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TEACHERS' PREPAREDNESS TO INTEGRATE ARTIFICIAL INTELLIGENCE INTO LIFE ORIENTATION CURRICULUM IMPLEMENTATION IN THE FURTHER EDUCATION AND TRAINING PHASE

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Abstract

The increasing integration of Artificial Intelligence (AI) into education presents opportunities to enhance teaching, learning, assessment and curriculum implementation. However, effective integration depends on teachers' preparedness to translate technological awareness into meaningful pedagogical practice, particularly in Life Orientation (LO), a human-centred subject addressing personal, social, ethical and career-related development. This study aimed to assess teachers' preparedness for integrating AI into LO curriculum implementation in the Further Education and Training (FET) phase. The study was informed by the Technology Acceptance Model (TAM), which explains technology acceptance through perceived usefulness and perceived ease of use, while recognising the influence of contextual factors. A generic qualitative research design was adopted. Data were generated through semi-structured interviews and non-participant classroom observations involving 15 purposively selected LO teachers from 15 schools across the five school quantiles in Gauteng Province. Qualitative content analysis was used to identify patterns and themes. Findings revealed six dimensions of preparedness: basic AI awareness and limited AI competence, general digital literacy, prior exposure to educational technologies, professional development opportunities, institutional support, and teaching experience and subject background. Although teachers demonstrated awareness of AI, foundational digital skills and willingness to experiment, their AI use remained largely exploratory rather than pedagogically embedded. The study contributes by conceptualising AI preparedness as a dynamic interaction between technological competence, professional learning, institutional conditions and subject-specific pedagogical expertise. It recommends continuous LO-specific AI professional development, stronger institutional support, an LO-specific AI competency framework, equitable infrastructure, and collaborative reflective practice. The study concludes that sustainable AI integration requires coordinated capacity development rather than technology acquisition alone.

Keywords: Artificial intelligence; Digital literacy; Life Orientation; Professional development; Teacher preparedness; Technology Acceptance Model; Technological integration

Introduction

Artificial Intelligence (AI) is rapidly reshaping educational practice by supporting personalised learning, adaptive instruction, automated assessment and intelligent content generation (Bhutoria, 2022; Al Nabhani et al., 2025). AI has increasingly been recognised as a technology capable of transforming teaching and learning by providing more personalised educational experiences and supporting teachers in the development and delivery of instructional content (Baidoo-Anu & Ansah, 2023). Rather than replacing teachers, AI can enhance curriculum implementation by enabling responsive teaching, differentiated learning experiences and improved learner engagement (Bhutoria, 2022; Hardaker & Glenn, 2025). However, the educational value of AI depends not only on access to technological tools but also on teachers' capacity to understand, evaluate and integrate these technologies appropriately within pedagogical practice (Tan et al., 2025; Kayıran et al., 2026). Teacher preparedness is therefore central to determining whether AI becomes meaningfully embedded in curriculum implementation or remains an exploratory technological addition.

In South Africa, the increasing emphasis on digital technologies in education reflects national efforts to strengthen the use of information and communication technologies and prepare learners for an increasingly technology-driven society (DBE, 2001; DBE, 2010). Nevertheless, differences in digital infrastructure, teacher competence, professional development and institutional support can influence teachers' opportunities and capacity to integrate emerging technologies effectively (Muyambi & Ramorola, 2025; Amemasor et al., 2025). Consequently, AI integration requires attention not only to technological availability but also to teachers' knowledge, confidence, professional learning and the institutional conditions within which teaching takes place (Tan et al., 2025). This issue is particularly important in Life Orientation (LO), a human-centred subject concerned with learners' personal, social, emotional, ethical and career development. The Curriculum and Assessment Policy Statement (CAPS) positions LO as a subject concerned with personal well-being, social relationships, citizenship, physical development and preparation for further education and the world of work (DBE, 2010). Unlike subjects in which AI may primarily support knowledge acquisition, LO requires teachers to facilitate dialogue, critical reflection, values formation and contextual decision-making. AI integration in LO therefore requires teachers to exercise professional judgement in determining whether AI-generated content is accurate, culturally responsive, ethically appropriate and aligned with curriculum objectives (Dlamini & Ndzinisa, 2025; Ceallaigh & Murphy, 2026).

Although research on AI in education has expanded considerably, much of the literature has focused on areas such as personalised learning, technology-supported teaching, teacher perceptions and AI-enabled educational applications (Bhutoria, 2022; Chounta et al., 2022; Crompton & Burke, 2023). Recent studies have increasingly emphasised teacher competence, professional development and pedagogical knowledge as important conditions for meaningful AI integration (Tan et al., 2025; Ceallaigh & Murphy, 2026; Kayıran et al., 2026). However, limited empirical attention has been given to teachers' preparedness to integrate AI into human-centred and values-oriented subjects such as LO, particularly within the South African FET context. Moreover, being aware of AI does

not necessarily mean that teachers are pedagogically prepared to use it. Teachers may know about AI tools while lacking the knowledge and confidence to select appropriate applications, critically evaluate AI-generated outputs or align their use with curriculum and subject-specific objectives (Ilma & Rohmah, 2025; Huwer et al., 2025).

The Technology Acceptance Model (TAM) provides a useful theoretical lens for understanding teachers' acceptance and use of emerging technologies by emphasising perceptions of usefulness and ease of use. In the context of AI integration, these perceptions may interact with teachers' technological competence, professional development and institutional conditions to influence their willingness and capacity to adopt AI in practice. Applying this perspective to LO provides an opportunity to examine preparedness beyond simple awareness or access and to consider the conditions that shape teachers' meaningful use of AI. Against this background, this study examines teachers' preparedness to integrate AI into LO curriculum implementation in the FET phase. It responds to the need for greater understanding of how teachers' technological capabilities, professional learning, prior experiences and contextual conditions shape their readiness to use AI meaningfully within a human-centred curriculum.

Aim of the Study

The aim of the study was to assess teachers' preparedness for integrating AI into the LO curriculum implementation in the FET phase.

Research Question

How prepared are teachers to integrate AI into the implementation of the LO curriculum in the FET phase?

Methodology

Research Approach

A qualitative research approach was employed because the study sought to obtain an in-depth understanding of teachers' perceptions, experiences and meanings concerning AI integration. Qualitative research enables researchers to investigate phenomena in natural settings and to interpret the meanings participants attach to their experiences (Oloba, 2026). It is particularly suitable where the objective is not to measure variables statistically but to generate rich, contextualised accounts of human experience. In this study, teachers were therefore positioned as active contributors to knowledge, enabling them to articulate their experiences of AI awareness, competence, technological exposure, professional development and institutional support. The qualitative approach consequently enabled the researcher to examine the complexity of preparedness within the everyday realities of FET schools.

Research Design

The study adopted a generic qualitative research design. Generic qualitative research provides flexibility for investigating participants' interpretations, perceptions and experiences without being restricted to the philosophical and procedural requirements of

traditions such as phenomenology, grounded theory or ethnography (Ellis & Hart, 2023). The design was appropriate because the study sought practical and contextually grounded understanding of teachers' preparedness rather than developing a formal theory or describing the essence of a lived experience. It enabled the researcher to explore teachers' awareness, competence, prior technological exposure, professional development, institutional support and teaching experience in a descriptive and interpretive manner. Its flexibility also permitted the use of semi-structured interviews and classroom observations to generate rich evidence about teachers' preparedness within authentic school contexts.

Population and Sampling

The population comprised LO teachers teaching in the FET phase in South Africa, from which 15 teachers from 15 schools in Gauteng Province were purposively selected, with one teacher representing each participating school. Purposeful sampling was appropriate because qualitative research prioritises information-rich participants who possess direct knowledge and experience relevant to the phenomenon under investigation (Ahmad & Wilkins, 2025). Participants were required to be qualified LO teachers teaching in the FET phase, have experience implementing the LO curriculum, teach in schools where digital technologies were accessible to some extent, and be willing to participate voluntarily and provide informed consent. The schools were distributed across the five school quantiles, with three schools represented from each quantile, thereby incorporating different socio-economic contexts. The sample consisted of teachers with between two and 15 years of teaching experience and qualifications ranging from Bachelor of Education degrees to Master's degrees.

Data Collection

Data were collected through one-to-one semi-structured interviews and non-participant classroom observations. The semi-structured interviews used predetermined open-ended questions aligned with the research objectives, allowing participants to discuss their AI awareness, preparedness, experiences and perceptions while enabling the researcher to probe emerging issues for clarification and depth. The interviews were complemented by non-participant observations of LO lessons, during which the researcher observed teachers' use of digital technologies, instructional strategies, learner engagement and evidence of AI-supported teaching and learning without participating in classroom activities. An observation schedule and field notes were used to ensure consistency and capture contextual evidence. The combination of interviews and observations enabled methodological triangulation by comparing teachers' reported experiences with observed classroom practices, thereby strengthening the credibility of the evidence.

Data Analysis

The data were analysed using inductive qualitative content analysis, which enabled the researcher to systematically identify, categorise and interpret patterns emerging from participants' accounts (Lyhne et al., 2025). Interview recordings were transcribed verbatim, and the transcripts and observation field notes were reviewed repeatedly to facilitate familiarity with the data. The researcher then identified meaningful units of text

relevant to teachers' preparedness to integrate AI into LO curriculum implementation and assigned initial codes to participants' descriptions of their knowledge, experiences, practices and contextual conditions. The initial codes were compared across participants to identify similarities, differences and recurring patterns. Related codes were subsequently grouped into broader categories, which were reviewed against the interview and observation data to ensure that they accurately reflected the participants' experiences. The categories were then refined and organised into six interrelated dimensions of preparedness: basic AI awareness and competence, general digital literacy, prior exposure to educational technologies, professional development opportunities, institutional support, and teaching experience and subject background. Observation data were considered alongside interview accounts to compare reported preparedness with evidence of technology use and pedagogical practice in the classroom, thereby supporting methodological triangulation and strengthening the credibility of the interpretation. The final analysis involved interpreting these dimensions in relation to the research question and the TAM. In particular, attention was given to how the identified dimensions influenced teachers' perceived usefulness and perceived ease of use of AI, while also considering the institutional, professional and pedagogical conditions shaping their preparedness. This approach enabled the analysis to move beyond identifying whether teachers were aware of AI towards understanding the extent to which they could translate technological awareness and experience into curriculum-aligned and pedagogically meaningful practice.

Ethical Considerations

Ethical clearance was obtained from the Higher Degree Committee of the Faculty of Education at the University of Johannesburg (Ethical Clearance No. SEM 2-2025-209) and permission was obtained from the Gauteng Department of Education before data collection commenced. Participation was voluntary and written informed consent was obtained from all participants after they had been informed about the purpose of the study, their involvement and their right to withdraw without negative consequences. Confidentiality and anonymity were protected through the use of pseudonyms for participants, schools and communities, while information provided by participants was used solely for academic purposes. Audio recording of interviews occurred only with participants' permission, and recordings were securely stored to prevent unauthorised access. Data collection was arranged at times and venues convenient to participants, and attention was given to protecting their dignity, rights and well-being throughout the research process, consistent with established ethical principles.

Findings

1. Basic awareness and limited AI competence

The data reveal that participants possessed a basic awareness of AI tools but had limited competence in applying them meaningfully within the LO curriculum. Participant 2 described an emerging engagement with AI, noting that it was mainly used for simple instructional tasks: *"I am aware of various AI tools that can support teaching and learning, and I have started incorporating some of them into my instructional practices. However, I mostly use them for basic tasks such as generating ideas or simple activities."* Participant

4 similarly acknowledged familiarity with AI-related applications but uncertainty about selecting appropriate tools and using them pedagogically: *"I recognise that I am not yet using these tools to their full potential because I am still unfamiliar with which AI tools are most suitable."* Participants 7 and 9 also described their competence as developing. Participant 7 explained: *"I sometimes use AI to help me prepare worksheets or to get ideas for class discussions, but I would not say I fully understand how it works."* Participant 9 similarly stated: *"I have basic knowledge of AI and have used it a few times for lesson ideas and activities."* Participant 12 expressed interest in AI while identifying inadequate training as a limitation: *"I often rely on trial and error, and I am not always sure if I am using the tools effectively to support learners."* The interview data were supported by classroom observations. Although teachers demonstrated confidence in using conventional digital technologies, AI was rarely evident in lesson planning, learner engagement or assessment. Classroom technology was predominantly used for presenting notes and activities. Thus, the evidence suggests that teachers were at an exploratory stage of AI adoption, characterised by awareness and willingness to experiment, but insufficient pedagogical competence for systematic curriculum integration.

2 General Digital Literacy

The data highlighted that participants generally possessed foundational digital literacy, although this did not consistently extend to confident use of AI in LO teaching. Participant 3 described their competence as basic: *"I have general digital literacy, but it is mostly at a basic level. I understand how to use common digital tools; however, when it comes to AI, my knowledge is still limited."* Participant 15 similarly explained that previous experience with classroom technology provided a foundation but did not eliminate the need for AI-specific guidance: *"This experience helps me to adapt more easily, but I still need guidance on how to use AI tools meaningfully in LO lessons."* Participant 10 reported greater confidence in digital technology, stating: *"I am confident in using digital technologies to support learner engagement and curriculum delivery, and this gives me a good starting point for integrating AI."* Participant 14, however, identified a persistent challenge in linking digital technologies to LO outcomes: *"I am comfortable using digital platforms like presentations and online resources, which makes it easier to explore AI tools. However, I am not always sure how to align these tools with the LO curriculum outcomes."* The self-directed nature of some teachers' digital learning was also evident. Participant 5 explained: *"Most of my digital skills are self-taught, so while I can navigate technology, I sometimes struggle to understand more advanced tools like AI."* Participant 13 similarly acknowledged that digital literacy enabled experimentation but did not ensure meaningful utilisation without training. Observations generally confirmed these accounts. Teachers could operate presentation software, online resources and other digital platforms, but AI-specific applications were rarely observed. Thus, general digital literacy provided a foundation for technological engagement but remained insufficient for pedagogically grounded AI integration.

3. Prior exposure to educational technologies

The data indicate that participants had varying levels of prior exposure to educational technologies, ranging from university-based training and use of learning platforms to informal experimentation with AI tools. Participant 11 described practical experience with digital platforms and generative AI: *"I do have prior exposure to educational technologies, such as Google Classroom and ChatGPT, which I have used for managing learner activities and generating ideas for lessons."* Participant 8 similarly linked their understanding of AI to university exposure: *"I possess a foundational understanding of AI tools and their potential applications in education... because I was introduced to these tools during my time at university."* Participant 1, however, indicated that formal exposure had remained relatively introductory: *"In university, I received some training in the use of AI, which gave me basic knowledge, but I have not yet fully explored how to apply it in my classroom practice."* In contrast, Participant 9 described a self-directed pathway: *"Most of my exposure to educational technologies has been through personal exploration, where I experimented with online tools and AI platforms to see how they can support teaching and learning."* Participant 14 highlighted the distinction between conventional educational technologies and AI: *"I have used technology like PowerPoint and online resources in my teaching, but my exposure to AI tools is still very limited."* These accounts indicate that previous exposure supported confidence and initial experimentation, but the depth and relevance of that exposure varied considerably. Observation data broadly supported the interview findings. Teachers with previous experience using educational technologies appeared comfortable operating digital platforms and resources. However, direct evidence of AI use remained limited. Prior exposure therefore appeared to provide a foundation for AI engagement, but its influence depended on the nature, depth and practical relevance of the experience.

4. Professional Development Opportunities

Participants highlighted that professional development opportunities strongly influenced teachers' preparedness to integrate AI into the LO curriculum. Participants emphasised the need for training that was continuous, practical and specifically aligned with LO. Participant 1 stated: *"Effective integration requires more specialised training, particularly in aligning AI tools with curriculum objectives and pedagogical strategies specific to Life Orientation."* Participant 6, who had benefited from institutional ICT training, explained: *"I have also received institutional support to use AI tools. Previously, I attended ICT training provided by the Department of Education, which has helped me feel more confident in experimenting with AI in my teaching."* However, access to training was uneven. Participant 8 described their preparedness as constrained by insufficient structured training: *"I do not feel fully equipped to integrate them effectively into the Life Orientation curriculum. This is mainly due to a lack of structured training and clear guidelines."* Participant 4 specifically called for subject-focused development: *"We need subject-specific workshops that show us exactly how AI can be used to teach topics like career guidance, personal development, and social issues."* Participants also emphasised the importance of continuity and practical application. Participant 12 observed: *"There are very few opportunities for continuous professional development when it comes to AI."* Participant 6 advocated practical engagement, arguing that teachers need opportunities

to use AI in authentic teaching situations. Participant 14 further highlighted the importance of follow-up: *"We need continuous guidance, mentoring, and opportunities to share experiences with other teachers."* Observations broadly reflected these accounts. Teachers who had received relevant training demonstrated greater confidence, whereas limited evidence of ongoing AI-focused development was apparent in other contexts. The data therefore suggest that one-off or generic training is insufficient for sustained AI integration.

5. Institutional Support

Participants expressed that institutional support differed substantially across schools and influenced teachers' preparedness to integrate AI into LO teaching. Participant 2 identified insufficient formal support as a limitation: *"My preparedness is limited by a lack of formal training and structured guidance on how to fully integrate AI within the LO curriculum."* Participant 5 similarly emphasised the importance of sustained support, particularly through professional development and practical engagement. In contrast, Participant 9 reported greater preparedness where institutional mechanisms were available: *"I am adequately prepared to use technology in the classroom, and this has been strengthened by the institutional support provided, such as ongoing professional development opportunities, access to digital tools, and encouragement from school leadership."* Participant 10 also linked preparedness to a supportive ICT environment, noting that their school prioritised digital integration through workshops and training. Leadership emerged as another important dimension. Participant 7 explained: *"The support from school management, especially in providing clear direction and encouraging the use of innovative technologies, has contributed to my confidence in attempting to integrate AI."* However, support was not uniformly available. Participant 12 reported: *"There is very limited institutional support, particularly in terms of resources and training, which makes it difficult to confidently integrate AI into the LO curriculum."* Participant 3 identified collaboration as a useful form of support, particularly through workshops, peer learning and shared resources, although more structured initiatives were considered necessary. Observation data confirmed considerable variation between schools. Some had stronger ICT infrastructure, internet connectivity, digital resources and visible leadership support, whereas others had limited resources and little evidence of formal AI-related guidance or professional development. The data therefore establish institutional support as both an enabling condition and a constraint on AI preparedness.

6. Teaching Experience and Subject Background

Participants indicated that teaching experience and subject-specific knowledge contributed to teachers' preparedness to integrate AI into LO teaching. Participant 1 explained that accumulated classroom experience had helped identify ways in which AI could support differentiated instruction: *"Through my teaching experience, I have come to realise that AI can significantly simplify my work, particularly by suggesting diverse teaching strategies that cater for different learner needs and abilities."* Participant 6 similarly linked prior training in lesson planning and material development with AI use, noting that such experience made it easier to use platforms such as Canva to develop visual resources. Participant 10 emphasised the relevance of subject experience,

explaining: *"Because Life Orientation deals with real-life issues, my experience in the subject has pushed me to use AI tools to generate relevant scenarios and examples that learners can relate to more easily."* Participant 15 described using AI as a supporting rather than replacement tool: *"My experience in designing learner-centred activities has helped me to use AI as a support tool that enhances interaction and participation."* Teaching experience also supported teachers' critical evaluation of AI-generated material. Participant 13 explained: *"With my teaching experience, I am able to assess and adapt AI-generated content to ensure that it aligns with the curriculum and is appropriate for my learners."* Observation data supported these accounts. More experienced teachers demonstrated greater confidence in adapting digital resources, differentiating activities and contextualising AI-generated content. Some incorporated visual materials, contemporary examples and learner-centred activities while retaining active teacher mediation. Thus, the evidence suggests that teaching experience and subject knowledge provide an important pedagogical foundation for meaningful AI use, particularly where teachers can evaluate and adapt AI outputs to suit curriculum requirements and learner needs.

Discussion

Participants' responses indicate that teachers possessed an emerging awareness of AI but had not yet developed the competence required for systematic and pedagogically meaningful integration into the LO curriculum. AI use was predominantly exploratory and functional, rather than embedded in lesson design, learner engagement or assessment. This suggests that awareness of AI does not necessarily translate into preparedness for effective curriculum implementation. Teachers recognised the potential value of AI but lacked the confidence and specialised knowledge needed to connect its capabilities with specific LO learning outcomes. This finding corresponds with studies showing that limited digital competence and inadequate training often result in superficial technology use, where emerging technologies are employed for routine tasks rather than transformative pedagogical purposes (Mamba & Beharry-Ramraj, 2026; Rahmawati et al., 2025). The finding is also consistent with research emphasising that teachers require both technological and pedagogical knowledge to integrate AI effectively. However, the present study provides a more specific account of this challenge within LO, where AI integration requires sensitivity to contextual, social, ethical and learner-centred issues.

From a TAM perspective, the findings suggest that limited competence constrains both perceived ease of use (PEOU) and perceived usefulness (PU). Teachers who are uncertain about how AI operates or how it can be incorporated into lesson planning are less likely to perceive the technology as easy to use. This reduced sense of usability can, in turn, limit their ability to recognise its broader pedagogical usefulness. The reliance on trial and error further indicates that teachers have not yet developed sufficient experience to make AI an intuitive component of their routine practice. This interpretation is supported by Syamala et al. (2025), who associate confidence and prior competence with stronger perceptions of technological ease of use. The findings also reveal a gap between attitudinal openness and practical capability. Teachers were generally not resistant to AI; rather, their willingness to experiment exceeded their ability to integrate it effectively. The present study therefore extends existing understanding by demonstrating that

preparedness should be viewed as more than technological awareness. In the LO context, meaningful preparedness requires the capacity to translate awareness into curriculum-aligned pedagogical practice. The study therefore identifies basic awareness as an important starting point for AI adoption, but not a sufficient condition for sustained and meaningful integration.

Participants' accounts indicate that teachers' general digital literacy provided an important foundation for engaging with AI, but it was insufficient to ensure meaningful integration into LO teaching. Participants were generally capable of using conventional digital technologies, yet this competence did not automatically translate into the ability to select, evaluate and pedagogically apply AI tools. This suggests that digital preparedness exists on a continuum, ranging from basic operational proficiency to more advanced technological–pedagogical competence. This finding is consistent with Muyambi and Ramorola (2025), who argue that foundational digital skills do not necessarily equip teachers for advanced technological innovation. It also corresponds with Archana (2025), who emphasise that AI requires specialised knowledge and critical engagement beyond conventional ICT competence. The finding further supports Alyoussef et al. (2026), who identify pedagogical alignment, ethical awareness and the ability to interpret technology as important dimensions of AI competence. However, the present study extends these arguments by demonstrating that the distinction between general digital literacy and AI competence is particularly significant in the LO context.

From a TAM perspective, general digital literacy may initially enhance PEOU because teachers who are familiar with digital platforms are more likely to approach new technologies with confidence. Nevertheless, where AI-specific knowledge is limited, PEOU remains fragile. Teachers may understand the operation of digital technologies while remaining uncertain about how AI can improve their teaching. Consequently, PU may also remain underdeveloped. The findings therefore suggest that general digital competence facilitates initial exposure but does not necessarily produce strong perceptions of AI's pedagogical usefulness. The uneven and predominantly self-developed nature of participants' digital skills further indicates limitations in formal capacity-building. Although prior experience can encourage experimentation, independent learning may produce inconsistent levels of competence across teachers. This corresponds with research emphasising the importance of structured professional development in supporting technology adoption (Mekheimer, 2025). The study therefore contributes by demonstrating that digital literacy should not be treated as a single, uniform predictor of AI readiness. Rather, preparedness depends on whether general digital competence is accompanied by AI-specific, pedagogical and curriculum-related knowledge. The findings consequently support the need for professional development that moves beyond basic ICT skills towards context-specific AI literacy for LO teaching.

The findings indicate that prior exposure to educational technologies contributes positively to teachers' preparedness for AI integration, but its influence is dependent on the depth, relevance and practical application of that exposure. Teachers with experience using learning platforms, digital resources and AI tools appeared more confident in experimenting with emerging technologies. However, exposure to conventional technologies alone did not guarantee AI competence. This suggests that preparedness

develops through meaningful technological experiences rather than through simple contact with technology. This finding corresponds with Ekhsan et al. (2026), who associate previous exposure and training with improved perceptions of technological usability and stronger adoption intentions. It is also consistent with research showing that previous technological experience can support technology adoption (Faiz et al., 2024). However, the findings reveal an important qualification: the type of exposure matters. Familiarity with presentation software or general digital platforms may provide confidence, but AI requires additional knowledge concerning its functionality, limitations, ethics and pedagogical application.

From a TAM perspective, prior exposure operates as an external variable that can strengthen both PEOU and PU. Familiarity reduces the cognitive and operational barriers associated with new technologies, making AI appear more manageable. At the same time, practical experience can help teachers identify concrete instructional benefits, strengthening PU. However, where previous exposure is largely theoretical or limited to conventional technologies, its effect on PU and PEOU is likely to be weaker. The findings therefore support the view that experience influences technology acceptance, while demonstrating that the quality of experience is equally important. The distinction between formal and informal exposure is also significant. University-based training provided some conceptual grounding, but participants' accounts suggest that such exposure did not always translate into classroom implementation. This finding is consistent with Kennedy (2025) and Whitehead and Arslan (2025), who identify a gap between theoretical preparation and practical application. Informal experimentation, meanwhile, demonstrated teacher initiative but also exposed limitations in structured institutional support. The study extends existing understanding by demonstrating that prior exposure should be conceptualised as a continuum rather than a binary condition. The contribution of the study lies in showing that contextually relevant, sustained and practice-oriented exposure is more likely to strengthen AI preparedness than generic technological familiarity. For LO teachers, exposure is most valuable when directly connected to curriculum objectives, learner needs and authentic classroom practice.

The data illustrate that professional development is a central determinant of teachers' preparedness to integrate AI into the LO curriculum. Training increased confidence and willingness to experiment, whereas limited, generic or infrequent development opportunities constrained teachers' capacity to move beyond basic AI use. This suggests that effective AI integration requires professional learning that is continuous, practical and explicitly connected to the pedagogical and curricular demands of LO. This finding is consistent with Mekheimer (2025), who identify professional development as an important influence on technology adoption. It also corresponds with research arguing that technological knowledge alone is insufficient without pedagogical and content alignment (Ceallaigh & Murphy, 2026; Ilma & Rohmah, 2025). However, the present findings provide greater specificity by showing that generic AI training may be inadequate for LO teachers because the subject requires the discussion of social, ethical, personal and career-related issues.

From a TAM perspective, professional development represents an important external variable influencing PEOU and PU. Practical training can reduce uncertainty and

technological anxiety, enabling teachers to perceive AI as more manageable. At the same time, curriculum-specific training can demonstrate how AI can improve particular aspects of teaching, strengthening perceptions of usefulness. Thus, professional development affects technology acceptance not simply by increasing knowledge but by transforming teachers' understanding of what AI can realistically accomplish in their classrooms. A particularly important finding is the participants' preference for hands-on learning, mentoring and continued support. This challenges models of professional development that rely primarily on once-off workshops. The finding corresponds with Syamala et al. (2025), who associate confidence and practical experience with stronger perceptions of ease of use. It also extends previous research by emphasising the social dimension of professional learning, particularly peer collaboration and sustained guidance. The findings reveal a dimension not sufficiently emphasised in conventional accounts of teacher AI preparedness: the relevance and continuity of professional development are as important as access to training itself. The study therefore demonstrate that AI preparedness is strengthened when professional learning combines technical knowledge, pedagogical application, curriculum alignment, practical experimentation and ongoing mentoring. For LO teachers, professional development should consequently be conceived as a sustained process of professional learning rather than a once-off technical intervention.

The data reveal that institutional support is a decisive contextual factor in teachers' preparedness to integrate AI into the LO curriculum. Teachers working in supportive environments, characterised by access to digital resources, professional development and leadership encouragement, demonstrated greater confidence and readiness. Conversely, inadequate infrastructure, limited training and weak institutional guidance constrained teachers' capacity to translate positive attitudes towards AI into classroom practice. This suggests that preparedness is not solely an individual characteristic but is shaped by the institutional conditions within which teachers work. This finding corresponds with research demonstrating that training, infrastructure and organisational support influence teachers' adoption of emerging technologies (Ekhsan et al., 2026; Oloba, 2026). It is also consistent with Murillo-Jiménez et al. (2025), who highlight the consequences of unequal technological resources for educational technology adoption. However, the present study extends this literature by illustrating how institutional disparities operate specifically within AI integration in LO, where access to technology must be accompanied by appropriate pedagogical guidance.

From a TAM perspective, institutional support functions as an external variable influencing PEOU and PU. Access to appropriate tools and training can make AI appear more manageable, while leadership direction and practical support can help teachers recognise its instructional value. Where these conditions are absent, AI may instead be perceived as complex, impractical or poorly aligned with curriculum requirements. Institutional support therefore affects the extent to which teachers can transform technological intention into actual use. The findings also reinforce the importance of leadership. Teachers who received encouragement and direction from school management appeared more willing to experiment with AI. This is consistent with Mmakau and Sethibe (2026), who identify leadership commitment as important to digital transformation. It also resonates with research identifying institutional and leadership

challenges in LO implementation (Kubheka et al., 2025). However, the findings suggest that leadership encouragement is most effective when accompanied by practical resources, formal guidance and continuous professional learning. The data indicate that institutional support has both cognitive and affective consequences. It influences not only teachers' perceptions of AI's usefulness and ease of use but also their confidence and sense of preparedness. The study therefore extends TAM by highlighting the institutional and social conditions through which technology acceptance is enacted. Without sustained and equitable institutional support, AI integration in LO is likely to remain fragmented, uneven and dependent on individual teacher initiative.

From the data, it is evident that teaching experience and subject-specific knowledge enhance teachers' preparedness to integrate AI in ways that are pedagogically meaningful. Experienced teachers appeared better positioned to identify appropriate applications of AI, adapt generated content and connect technological resources with learner needs and curriculum objectives. This suggests that AI preparedness is influenced not only by technological competence but also by accumulated pedagogical knowledge, curriculum familiarity and professional judgement. This finding corresponds with Alqarni (2026) and Ilma and Rohmah (2025), who emphasise the importance of teacher competence in ensuring that technology enhances rather than disrupts curriculum implementation. It is also consistent with research showing that AI can support personalised and context-sensitive learning when appropriately mediated by teachers (Al Nabhani et al., 2025; Hardaker & Glenn, 2025). However, unlike accounts that treat technological experience primarily as a general competence, the present study highlights the importance of subject-specific expertise in determining how AI is applied.

From a TAM perspective, teaching experience and subject background function as external factors that can strengthen both PU and PEOU. Teachers with established instructional strategies and curriculum knowledge are more capable of identifying situations in which AI can improve teaching performance. This increases PU because the technology can be linked to concrete instructional outcomes. Experience may also strengthen PEOU because teachers possess established pedagogical routines into which AI can be incorporated without requiring them to reconstruct their entire approach to teaching. The findings are particularly significant for LO because the subject deals with real-life situations, personal development, social issues and learner-centred activities. Teachers' ability to generate relevant scenarios and adapt AI-generated material demonstrates that subject expertise mediates the value of AI. AI therefore appears most beneficial when teachers exercise professional judgement rather than simply transferring generated content to learners. This supports Tan et al. (2025), who caution against uncritical reliance on AI and emphasise the continuing importance of human mediation. However, teaching experience should not be interpreted as sufficient in itself. Existing research indicates that experienced teachers may still struggle with technological innovation where appropriate training is absent (Sanchez & Gutiérrez-Esteban, 2023). The present study therefore extends previous understanding by demonstrating that the value of experience depends on the nature of that experience and its interaction with continuing professional learning. The data revealed that AI preparedness in LO is strengthened when technological adoption is grounded in accumulated pedagogical expertise, subject knowledge and reflective practice. Preparedness should consequently

be understood as a dynamic interaction between experience, technological competence and ongoing professional development rather than as a simple function of years of teaching.

Contribution of the Study

This study contributes to the growing body of research on AI in education by providing a contextually grounded account of teachers' preparedness to integrate AI into LO curriculum implementation in the FET phase. The study demonstrates that preparedness is not a fixed individual attribute that can be inferred from teachers' awareness of AI or their general ability to use digital technologies. Rather, it is a dynamic and multidimensional capability that develops through the interaction between teachers' technological competence, professional learning, prior technological experience, institutional conditions and subject-specific pedagogical knowledge. This conceptualisation provides a more comprehensive understanding of preparedness in a human-centred and values-oriented subject such as LO.

Theoretical contribution

The study makes a theoretical contribution through its contextual application and refinement of the TAM. While TAM provides a useful basis for understanding technology acceptance through PU and PEOU, the findings demonstrate that these perceptions cannot be adequately understood in isolation from the conditions in which teachers encounter and use AI. Professional development, prior technological exposure, institutional support, digital resources, teaching experience and subject knowledge shape teachers' confidence in using AI and their ability to recognise and apply its pedagogical value. The study therefore extends the contextual interpretation of TAM by positioning technology acceptance within professional, institutional and pedagogical conditions. More specifically, the study distinguishes between technology acceptance and pedagogical preparedness. A teacher may perceive AI positively and possess basic digital skills without having the knowledge required to select appropriate tools, evaluate AI-generated content or align its use with curriculum objectives. The study consequently proposes that AI preparedness involves progression from awareness and exposure towards AI-specific competence, curriculum alignment, critical evaluation and reflective pedagogical practice. This extends conventional technology acceptance perspectives by recognising that meaningful educational use depends not only on whether teachers accept a technology but also on whether they are capable of mediating its use within a particular subject and learning context.

Empirical contribution

Empirically, the study adds evidence from 15 LO teachers across 15 schools representing all five school quantiles in Gauteng Province, addressing a context that has received comparatively limited attention in research on AI integration. The findings provide evidence that teachers generally possess basic AI awareness and foundational digital literacy, but that these capabilities do not necessarily translate into systematic or pedagogically embedded AI use. The study further demonstrates the importance of the interaction between teachers' capabilities and their working environments. Professional

development, institutional support and opportunities for practical experimentation can strengthen preparedness, while inadequate support and limited opportunities for AI-specific learning can constrain it. The study also contributes subject-specific insight by showing that teaching experience and LO knowledge are important in determining how AI-generated resources are interpreted and used. Because LO addresses personal, social, ethical and real-life issues, teachers require professional judgement to determine whether AI-generated material is accurate, appropriate, culturally responsive and aligned with curriculum purposes. AI therefore derives much of its educational value from teacher mediation rather than technological capability alone.

Practical and policy contribution

At the practical and policy level, the study provides evidence for moving beyond generic digital-skills training and technology provision towards a coordinated system of AI capacity development. The findings support the development of continuous, practical and LO-specific professional development that integrates AI knowledge with curriculum planning, assessment, learner engagement, ethical decision-making and evaluation of AI-generated content. They also highlight the need for stronger institutional support, equitable digital infrastructure and opportunities for teachers to learn collaboratively. The study therefore has implications for the Department of Basic Education (DBE), provincial education departments, curriculum specialists and school management teams. Rather than prescribing particular AI tools that may become outdated, policy and professional-development initiatives should establish transferable AI competencies and principles for curriculum-aligned, ethical and context-sensitive use. At school level, leadership should create conditions in which teachers can experiment with AI responsibly, receive sustained guidance and share practices with colleagues. The study contributes a context-sensitive conceptualisation of AI preparedness in which individual teacher capability and contextual support are mutually dependent. It demonstrates that sustainable AI integration in LO cannot be achieved through technology acquisition or teacher awareness alone. Meaningful integration requires the alignment of technological competence, professional learning, institutional support, subject knowledge and pedagogical judgement. In this way, the study positions AI as a tool that can enhance curriculum implementation while preserving the central role of teachers as professional interpreters, mediators and facilitators of learning.

Limitation of the Study

The principal limitation concerns the scope and contextual specificity of the sample. The study involved only 15 LO teachers drawn from 15 schools in Gauteng Province, using purposive rather than probability sampling. Although the inclusion of schools across all five quantiles provided variation in socio-economic contexts, the sample cannot be assumed to statistically represent all LO teachers or FET schools in South Africa. The qualitative generic design was intended to provide rich, contextually grounded understanding rather than statistical generalisation, and the study accordingly emphasises transferability through detailed contextual description rather than population-level generalisation. The findings should therefore be interpreted primarily in relation to comparable South African FET contexts. Nevertheless, the use of both interviews and

classroom observations strengthened the study by enabling participants' accounts to be considered alongside evidence from actual teaching contexts, while thick description allows readers and future researchers to judge the applicability of the findings to other settings.

Recommendations

1. Develop continuous, subject-specific AI professional development for LO teachers

The DBE, provincial education departments and school management teams should establish continuous professional development programmes specifically designed for LO teachers rather than relying predominantly on generic AI or ICT workshops. These programmes should combine hands-on activities, curriculum mapping, lesson planning, assessment development, AI-generated content evaluation and authentic LO classroom scenarios. Training should be delivered through a sustained cycle of workshops, practical classroom application, mentoring and follow-up sessions, allowing teachers to experiment with AI, reflect on their experiences and receive further guidance. This recommendation is significant because the findings show that teachers' awareness and willingness to use AI are not matched by sufficient pedagogical competence, while continuous and practical professional development can strengthen both confidence and the ability to align AI with LO curriculum objectives.

2. Establish stronger institutional support systems and AI leadership structures in schools

School management teams, supported by provincial education authorities, should develop school-level AI integration plans that identify available technologies, professional learning needs, responsible-use expectations and mechanisms for ongoing support. Schools should designate appropriate staff or digital-learning coordinators to provide technical assistance, facilitate peer learning and support teachers when implementing AI-based activities. School leaders should also create opportunities for teachers to share successful practices and challenges rather than treating AI integration as an individual teacher responsibility. This recommendation is important because the findings demonstrate substantial differences in institutional support, infrastructure, leadership encouragement and access to professional development, with supportive environments enabling greater confidence and readiness while weak institutional conditions constrain implementation.

3. Develop an LO-specific AI competency and implementation framework

The DBE and curriculum specialists should develop clear guidance identifying the AI competencies that LO teachers require and illustrating how these competencies can be applied across relevant curriculum areas. The framework should cover AI awareness, operational competence, curriculum alignment, critical evaluation of AI-generated content, learner engagement, ethical considerations and teacher mediation. Rather than prescribing particular AI tools that may quickly become outdated, the framework should establish principles and competencies that can remain relevant as technologies change.

It should also include practical examples demonstrating how AI can support topics such as career guidance, personal development and social issues. This recommendation is significant because the study found that teachers often understood conventional digital technologies but remained uncertain about which AI tools were appropriate and how they should be aligned with LO outcomes.

4. Strengthen equitable access to digital infrastructure and opportunities for practical experimentation

Provincial education departments and school management teams should prioritise equitable access to reliable internet connectivity, appropriate digital devices, relevant educational platforms and other resources required for responsible AI experimentation. Infrastructure provision should be accompanied by structured opportunities for teachers to use the available technologies in authentic classroom situations, because access alone does not guarantee meaningful adoption. Schools should identify infrastructure gaps, prioritise areas of greatest need and monitor whether teachers can actually access and use the available resources for curriculum implementation. The significance of this recommendation lies in addressing the interaction between institutional conditions and individual preparedness: the findings demonstrate that inadequate resources, limited guidance and weak institutional support can prevent teachers from translating positive attitudes and existing competencies into classroom practice.

5. Promote collaborative and reflective AI practice among teachers while maintaining professional judgement

School management teams, subject advisers and teacher professional learning communities should establish regular peer-learning activities in which LO teachers collaboratively design AI-supported lessons, evaluate AI-generated materials, discuss classroom experiences and reflect on ethical and pedagogical challenges. More experienced teachers should be encouraged to support colleagues who are developing their AI competence, while all teachers should be encouraged to critically evaluate AI outputs rather than transferring generated content directly to learners. Such collaboration should be integrated into existing professional learning structures so that AI development becomes an ongoing aspect of teaching practice rather than an additional isolated responsibility. This recommendation is significant because the findings show that teaching experience and subject knowledge strengthen teachers' ability to contextualise and evaluate AI-generated content, while participants also identified mentoring, peer collaboration and opportunities to share experiences as important forms of support.

Conclusion

This study examined teachers' preparedness to integrate AI into LO curriculum implementation in the FET phase. The findings demonstrate that teachers generally possess basic awareness of AI and foundational digital literacy, but these capabilities do not necessarily translate into sustained and pedagogically meaningful integration. Preparedness is shaped by the interaction of AI-specific competence, prior technological exposure, professional development, institutional support, teaching experience and subject-specific knowledge. In particular, teachers' ability to evaluate, adapt and contextualise AI-generated content is influenced by their pedagogical expertise and

familiarity with the LO curriculum. The study further demonstrates that the TAM provides a useful foundation for understanding teachers' engagement with AI through perceived usefulness and perceived ease of use. However, the findings suggest that these perceptions are embedded within the professional and institutional contexts in which teachers work. AI preparedness should therefore be understood not simply as an individual capacity or willingness to use technology, but as a context-dependent capability that develops through the interaction between teacher competence, professional learning, institutional support and pedagogical judgement.

The central implication is that meaningful AI integration in LO requires a shift from viewing preparedness as technology awareness towards developing teachers' capacity to use AI critically, appropriately and in alignment with curriculum objectives. This is particularly important in LO because its human-centred focus requires sensitivity to personal, social, ethical and real-life issues. AI should therefore function as a supportive resource within teacher-led pedagogy rather than as a substitute for teachers' professional expertise. Thus, sustainable AI integration requires coordinated capacity development at teacher, school and education-system levels. When teachers are provided with relevant professional learning, supportive institutional conditions and opportunities to develop curriculum-specific AI competence, AI has greater potential to enhance LO curriculum implementation while preserving the professional judgement, human interaction and pedagogical responsibility that remain central to the subject.

References

Ahmad, M., & Wilkins, S. (2025). Purposive sampling in qualitative research: A framework for the entire journey. *Quality & quantity*, *59*(2), 1461-1479. https://doi.org/10.1007/s11135-024-02022-5

Al Nabhani, F., Hamzah, M. B., & Abuhassna, H. (2025). The role of artificial intelligence in personalizing educational content: Enhancing the learning experience and developing the teacher's role in an integrated educational environment. *Contemporary Educational Technology,* *17*(2), 1–21. https://doi.org/10.30935/cedtech/16089

Alqarni, T. M. (2026). Teachers' perceptions of generative AI in inclusive classrooms: Enhancing engagement for students with learning disabilities. *Universal Access in the Information Society, 25*(1), 1–22. https://doi.org/10.1007/s10209-025-01301-8

Alyoussef, I. Y., Dahri, N. A., Alhashmi, K. A., Al-Rahmi, W. M., Muzna, P., & Dahri, F. H. (2026). Ethical use of artificial intelligence in education: proposed ethical competency framework for teachers. *Frontiers in Artificial Intelligence*, *9*, 1-22. https://doi.org/10.3389/frai.2026.1833043

Amemasor, S. K., Oppong, S. O., Ghansah, B., Benuwa, B. B., & Agbeko, M. (2025). The influence of digital professional development and professional learning communities in the relationship between school digital preparedness and digital instructional integration. *PLoS ONE,* *20*(7), 1–25. https://doi.org/10.1371/journal.pone.0328883

Archana, T. (2025). Artificial intelligence and digital competencies in the public sector. In *Digital competency development for public officials: Adapting new technologies in public services* (pp. 95-120). IGI Global Scientific Publishing.

Baidoo-Anu, D., & Ansah, L. O. (2023). Education in the era of generative artificial intelligence: Understanding the potential benefits of ChatGPT in promoting teaching and learning. *Journal of AI, 7*(1), 52–62. https://dergipark.org.tr/en/download/article-file/3307311

Bhutoria, A. (2022). Personalized education and artificial intelligence in the United States, China, and India: A systematic review using a human-in-the-loop model. *Computers and Education: Artificial Intelligence, 3*, 1-18. https://doi.org/10.1016/j.caeai.2022.100068

Ceallaigh, T. Ó., & Murphy, S. (2026). Teaching the teachers: A systematic review of GenAI-specific technological pedagogical knowledge in teacher education. *Computers and Education Open, 10*, 1–14. https://doi.org/10.1016/j.caeo.2026.100367

Chounta, I.-A., et al. (2022). Exploring teachers' perceptions of artificial intelligence as a tool to support their practice in Estonian K-12 education. *International Journal of Artificial Intelligence in Education, 32*(3), 725–755. https://doi.org/10.1007/s40593-021-00243-5

Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: The state of the field. *International Journal of Educational Technology in Higher Education, 20*(1), 1-22. https://doi.org/10.1186/s41239-023-00392-8

Department of Basic Education. (2001). *Strategy for information and communication technology in education*. Department of Education.

Department of Basic Education. (2010). *Curriculum and Assessment Policy Statement (CAPS)*. Department of Basic Education.

Dlamini, R., & Ndzinisa, N. (2025). Towards a critical discourse on artificial intelligence and its misalignment in sub-Saharan Africa: Through an equality, equity, and decoloniality lens. *Journal of Education (University of KwaZulu-Natal), (98)*, 42–61. https://doi.org/10.17159/2520-9868/i98a03

Ekhsan, M., Badrianto, Y., Suwandi, S., Hermawan, H., & Septiani, A. (2026). Strategic human resource capabilities for digital transformation: Linking talent, leadership, competence and readiness to technology adoption. *SA Journal of Human Resource Management, 24*, 1–21. https://journals.co.za/doi/epdf/10.4102/sajhrm.v24i0.3327

Ellis, J. L., & Hart, D. L. (2023). Strengthening the choice for a generic qualitative research design. *The Qualitative Report*, *28*(6), 1759-1768. https://doi.org/10.46743/2160-3715/2023.5474

Faiz, F., Le, V., & Masli, E. K. (2024). Determinants of digital technology adoption in innovative SMEs. *Journal of Innovation & Knowledge, 9*(4), 1–20. https://doi.org/10.1016/j.jik.2024.100610

Hardaker, G., & Glenn, L. E. (2025). Artificial intelligence for personalized learning: A systematic literature review. *The International Journal of Information and Learning Technology, 42*(1), 1–14. https://doi.org/10.1108/IJILT-07-2024-0160

Huwer, J., Thyssen, C., Becker-Genschow, S., von Kotzebue, L., Finger, A., Kremser, E., & Thoms, L. J. (2025). Competencies for teaching with and about artificial intelligence in the natural sciences–DiKoLAN AI. *Computers and Education Open, 9*, 1–24. https://doi.org/10.1016/j.caeo.2025.100303

Ilma, A., & Rohmah, Z. (2025). AI in EFL education: Teachers' competence and the roadblocks to teaching material development. *Cogent Education, 12*(1), 1–25. https://doi.org/10.1080/2331186X.2025.2588471

Kayıran, D., Sönmez, M., Avcı, A., & Mohamud, R. Y. H. (2026). Teachers' perceptions of artificial intelligence in curriculum integration: Opportunities, concerns, and professional development needs. *Frontiers in Artificial Intelligence, 9*, 1–10. https://doi.org/10.3389/frai.2026.1806165

Kennedy, G. M. (2025). Rethinking teacher education in Liberia's rural teacher training institutes: Key challenges and strategic solutions. *Discover Education, 4*(1), 1–15. https://doi.org/10.1007/s44217-025-00621-4

Kubheka, P. N., Naidoo, P., & Oloba, P. B. (2025). Instructional leadership experiences of departmental heads in five public primary schools in Gauteng province, South Africa. *Interdisciplinary journal of education research*, *7*(2), 1-16. https://doi.org/10.38140/ijer-2025.vol7.2.10

Lyhne, C. N., Thisted, J., & Bjerrum, M. (2025). Qualitative content analysis–framing the analytical process of inductive content analysis to develop a sound study design. *Quality & Quantity*, *59*(6), 5329-5349. https://doi.org/10.1007/s11135-025-02220-9

Mamba, S., & Beharry-Ramraj, A. (2026). Transforming teaching and learning into South Africa's FET phase through a dual-user AI-powered entrepreneurial Sandbox. *International Journal of Studies in Inclusive Education*, *1*(1), 82-90. https://hdl.handle.net/10520/ejc-ijsie_v1_nsi1_a12

Mekheimer, M. A. (2025). Effective technology integration in higher education: A mixed-methods study of professional development. *Education and Information Technologies, 30*(17), 25013–25058. https://doi.org/10.1007/s10639-025-13750-y

Mmakau, S. E., & Sethibe, T. (2026). Digital transformation: A model of transformational leadership in an organisation. *South African Journal of Information Management, 28*(1), 1–11. https://doi.org/ 10.4102/sajim.v28i1.2057

Murillo-Jiménez, H., Centeno-Alarcón, M., Buele, J., & Yumbla, F. (2025). Analyzing barriers to the effective implementation of technological tools in inclusive education: a scoping review. *Frontiers in Education*,10, 1-12. https://doi.org/10.3389/feduc.2025.1687664

Muyambi, G. C., & Ramorola, M. Z. (2025). Unveiling educators' readiness to teach through digital media (DM): The case of South Africa. *Education and Information Technologies, 30*(10), 13807–13834. https://doi.org/10.1007/s10639-024-13310-w

Oloba, P. B. (2026). *Rethinking Qualitative Inquiry in the Social Sciences and Humanities: Epistemology, Context and Methodological Praxis.* ERRCD Forum Books https://doi.org/10.51986/errcdf-2026-02

Oloba, P. B. (2026). The roles of departmental heads in leading the adoption of digital culture in African higher education institutions. *African Journal of Teacher Education*, *15*(1), 119-136. https://doi.org/10.21083/ajote.v15i1.8851

Rahmawati, S., Prestridge, S., Abdullah, A. G., & Widiaty, I. (2025). Unpacking the digital competence challenge in vocational education: A case from Indonesia. *Social Sciences & Humanities Open, 12*, 1–15. https://doi.org/10.1016/j.ssaho.2025.101803

Sanchez, V. V., & Gutiérrez-Esteban, P. (2023). Challenges and enablers in the advancement of educational innovation: The forces at work in the transformation of education. *Teaching and Teacher Education, 135*, 1–12. 10.1016/j.tate.2023.104359

Syamala, A. L., Sameena, S., Sri, K. B., & Ananthi, J. V. (2025, October). A Perspective Review on the Importance of 6G Networks and its Key Requirements for Future Technology. In *2025 9th International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC)* (pp. 1-6). IEEE.

Tan, X., Cheng, G., & Ling, M. H. (2025). Artificial intelligence in teaching and teacher professional development: A systematic review. *Computers and Education: Artificial Intelligence, 8*, 1–19. https://doi.org/10.1016/j.caeai.2024.100355

Whitehead, G. E., & Arslan, S. (2025). Bridging the theory and practice divide in pre-service language teacher education: A focus on teacher educators' expertise from in-service teachers' vantage point. *Social Sciences & Humanities Open, 12*, 1–9. https://doi.org/10.1016/j.ssaho.2025.101656