the study. However, the return rate was 67 out of 75 responses was equivalent to 89%. This sample included 19 faculty members, 27 students, 13 administrators and 8 others including alumni as well as those who did not indicate their roles at EAST. The study was conducted using convenience sampling which is also referred to as availability or accidental sampling (McLeod, 2023). This non-probability sampling method helped in collecting data from the study participants selected from EAST Community. While this is a non-probability sampling method that makes the generalization of the findings limited, it was appropriate considering that the research being executed was an Action Research that was contextualized to. The Study Instrument was closely connected to the Study Objectives and was subject to expert review. Triangulation involved the use of multiple questionnaire items; with some items being open in order to collect views, opinions and discourse from the respondents; the goal being to boost the reliability and dependability of the findings. Additionally, transparency in the data analysis and reflective interpretation helped mitigate the bias and strengthen the integrity of the results within a specific context of the university.

The study participants were in the following age categories: 6: Under 20, 21-25, 26-30, 31-35, 36-40, Over 40. The majority of the Study Participants (47.7%) were aged over 40 years; the same was followed by respondents between the ages of 21-25 years (20%). Those aged 26-30 were third (15.4%) and 7.7% were respondents aged 35-40. The under-20s and 31-35 years old ranges combined, this group made up 9.2% of the Study Sample. As indicated by the Study participants 52.3% were male and 46.2% were female while 1.5% were others. Google Forms was used for data collection on and analysis data.

The online survey collected data by means of Google Forms, and spontaneously compiled it into Google Sheets for analysis. Google Sheets was employed for the seamless way in which it integrates with a research instrument, its convenience, and its ability to support basic statistical analysis for informed interpretation. Descriptive statistics such as frequencies, percentages, and means were generated to identify trends and patterns in participant responses. The analysis focused on summarizing key insights related to the assessment of status quo of teaching and learning at EAST, obstacles to effective and quality education, instructor development needs, technological impact on pedagogy and suggestions for enrichment of quality in instruction at EAST.

Ethical Consideration

The research followed the provided guidelines of research ethics. One of the provisions requires obtaining consent from participants especially in the process of gathering data using survey. All participants in this research were allowed to choose whether they wanted to be part of the research or not. Ethical approval was not required for this study.

Results

In assessing the status quo of quality education in the University, findings from the study revealed that although slightly over half of the respondents (50.8%) considered the teaching and learning environment at EAST conducive, a significant proportion expressed concerns about poor internet connectivity, inadequate facilities, and dissatisfaction with assessment processes, despite acknowledging positives such as quiet surroundings and accessible faculty. Teaching and learning methods were dominated by lectures, blended learning, and discussions, with less use of flipped classes and community projects. While nearly half rated current approaches as effective, three-quarters of the respondents felt that teaching methods require improvement. Student engagement was generally high, though 84.6% indicated that more needs to be done to enhance participation. Technology integration was evident through the use of LMS platforms, computers, and interactive displays, but full utilization was limited by insufficient training and support. Similarly, while student support services such as study groups, mentorship, and tutorials were available, most respondents viewed them as only moderately effective and called for substantial improvement.

The findings show multiple, quantifiable barriers to quality instruction at EAST: chief among them was inadequate digital tools (71.4%), followed by limited library facilities (49.2%) and insufficient textbooks (39.7%), with 27% citing an inadequate number of lecturers and 25.4% noting limited student support; while 82.8% of respondents felt class sizes sometimes constrained individual attention, the student-to-teacher ratio was judged effective only to a moderate extent by 39.1% and to a large extent by 37.5% (17.2% said it was effective to a very large extent). Professional development support for lecturers was uneven with 33.9% describing it as moderate, 32.3% as substantial, 14.5% as limited, and 12.9% reported no support. Also, perceptions of curriculum alignment with industry were mixed (43.3% said it met needs to a large extent, 32.8% to a moderate extent, 12.5% to a very large extent, 7.8% to a small extent, and 1.6% said it was not aligned). Together these resource, staffing, support, and curriculum gaps; alongside reported reliance on

traditional pedagogy therefore explain why respondents view the quality of instruction as needing targeted, measurable interventions.

The study identified several professional development needs among EAST faculty members that require attention to enhance teaching effectiveness. Instructional technologies workshops were rated as a high priority, with 60.3% of respondents strongly agreeing and 34.9% agreeing, while 4.8% were neutral or disagreed. Training in active learning and student engagement was similarly prioritized, with 57.8% strongly agreeing, 35.9% agreeing, and 6.3% neutral or disagreeing. Curriculum design and assessment training was also seen as essential, with 55.4% strongly agreeing, 40% agreeing, and 4.6% neutral or disagreeing. Inclusive learning practices and research, innovation, and community outreach were each rated as important by nearly half of the respondents (49.2% strongly agreeing) with additional agreement of 36.9% and 41.5% respectively, and 13.9% and 9.3% neutral or disagreeing. Lastly, peer mentoring and collaborative learning were seen as valuable by 40% strongly agreeing, 47.7% agreeing, and 12.3% neutral or disagreeing. These findings indicate a clear consensus among faculty that targeted, ongoing professional development across these areas is essential for improving teaching quality and student learning outcomes at EAST. Lastly, the study established that technology plays a significant role in teaching and learning at EAST, though its utilization and impact vary across different dimensions. Respondents rated the use of educational technologies in engaging students during lessons relatively high, at 4.0 out of 5, while the role of Learning Management Systems (LMS) in tracking and assessing student progress was rated 3.5. The incorporation of multimedia resources such as videos, podcasts, and simulations received a lower rating of 3.0, reflecting limited use in enhancing student understanding of complex concepts. Technology's overall contribution to improving student learning outcomes, including better grades and deeper comprehension, was rated 4.0, whereas faculty confidence in using digital tools to promote active learning was moderate, at 3.0. These findings suggest that while technology is recognized as valuable, its full potential is hindered by factors such as limited training, technical challenges, resistance to change, and unequal access to devices and internet connectivity.

Discussion

The results were analyzed and discussed as per the Objectives of the Study. These included to determine the current state of teaching and learning at EAST; establish factors in the teaching-learning process that impede quality education at EAST; assess the professional development needs of faculty members that should be addressed to enhance their teaching skills and knowledge at EAST; examine the role of technology in improving teaching practices and student learning outcomes at EAST; and to propose actionable recommendations for policy, faculty development, and resource allocation to enhance teaching and learning quality at EAST.

Current State of Teaching and Learning at EAST

Okebukola (2012) stresses the need for regular review of university teaching practices to meet current standards and address both student and societal needs. High quality instruction calls for learner-centered pedagogy that promotes deep learning and critical thinking; aligned to government

policy and personal growth (Smith et al. 2025 & Bhardwaj et al 2025). Technology integration is crucial for developing 21st-century skills and enhancing academic achievement and engagement (Ramaila & Molwele, 2023). It also supports collaborative and remote learning environments (Mdhlalose & Mlambo, 2023). Obi and Okeke (2013) and Omondi (2008) highlight its importance for student development and academic outcomes. Channa (2023) further demonstrates its role in improving graduation and retention rates while increasing student satisfaction. On the other hand, Bailey and Jaggars (2023) note that evidence-based evaluations can help improve these outcomes, while Leibowitz and Bozalek (2023) underscore their influence on institutional culture. Besides, Tight (2023) emphasizes their global relevance. With this in mind, EAST sought to assess the current state of instruction in the University as a vital part of quality assurance, strategic planning, accreditation, and student success.

The results of the self-evaluation indicated that the teaching and learning environment at EAST was largely considered conducive, with 50.8% rating it conducive and another 43% rating it moderately or highly conducive. Positive aspects included quiet surroundings, spacious classrooms, and relevant teaching materials. Dissatisfaction arose from poor internet performance, inadequate facilities, and concerns about exam marking fairness. The most widely used teaching methods were Lectures (83.1%), Blended Learning (75.4%), and Discussions (69.2%), while less emphasis was placed on flipped classrooms or community projects. Effectiveness ratings showed that 47.7% considered methods effective and 25.6% very effective, though a minority expressed dissatisfaction. Student engagement was rated Relatively High by 43.1% and High by 32.3%, with none rating engagement as very low. Technology was moderately integrated, with LMS (78.5%), computers (60%), and TV screens (52.3%) being most used. Advanced tools like VR/AR (18.5%) were rarely applied. Academic support services included study groups (31.3%), mentorship (25%), and tutorials (17.2%), though their effectiveness was largely rated as only moderate (45.3%). These findings underscore the importance of a conducive teaching and learning environment, highlighting actionable areas that other universities in Sub-Saharan Africa can adopt, such as improving internet connectivity, expanding digital resources, and creating quiet, well-resourced spaces that facilitate active learning.

Factors Impeding Quality Education at EAST

Despite its strong Mission and Vision, EAST faces challenges that undermine effective instruction, including limited resources, inadequate access to modern pedagogical methods, and insufficient faculty professional development among others. EAST's educational philosophy combines rigorous academic training with character formation, prioritizing servant leadership to prepare graduates for global leadership roles with integrity. The Study results indicated 59.4% of respondents as rating EAST's teaching methods as effective even though over 80% had indicated lectures as predominant. However, several other barriers were identified such as, inadequate digital tools (71.4%), limited library facilities (49.2%), shortages of textbooks (39.7%), insufficient numbers of full time lecturers (27%), and limited student support (25.4%). The student-to-teacher ratio was considered adequate to a moderate or large extent by 76.6% of respondents, yet some perceived challenges with larger

classes. These findings agree with other researches which observed several factors impede quality education in universities, including outdated teaching methods, inadequate infrastructure, and limited technological resources (Zickafoose et al., 2024; Yusuf & Adebayo, 2019). Professional development is essential for improving teaching effectiveness (McDougall & Johnstone-Wilder, 2024; Al Lily et al., 2022); and the American Council on Education (2017) affirms its role in fostering engaging learning environments. Resource limitations also compromise innovation and academic excellence (Al Lily et al., 2022). Okebukola (2014) underscores faculty commitment as key to enhancing educational outcomes. The Action Research at EAST established faculty support for professional development was considered moderate (33.9%) or to a large extent (32.3%), though 12.9% reported no support at all; indicating below average support for professional development; underscoring the importance of addressing this gap. Curriculum alignment with industry needs was generally positive, with 43.3% rating alignment to a large extent, though a small minority questioned its relevance. This gap does not seem to be a well-researched area globally but an important need nonetheless. These results highlight structural and resource-based challenges common across universities in Sub-Saharan Africa, emphasizing the need for institutional investments in adequate faculty numbers, learning resources, and professional development to enhance quality education and ensure graduates are prepared for the workforce.

Faculty Professional Development Needs

Table 1

Professional Development Needs of EAST Faculty Members

Developmental Need	Strongly Agree	Agree	Neutral/Disagree /Strongly Disagree
Instructional Technologies Workshops	60.3%	34.9%	4.8%
Active Learning & Student Engagement	57.8%	35.9%	6.3%
Curriculum Design & Assessment Training	55.4%	40%	4.6%
Inclusive Learning Practices	49.2%	36.9%	13.9%
Peer Mentoring & Collaboration	40%	47.7%	12.3%
Research & Innovation	49.2%	41.5%	9.3%

Note. Data adapted from study survey responses (N = 64).

The quality of teaching and learning in higher education is central to student success, shaping learners' knowledge, critical thinking, and innovation capabilities (Altbach et al., 2009; Teichler, 2014). A 2024 study by Kulal et al. demonstrated the value of aligning development programs with faculty needs, highlighting improved teaching effectiveness and adoption of modern instructional approaches. The study also revealed significant gaps between existing training initiatives and faculty expectations, emphasizing the need for personalized and stage-sensitive programs. Similarly, a 2023

South Korean study by Im et al. on faculty development in medical schools advocated for expanding and aligning programs with faculty roles and career stages. Given these far-reaching goals, institutions must regularly assess the status of teaching and learning through evidence-based analysis of key elements such as curriculum delivery, faculty engagement, student participation, and the institutional environment (Pattison, 2024).

The EAST Fraternity expressed strong demand for professional development in instructional technologies, active learning, curriculum design and assessment, inclusive practices, peer mentoring and collaboration, and research/innovation. Recent research underlines the importance of addressing gaps in pedagogical methods, research competencies, and leadership skills. A 2024 study by Kulal et al. demonstrated the value of aligning development programs with faculty needs, highlighting improved teaching effectiveness and adoption of modern instructional approaches. The study also revealed significant gaps between existing training initiatives and faculty expectations, emphasizing the need for personalized and stage-sensitive programs. Similarly, a 2023 South Korean study by Im et al. on faculty development in medical schools advocated for expanding and aligning programs with faculty roles and career stages. In Iran, Keshmiri and Parsa (2023) recommended adopting competency-based frameworks and broadening faculty development to enhance both individual growth and institutional performance. These studies affirm that needs assessments are not merely administrative tasks but strategic tools that inform sustainable, impactful development initiatives.

Although reviewed literature did not indicate specific areas the faculty professional development should address, the EAST study revealed that instructional technologies workshops were rated as a priority by 60.3% strongly agreeing and 34.9% agreeing. Active learning and student engagement training was similarly prioritized, with 57.8% strongly agreeing and 35.9% agreeing. Curriculum design and assessment training saw 55.4% strongly agreeing and 40% agreeing, while inclusive learning practices and research/innovation were strongly agreed upon by 49.2% of respondents. Peer mentoring and collaborative learning were recognized by 40% strongly agreeing and 47.7% agreeing.

Effective faculty development should be ongoing, content-focused, and tied to student outcomes (Desimone, 2009). Green and Hearn (2013) found that faculty trained in modern teaching strategies demonstrated greater student engagement and classroom adaptability. Similarly, the American Council on Education (2012) observed that such training improves faculty effectiveness and student achievement. Evaluation and assessment practices also play a transformative role, influencing institutional culture and ensuring responsiveness to changing educational needs (Bailey & Jaggars, 2023; Leibowitz & Bozalek, 2023; Tight, 2023). It is however important to emphasize the value of targeted, ongoing faculty development programs, which other universities in Kenya and across the region can replicate to improve teaching quality, enhance student engagement, and promote research and innovation culture as indicated by the current study.

Role of Technology in Teaching and Student Learning

Table 2

Role of Technology in Teaching and Student Learning at EAST

Technological Role	Mean Rating
Use of technology in engaging students	4.0
LMS in tracking and assessing student progress	3.5
Multimedia in improving student understanding	3.0
Technology improving student learning outcomes	4.0
Faculty digital tool confidence	3.0

Note. Ratings based on a 5-point scale where 1 = lowest and 5 = highest.

In the current Study, technology was viewed as an important tool in enhancing instruction and student learning outcomes. This is in agreement with other studies which assert that in university education, technology is increasingly becoming central in facilitating dynamic, wide-ranging, and flexible learning experiences. This is because it supports varied instructional formats that cater to different learning preferences and enhances engagement through interactive and immersive methods. The Study Respondents rated technology's role in engaging students ($M = 4.0$) and in improving learning outcomes ($M = 4.0$) as highly significant. Technology's contribution in tracking student progress via LMS ($M = 3.5$). Adeline (2024) agree with the notion of digital tools building stronger faculty-student relationships irrespective of locality to promote flexible and inclusive instruction. Coker and Mercieca (2023) highlight how digital access enriches learning through global collaboration while Means et al. (2013) found that e-learning tools improve outcomes by providing diverse and robust learning prospects. There is a wide range of technology that can be integrated into instruction. However, in the case of EAST, faculty confidence in using these digital tools was indicated as moderate ($M = 3.0$). Multimedia incorporation, such as videos, podcasts, and simulations, was rated 3.0, indicating limited usage in enhancing complex concept understanding. Challenges to technology integration included limited training, technical issues, resistance to change, and unequal access to devices and internet connectivity. These findings suggest that investment in digital literacy, training, and infrastructure is critical. Universities across Sub-Saharan Africa can benefit by prioritizing technology integration, supporting faculty in digital skills, and ensuring equitable access to online learning platforms and resources.

Strategies Proposed for EAST to Enhance the Quality of Instruction

To promote active learning and student-centered teaching approaches across departments, the University should prioritize faculty development and support. This includes organizing regular workshops, seminars, and peer mentoring sessions that emphasize active learning techniques such as flipped classrooms and problem-based learning. Faculty motivation should be strengthened through timely payment, recognition, and incentives, while opportunities for professional growth such as participation in academic conferences, faculty exchange programs, and cross-department

collaboration should be expanded. Feedback from student evaluations should also be systematically utilized to guide instructional improvements.

Promoting active learning and student-centered pedagogies will require greater use of participatory methods such as case studies, simulations, debates, role-play, and peer teaching. Interdisciplinary learning should be encouraged alongside weekly assessments, learner choice, and critical thinking exercises to foster curiosity, creativity, and independence among students. In order to complement these strategies, technology integration must be enhanced. This involves strengthening the use of Learning Management Systems, incorporating gamification and emerging technologies such as VR, AR, and AI, and expanding access to laptops, e-books, and smart boards. Reliable internet connectivity and digital library resources will be essential to support this transition.

Enhancing student engagement and mentorship should be another priority. Faculty-student mentorship programs, inclusive participation strategies that draw in quieter learners, and opportunities for student leadership in clubs, forums, and research projects will cultivate active involvement. Strengthening peer mentoring and study groups will further support student learning and retention. Similarly, experiential and practical learning should be emphasized by expanding internships, service learning, fieldwork, and industry partnerships. Maker spaces, laboratories, and hands-on projects, coupled with corporate guest lectures, will provide students with real-world applications of theory.

Effective assessment and feedback strategies are also necessary. Formative assessments such as quizzes, reflections, and presentations, alongside competency-based evaluations, e-portfolios, and peer/self-assessments, will help track learning progress. Feedback mechanisms must be strengthened to ensure student input leads to tangible improvements. At the institutional level, investment in infrastructure and the learning environment is critical. Active learning classrooms with flexible seating, improved study areas, modernized facilities, expanded library resources, and better cafeteria services will create a more supportive atmosphere. Long-term improvements such as a campus clinic and international exchange programs should also be considered.

Finally, communication, collaboration, recognition, and growth strategies should underpin all efforts. Clear communication of policies across departments, collaborative curriculum reviews, team teaching, and interdisciplinary efforts will enhance cohesion. Recognition of both faculty and student achievements through awards, incentives, and institutional visibility will boost motivation and morale. At the same time, strategic marketing, strong partnerships with churches and other institutions, participation in academic events, and celebration of student successes will strengthen EAST's reputation and competitiveness locally and internationally.

Conclusion

The findings of this study demonstrate that while EAST has made commendable strides in creating a conducive teaching and learning environment, significant opportunities remain for strengthening instructional quality and student outcomes. Faculty members have shown commitment to teaching, yet there are clear gaps in professional development, technology integration, and student engagement that must be addressed for the Institution to remain competitive and relevant in today's

higher education landscape. Barriers such as limited digital resources, inadequate academic support services, and uneven curriculum alignment with industry standards continue to impede the attainment of quality education.

To overcome these challenges, the University must adopt a holistic strategy that emphasizes faculty empowerment, student-centered pedagogies, effective use of technology, experiential learning, and institutional investment in infrastructure and resources. Equally important is the creation of systems that value student feedback, promote collaboration across departments, and recognize excellence in teaching and learning. By aligning its practices with evidence-based approaches and fostering strong industry and community partnerships, EAST can nurture an environment where students are not only consumers of knowledge but also active participants in their learning journeys.

Finally, transforming teaching and learning at EAST requires deliberate commitment at all levels including policy, faculty, and administration. By implementing the recommendations proposed in current Study, the Institution has the potential to set itself apart as a center of academic innovation, producing graduates who are well-prepared to meet both the professional and societal demands of the 21st century.

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Conflict of interest

The authors declare that they have no conflict of interest.

References

- Adachi, C., Tai, J. H.-M., & Dawson, P. (2017). Academics' perceptions of the benefits and challenges of self and peer assessment in higher education. *Assessment & Evaluation in Higher Education*, 43(2), 294–306. <https://doi.org/10.1080/02602938.2017.1339775>
- Al Karadsheh, O., Abutayyem, H., Saidi, A., & Shqaidef, A. (2025). Knowledge acquisition and student perceptions of three teaching methods: a randomized trial of live, flipped, and interactive flipped classrooms. *BMC Medical Education*, 25, 573. <https://doi.org/10.1186/s12909-025-07156-0>
- Al Lily, A. E., Alqahtani, A., Alshamsi, O., & AlMarzooqi, M. H. (2022). A bibliometric analysis of online faculty professional development in higher education. *Research and Practice in Technology Enhanced Learning*, 17(17). <https://doi.org/10.1186/s41039-022-00196-w>
- Altbach, P. G., Reisberg, L., & Rumbley, L. E. (2009). *Trends in global higher education: Tracking an academic revolution*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000183219>
- Amberscript. (2023, April 25). Open-Ended Questions in Qualitative Research: Strategies, Examples, and Best Practices. Retrieved from <https://www.amberscript.com/en/blog/open-ended-questions-in-qualitative-research>.
- American Council on Education. (2017). *Institutional commitment to teaching excellence: The role of faculty development in advancing instructional quality and student learning* [PDF]. American Council on Education. Retrieved from <https://www.acenet.edu/Documents/institutional-commitment-to-teaching-excellence.pdf>.
- Bailey, T. R., & Jaggars, S. S. (2023). Improving student outcomes through effective assessment of teaching and learning. *The Journal of Higher Education*, 94(1), 29–48. <https://doi.org/10.1080/00221546.2022.2117652>.
- Baran, E., Correia, A. P., & Thompson, A. (2011). Transforming online teaching practice: Critical analysis of the literature on the roles and competencies of online teachers. *Distance Education*, 32(3), 421–439. <https://doi.org/10.1080/01587919.2011.610293>
- Berge, Z. L. (2002). Online Teaching and Learning: Perspectives and Directions. *Educational Technology*, 42(5), 15-24.

- Bhardwaj, R., Chen, L., & Gonzalez, A. (2025). Student-centered strategies for academic and personal growth in graduate education. *Frontiers in Education, 10*, Article 1518602. <https://doi.org/10.3389/educ.2025.1518602>
- Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university* (4th ed.). Open University Press.
- Bozkurt, A., Jung, I., Xiao, J., Vladimirsch, V., Schuwer, R., Egorov, G., ... Paskevicius, M. (2020). A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education, 15*(1), 1–126.
- Commission for University Education. (2020, December). *Quality: Our agenda* [PDF]. Commission for University Education. Retrieved from <https://www.cue.or.ke/index.php/quality-our-agenda>
- Coker, H., & Mercieca, D. (2023). "Digital Technology for Inclusive Education: Reflecting on the Role of Teachers." In: *Inclusion, Equity, Diversity and Social Justice in Education* (Sustainable Development Goals Series). Springer Nature. DOI: 10.1007/978-981-19-5008-7_16.
- Craig, C. D., & Kay, R. H. (2021). Self-assessment in online learning for higher education: A systematic review of the literature. *ICERI 2021 Conference Proceedings*. <https://doi.org/10.21125/iceri.2021.0488>.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE Publications.
- Dela Cruz, R. A. C. (2023). Assessment of the Adaptive Learning System Implementation in Selected Private School: Basis for Enrichment. *Cosmos International Journal of Art & Higher Education, 12*(1), 144-156. <https://doi.org/10.46360/cosmos.ahe.520231011>.
- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher, 38*(3), 181–199. <https://doi.org/10.3102/0013189X08331140>.
- Feng, L., Close, E. W., Luxford, C. J., Pierson, J., Olmstead, A., Shim, J., & Koka, V. S. (2025). Transforming Undergraduate STEM Education: The Learning Assistant Model and Student Retention and Graduation Rates. *Research in Higher Education, 66*, Article 4. <https://doi.org/10.1007/s11162-024-09823-5>.
- Fontaine, G., Cossette, S., Maheu-Cadotte, M.-A., Mailhot, T., Deschênes, M.-F., Mathieu-Dupuis, G., Côté, J., Gagnon, M.-P., & Dubé, V. (2019). Efficacy of adaptive e-learning for health professionals and students: a systematic review and meta-analysis. *BMJ Open, 9*(8), e025252. <https://doi.org/10.1136/bmjopen-2018-025252>.
- Green, M. F., & Hearn, J. C. (2013). Faculty Development: The Impact of Professional Development Programs on Faculty Teaching Effectiveness. *Journal of Higher Education, 24*(3), 202-211.
- Im, J. H., Kang, W. S., Lee, S. H., Jeong, D. C., Kim, D. H., Lim, M. S., Kim, M., Seo, J. H., & Lee, D. H. (2024). Needs and gaps of faculty development for medical schools. *Korean Journal of Medical Education, 36*(2), 189-201. <https://doi.org/10.3946/kjme.2024.295>.
- Kalam, A., & Hossain, M. A. (2023). Effects of quality of higher education on student satisfaction and the institutional image. *International Journal of Business Innovation and Research, 31*(4). <https://doi.org/10.1504/IJBIR.2023.100494>.
- Kandiri, J., Wambugu, P., & Makini, E. (2023). Professional development in Kenyan universities: Challenges and opportunities. *Journal of Higher Education in Africa, 21*(2), 89–107.
- Keshmiri, F., & Parsa, S. (2023). A systematic review of faculty development programs based on the Harden teacher's role framework model. *BMC Medical Education, 23*, Article 590. <https://doi.org/10.1186/s12909-023-04863-4>.
- Kohnke, L., & Zou, D. (2025). *Preparing future educators for AI-enhanced classrooms: Insights into AI literacy and integration*. *Computers and Education: Artificial Intelligence, 8*, Article 100398. <https://doi.org/10.1016/j.caeai.2025.100398>.
- Kothari, C. R. (2014). *Research methodology: Methods and techniques* (2nd ed.). New Age International.
- Kozanitis, A., & Nenciovici, L. (2023). Effect of active learning versus traditional lecturing on the learning achievement of college students in humanities and social sciences: a meta-analysis. *Higher Education, 86* (6), 1377-1394. <https://doi.org/10.1007/s10734-022-00977-8>.
- Kulal, A., Nanjundaswamy, A., Dinesh, S., Suraj, N., & Mallika, N. (2024). Advancing teacher competencies: Assessing the influence of faculty development programs (FDP) on embracing modern innovations in teaching. *Journal of Applied Research in Higher Education, 16*(4), 1301–1323. <https://doi.org/10.1108/JARHE-01-2024-0004>.
- Leibowitz, B., Bozalek, V., van Schalkwyk, S., & Winberg, C. (2015). Institutional context matters: the professional development of academics as teachers in South African higher education. *Higher Education, 69*(2), 315-330. <https://doi.org/10.1007/s10734-014-9777-2>.

- La Fleur, J., & Dlamini, R. (2022). Towards learner centric pedagogies: Technology enhanced teaching and learning in the 21st century classroom. *Journal of Education (South Africa)*, *88*(8), 4–20. <https://doi.org/10.17159/2520-9868/i88a01>.
- Lampropoulos, G. (2025). Augmented Reality, Virtual Reality, and Intelligent Tutoring Systems in Education and Training: A Systematic Literature Review. *Applied Sciences*, *15*(6), 3223. <https://doi.org/10.3390/app15063223>.
- Lukashe, M., Chigbu, B. I., & Umejesi, I. (2024). Synchronous online learning and career readiness in higher education: student perceptions, challenges, and solutions. *Frontiers in Education*, *9*:1449363. <https://doi.org/10.3389/feduc.2024.1449363>.
- Makerere University. (2024). *Graduate employability and curriculum alignment report*. Makerere University Press.
- Maiyo, A., Abong'o, J., & Tuigon'g, A. (2014). Bridging the gap between curriculum theory and industrial innovation practice in Kenya. *International Journal of Research and Scientific Innovation*, *1*(5), 30–36. Retrieved from <https://rsisinternational.org/journals/ijrsi/articles/bridging-the-gap-between-curriculum-theory-and-industrial-innovation-practice-in-kenya/>.
- McDougall, D., & Johnston-Wilder, S. (2024). Teacher growth through professional development centered on the Teaching for Robust Understanding framework. *Education Sciences*, *15*(1), Article 18. <https://doi.org/10.3390/educsci15010018>
- McIver, S., & Murphy, B. (2021). Self-assessment and what happens over time: Student and staff perspectives, expectations and outcomes. *Active Learning in Higher Education*. Advance online publication. <https://doi.org/10.1177/14697874211056087>.
- McLeod, S. (2023). Convenience sampling. *Simply Psychology*. Retrieved from <https://www.simplypsychology.org/convenience-sampling.html>.
- Mdhlalose, D., & Mlambo, G. (2023). Integration of Technology in Education and Its Impact on Learning and Teaching. *Asian Journal of Education and Social Studies*, *47*(2), 54–63. <https://doi.org/10.9734/ajess/2023/v47i21021>.
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2013). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. *U.S. Department of Education*.
- Nganga, S. K. (2022). Reimagining university teaching in Africa: Challenges and innovations. *International Journal of Educational Reform*, *31*(3), 211–229.
- Obi, C. I., & Okeke, C. N. (2013). Academic support services and student success in higher education. *Journal of Education and Practice*, *4*(15), 45–53.
- Okebukola, P. A. O. (2012). Getting teacher quality right in Nigeria: Some strategic options. *National Summit on Education, Academic Staff Union of Universities (ASUU)*. https://www.academia.edu/9062940/Getting_Teacher_Quality_Right_in_Nigeria_Some_Strategic_Options.
- Omondi, B. (2008). *The influence of learner support services on academic performance of distance learners: The case of University of Nairobi external degree programs in Kenya*. University of Nairobi. Retrieved from <https://erepository.uonbi.ac.ke/handle/11295/14205>.
- Omoniyi, T. O. (2023). Potential graduates' knowledge, readiness, and disposition to 21st-century employability skills in the University of Ibadan, Nigeria. *International Journal of Educational Development*, *92*, 102631. <https://doi.org/10.1016/j.ijedudev.2022.102631>.
- Pattison, S., Fung, D., & Brew, A. (2024). Faculty members' perceptions and students' experiences of research-based curricula: A multiple case study of four undergraduate programmes. *Higher Education*, *88*(5), 1205–1225. <https://doi.org/10.1007/s10734-023-01093-1>.
- Quist, I. (2023). Factors inhibiting quality higher education delivery: Empirical evidence from the University for Development Studies (UIDS), Tamale, Ghana. *European Journal of Development Studies*. Retrieved from <https://ej-develop.org/index.php/ejdevelop/article/view/290>.
- Ramaila, S., & Molwele, A. J. (2022). The role of technology integration in the development of 21st century skills and competencies in life sciences teaching and learning. *International Journal of Higher Education*, *11*(5), 9-17. <https://doi.org/10.5430/ijhe.v11n5p9>.
- Smith, J., Odhiambo, R., & Bhardwaj, R. (2025). Learner-centered teaching in rural Kenya: Faculty interpretations and applications. *International Journal of Education Research*, *120*, 101–115.
- Tashakkori, A., & Teddlie, C. (2010). *Mixed methodology: Combining qualitative and quantitative approaches*. SAGE Publications.
- Teichler, U. (2014). Opportunities and problems of comparative higher education research: The contribution of a research program on "Academic Profession." *Higher Education*, *67*(4), 439–455. <https://doi.org/10.1007/s10734-013-9682-0>.
- Tight, M. (2023). *Researching higher education: International perspectives and practices* (2nd ed.). Bloomsbury Academic.
- Trust, S. (2025). London dominates England's social mobility league with top 20 places. *The Guardian*. <https://www.theguardian.com/society/2025/may/15/london-dominates-englands-social-mobility-league-with-top-20-places>.
- Wang, A. I., & Tahir, R. (2020). The effect of using Kahoot! for learning – A literature review. *Computers & Education*, *149*, Article 103818. <https://doi.org/10.1016/j.compedu.2020.103818>.

- Wangenge Ouma, G. (2017). Quality of higher education in Kenya: Addressing the conundrum. *International Journal of Educational Development*, 55, 1–10. <https://doi.org/10.1016/j.ijedudev.2017.11.002>.
- Xiao, Y., & Watson, M. (2019). Guidance on conducting a systematic literature review. *Journal of Planning Education and Research*, 39(1), 93–112. <https://doi.org/10.1177/0739456X17723971>.
- Yusuf, A. M., & Adebayo, G. A. (2019). Challenges of pedagogical practices in Nigerian universities: An empirical analysis. *Educational Studies*, 45(2), 239–253.
- Zickafoose, A., Sun, H., Zhang, Y., & Abdulaziz, F. (2024). Barriers and challenges affecting quality education (Sustainable Development Goal #4) in Sub-Saharan Africa by 2030. *Sustainability*, 16(7), 2657. <https://doi.org/10.3390/su16072657>.