Artificial Intelligence Use by University Educators: A Critical Integrative Review Towards a Professionally Situated Conceptualisation

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ABSTRACT

Artificial intelligence (AI) is increasingly becoming embedded in higher education teaching, assessment, research and academic support. However, the educational value of AI cannot be adequately explained by the availability of AI tools, frequency of use or technical competence alone. University educators operate within professional, disciplinary, institutional and ethical contexts in which AI generated outputs must be interpreted, evaluated, adapted and sometimes rejected. This article critically integrates recent research on AI use by university educators to develop a professionally situated conceptualization of AI mediated educational practice. The review focuses particularly on educators' patterns of AI use, AI literacy, professional and disciplinary knowledge, human AI interaction, professional judgement, ethical and regulatory accountability, institutional context and reflective professional learning. The synthesis indicates that educators increasingly use AI for preparation of learning materials, generation of activities, feedback, formative assessment, research support and administrative work, but adoption remains selective and context dependent. AI literacy is important but does not by itself ensure educationally appropriate practice. Similarly, institutional policies and professional development influence adoption without determining how educators ultimately use AI. The review therefore proposes Professionally Situated AI Mediated Practice (PS AIMP), a conceptual framework in which professional judgement is positioned as the central proposed mechanism through which AI capability is translated into educationally legitimate and professionally accountable practice. Professional judgement is informed by professional purpose, disciplinary knowledge, AI literacy and human AI interaction, while being bounded by ethical and regulatory accountability and shaped by institutional context. Quality of AI mediated professional practice constitutes the principal outcome, while reflective professional learning provides a recursive process through which practice is continually evaluated and improved. The framework offers a basis for empirical investigation of why similar AI capabilities may produce different educational outcomes across educators, disciplines and institutions.

Keywords: Artificial intelligence; generative AI; higher education; university educators; AI literacy; professional judgement; professional knowledge; AI mediated practice; professional learning; PS AIMP

INTRODUCTION

Artificial intelligence has moved rapidly from an emerging technological development to an increasingly visible component of higher education practice. Generative artificial intelligence in particular has expanded the range of tasks that educators can perform with technological assistance, including preparation of teaching materials, generation of examples and learning activities, feedback, formative assessment, language support, information synthesis and aspects of research and academic administration. Recent studies indicate that university educators are no longer merely discussing the possibility of AI integration; many are experimenting with or incorporating AI into routine academic work (Mah & Groß, 2024; Mah et al., 2025; Mota et al., 2026; Baggia et al., 2026).

The rapid diffusion of AI, however, has not produced a uniform transformation of university teaching. Educators differ in their willingness to use AI, the purposes for which they use it, the extent to which they trust its outputs and the degree to which they retain human oversight. Evidence indicates that AI adoption is

associated with perceived usefulness, self efficacy, AI literacy, prior experience and professional development, but is also influenced by institutional policies, disciplinary cultures, access to technology and ethical concerns (Baig & Yadegaridehkordi, 2025; Jogezai et al., 2025; Lyu et al., 2025; Soleimani et al., 2025). Recent synthesis further shows that university teachers' engagement with GenAI encompasses pedagogical use, assessment, ethics, trust, institutional support, workload and disciplinary variation rather than constituting a single form of technological adoption (Baggia et al., 2026).

This complexity raises a fundamental conceptual problem. Much of the emerging literature explains educators' AI engagement through constructs such as technology acceptance, perceived usefulness, self efficacy, AI literacy, technological competence or pedagogical integration. These constructs are important, but they do not fully explain what happens between having access to AI and producing educationally appropriate practice. An educator may possess substantial AI literacy and still accept an inaccurate AI generated explanation. An educator may have access to sophisticated AI tools but use them in ways that weaken disciplinary reasoning or assessment validity. Conversely, an educator with moderate technical proficiency may use AI productively because strong professional knowledge enables careful interpretation, adaptation and rejection of inappropriate outputs.

The distinction is particularly important because AI systems do not simply automate predetermined educational tasks. They generate content that requires interpretation and evaluation. AI generated responses may be incomplete, contextually inappropriate, biased, fabricated or pedagogically unsuitable. UNESCO guidance therefore emphasises human agency, ethical safeguards, institutional validation and the need to consider the implications of generative AI for teaching, learning and assessment (Miao & Holmes, 2023). The AI Competency Framework for Teachers similarly places AI competence within broader professional responsibilities rather than reducing it to technical operation (Miao & Cukurova, 2024).

Recent research increasingly recognises the importance of educator agency and professional responsibility. Kahn et al. (2025), for example, conceptualise teaching in higher education as a responsive and cultural activity in which teacher agency remains important in encounters with generative AI. Research on academic staff also indicates that educators perceive AI as relevant to multiple dimensions of academic work rather than as a simple instructional technology (Mah et al., 2025). Studies of trust and adoption similarly show that educators' responses are shaped by their confidence in AI outputs, their understanding of risks and the institutional environments in which AI is introduced (Lelescu et al., 2025; Lyu et al., 2025).

These developments suggest the need to move beyond a predominantly technology centred explanation of AI adoption. The central issue is not simply whether educators use AI, but how professional knowledge and judgement shape the educational consequences of that use. This article therefore develops a critical integrative account of AI use by university educators and proposes a professionally situated conceptualisation of AI mediated practice.

The article introduces the concept of Professionally Situated AI Mediated Practice (PS AIMP)**.** The framework proposes that AI capability becomes educationally meaningful through an interaction among professional purpose, professional and disciplinary knowledge, human AI interaction, professional judgement, ethical and regulatory accountability, institutional context and reflective professional learning. Within this configuration, professional judgement is proposed as the central mechanism through which AI capability is translated into educationally legitimate and professionally accountable practice.

Statement of the Problem

Artificial intelligence (AI) is increasingly available to universities for teaching, learning, assessment, research and academic administration. However, the educational value of AI does not depend simply on whether educators have access to it or possess the ability to use it. Evidence indicates that educators' AI use varies according to AI literacy, self-efficacy, trust, professional development, institutional support and disciplinary context (Baig & Yadegaridehkordi, 2025; Lyu et al., 2025; Soleimani et al., 2025). More importantly, possessing AI literacy does not necessarily ensure appropriate educational use. Educators must

evaluate the accuracy, relevance, pedagogical suitability and disciplinary acceptability of AI-generated outputs before incorporating them into professional practice (Miao & Cukurova, 2024; Williams, 2026).

The specific problem, therefore, is not merely uneven AI adoption or inadequate AI literacy. Rather, existing research provides limited conceptual explanation of how educators translate available AI capabilities into quality, legitimate and professionally responsible educational practice. Much of the literature has examined AI adoption, acceptance, technological competence, AI literacy and factors influencing educators' use of AI (Baig & Yadegaridehkordi, 2025; Lyu et al., 2025; Miao & Cukurova, 2024; Soleimani et al., 2025). Less explicit attention has been given to the professional judgement through which educators interpret AI outputs, evaluate their appropriateness, and decide whether to accept, modify or reject them within particular educational contexts (Williams, 2026). Consequently, existing scholarship does not yet provide a sufficiently integrated explanation of how AI capability becomes quality AI-mediated professional practice. This conceptual gap warranted the present critical integrative review, which critically brings together existing evidence to examine the professional, disciplinary, contextual, ethical and judgement-related dimensions through which educators' AI use becomes educationally meaningful and professionally appropriate.

Purpose and Research Questions

The purpose of this article is to critically integrate recent evidence on AI use by university educators and develop a professionally situated conceptualisation of AI mediated educational practice.

The review addresses three questions:

- What patterns of AI use are evident among university educators?
- What professional and contextual factors shape educators' AI mediated practice?
- How can these factors be integrated into a professionally situated conceptual framework for AI mediated educational practice?

REVIEW METHODOLOGY

Review Design

The article adopts a critical integrative review design. This approach is appropriate because the literature on AI in higher education is rapidly developing and encompasses empirical studies, systematic reviews, conceptual frameworks, institutional perspectives and policy guidance. Rather than treating all sources as methodologically equivalent, the review integrates evidence across different research designs to identify convergence, divergence and unresolved conceptual issues.

This methodological position is important because recent systematic reviews demonstrate the methodological heterogeneity of research on university educators and GenAI. Baggia et al. (2026), for example, screened 207 records and included 30 studies in qualitative synthesis and 13 in quantitative synthesis, finding considerable variation in contexts, disciplines and institutional conditions. Their findings reinforce the need for cautious synthesis rather than assuming that findings from individual studies are directly comparable.

Scope of the Evidence

The evidence base focuses primarily on higher education educators and academic staff, with particular attention to AI and generative AI use in teaching, assessment, feedback, academic work and professional practice. The evidence includes empirical studies, systematic reviews and conceptual or policy sources that contribute directly to understanding educators' AI competencies, beliefs, adoption, trust, agency, professional practice and institutional environments.

The literature includes studies from different geographical and institutional contexts. This diversity is valuable because AI mediated practice is unlikely to be independent of institutional culture, disciplinary norms, professional expectations and available resources. Particular attention is therefore given to evidence that illuminates contextual variation rather than treating AI adoption as a universal behavioural process.

Analytical Procedure

The literature was analysed thematically around the following dimensions:

- patterns and purposes of AI use;
- AI literacy and competence;
- professional and disciplinary knowledge;
- human AI interaction and verification;
- professional judgement;
- ethical and regulatory accountability;
- institutional context;
- reflective professional learning; and
- quality of AI mediated professional practice.

The analysis proceeded from description to critical comparison and finally conceptual integration. Evidence was first examined for what educators actually do with AI. It was then considered in relation to the knowledge and competencies required for those practices. Finally, the relationships among individual, professional, ethical and institutional factors were examined to identify the construct that could explain the translation of AI capability into educational practice.

RESULTS AND CRITICAL SYNTHESIS

AI Use Is Increasing but Remains Selective

The literature demonstrates increasing educator engagement with AI, but adoption is neither universal nor uniform. Mah and Groß (2024) found distinct patterns of faculty AI use and differences in self efficacy and professional development needs. Their findings suggest that faculty members cannot be treated as a homogeneous population of technology users.

More recent research reinforces this conclusion. Mah et al. (2025) found that academic staff perceive AI as relevant across several areas of higher education work, while Lyu et al. (2025) reported varied practices, perceptions and levels of trust among instructors in United States higher education. Similarly, Ofosu-Ampong (2024) found that faculty perceptions and acceptability of AI are shaped by both perceived benefits and concerns surrounding its use.

The most recent systematic evidence further demonstrates that university teachers use GenAI across several stages of teaching. Baggia et al. (2026) identify lesson preparation and content creation, classroom instruction, student support and feedback, assessment and evaluation, and reflective or innovative practices among the major areas of use. Importantly, teachers tend to maintain greater human involvement in consequential assessment decisions than in preparatory or formative tasks.

This pattern suggests that educators do not necessarily approach AI as a general substitute for professional activity. Instead, they appear to differentiate between tasks that can be supported or accelerated through AI and tasks that require stronger human oversight. Such differentiation is theoretically significant because it

suggests that the educational value of AI depends partly on educators' capacity to judge where AI assistance is appropriate and where it should remain subordinate to professional reasoning.

AI Literacy Is Necessary but Not Sufficient

AI literacy is an increasingly important component of educator competence. It includes the ability to understand AI systems, recognise their capabilities and limitations, interact effectively with AI tools, evaluate outputs and consider ethical implications. The UNESCO AI Competency Framework for Teachers places AI competence within broader dimensions of human agency, ethics, pedagogy and professional development (Miao & Cukurova, 2024).

Williams (2026) similarly argues for a broader conceptualisation of AI literacy for higher education teachers rather than treating literacy as a narrow technical skill. The significance of AI literacy is also supported empirically. Research indicates that AI knowledge, confidence and experience influence educators' willingness to use AI and their perceptions of its usefulness (Baig & Yadegaridehkordi, 2025; Tan et al., 2025).

However, AI literacy alone cannot determine whether a particular AI mediated action is educationally appropriate. Knowing how to generate a response from an AI system does not necessarily establish whether the response is accurate. Knowing how to automate feedback does not establish whether the feedback is pedagogically valid. Knowing how to generate assessment questions does not establish whether those questions appropriately measure the intended learning outcomes.

Professional and Disciplinary Knowledge Remains Central

University teaching is inherently professional and disciplinary. Educators do not merely transmit information; they interpret disciplinary knowledge, establish learning objectives, design pedagogical experiences, evaluate student work and make decisions about the quality and relevance of knowledge. AI therefore enters an existing professional knowledge system. It does not replace that system.

Tan et al. (2025) demonstrate the importance of integrating AI competence with pedagogical and technological knowledge through an intelligent TPACK based professional development intervention. Their work suggests that AI competence is more meaningful when connected to established forms of teacher knowledge.

This principle is particularly important in higher education because disciplinary standards differ considerably. What constitutes an acceptable explanation, method, argument, evidence base or professional response depends partly on the epistemological and methodological conventions of a discipline. An AI system can generate plausible language without necessarily satisfying those disciplinary requirements.

Professional knowledge consequently provides the criteria against which AI outputs are interpreted. The educator's disciplinary expertise allows the educator to ask whether an AI generated claim is conceptually accurate, whether evidence is sufficient, whether a proposed explanation is appropriate for the learners and whether an AI generated product satisfies disciplinary standards.

PS AIMP therefore does not conceptualise AI competence as an independent technical capacity. It conceptualises AI competence as embedded within professional and disciplinary knowledge.

Human AI Interaction Requires Verification and Interpretation

Human AI interaction is frequently discussed in terms of prompts, interfaces, usability and task completion. However, educationally significant human AI interaction extends beyond the generation of outputs. The educator must formulate a meaningful task, interpret the response, evaluate its accuracy and relevance, adapt it to the educational context and determine whether it should be accepted, modified or rejected.

Research on trust demonstrates the importance of this process. Lelescu et al. (2025) identify trust as an

important issue in educator engagement with GenAI, while Lyu et al. (2025) show that instructors' practices are accompanied by both trust and distrust. Trust, therefore, should not be understood as unconditional confidence in AI. Productive professional use requires calibrated trust: sufficient confidence to exploit useful AI capabilities while retaining sufficient scepticism to identify errors and limitations.

Cabellos et al. (2024) similarly demonstrate that university teachers' beliefs influence their understanding and anticipated use of generative AI. These beliefs can affect whether educators perceive AI as a pedagogical resource, a threat, an administrative aid or an unreliable source of information.

Professional Judgement as the Critical Explanatory Construct

The synthesis identifies professional judgement as the construct that most clearly connects AI capability to educational practice. Professional judgement refers here to the educator's reasoned capacity to determine what should be done in a particular educational situation, taking account of professional purpose, disciplinary knowledge, learner needs, evidence, institutional expectations, ethical principles and the limitations of available technologies. This definition distinguishes professional judgement from technical competence. Technical competence concerns what an educator can do with AI. Professional judgement concerns what the educator should do with AI and why.

This distinction is visible across the literature. Research on pedagogically relevant use shows that faculty AI engagement is shaped not only by technology acceptance but also by pedagogical considerations (Jogezai et al., 2025). Research on educator perceptions similarly demonstrates that academic staff distinguish among possible applications according to their perceived relevance to professional work (Mah et al., 2025). Research on teacher agency further positions educators as active professional actors rather than passive recipients of technological change (Kahn et al., 2025). Professional judgement is consequently proposed as the central explanatory mechanism within PS AIMP.

However, an important qualification is necessary**.** The literature reviewed does not establish statistically that professional judgement mediates the relationship between AI capability and educational quality. The mediation claim is therefore a theoretical proposition generated from the synthesis and requires empirical testing.

Ethical and Regulatory Accountability

AI mediated educational practice cannot be separated from ethical and regulatory accountability. AI systems raise questions concerning privacy, bias, intellectual property, transparency, academic integrity, authorship, equity and accountability. Miao and Holmes (2023) emphasise human agency, inclusion, equity, data protection and institutional responsibility in the educational use of generative AI.

The issue is therefore not simply whether AI is useful but whether its use is consistent with educational values and institutional obligations. Khlaif et al. (2024) demonstrate the importance of university teachers' views concerning the adoption of generative AI for student assessment. Assessment is particularly sensitive because AI mediated decisions may affect students' academic progression and perceptions of fairness.

Bacalso et al. (2026) further show that institutional approaches to generative AI management have become an important component of higher education governance. This reinforces the proposition that responsible AI use cannot be reduced to individual educator choice. Institutions establish policies, procedures and accountability structures within which professional decisions occur.

Ethical accountability therefore functions as a boundary condition within PS AIMP. Professional judgement may determine how AI should be used, but such judgement must remain consistent with professional ethics, institutional regulations and wider legal and societal responsibilities.

Institutional Context Shapes but Does Not Determine Practice

Institutional context is another recurring theme in the evidence. Educators' AI use is influenced by

institutional policies, access to infrastructure, professional development, leadership support, peer cultures and expectations concerning assessment and academic integrity. Baig and Yadegaridehkordi (2025) identify factors associated with academic staff satisfaction and continued use of GenAI. Jogezai et al. (2025) similarly demonstrate the importance of factors influencing pedagogically relevant faculty use. Soleimani et al. (2025) identify attitudes, barriers and learning needs that influence educators' engagement with GenAI.

Institutional policy is especially important because educators require guidance concerning acceptable and unacceptable AI use. Without clear institutional expectations, educators may develop inconsistent practices. Bacalso et al. (2026) highlight the increasing importance of institutional approaches to AI management, while Miao and Holmes (2023) emphasise the need for institutions to validate AI systems for ethical and pedagogical appropriateness.

Nevertheless, institutional context should not be treated as a deterministic variable. Two educators working in the same institution may respond differently to the same AI policy because they possess different professional knowledge, beliefs, experience and judgement. Institutional context therefore provides conditions and constraints rather than completely determining practice.

Reflective Professional Learning

The speed of AI development means that professional competence cannot be regarded as a fixed state. Educators must continually learn about emerging capabilities, limitations, ethical issues and pedagogical applications.

Tan et al. (2025) provide evidence that targeted professional development can strengthen educators' AI competency. Williams (2026) similarly supports a broader approach to AI literacy that recognises continuing professional development. Mah and Groß (2024) identify professional development needs associated with different faculty profiles. Reflective professional learning is therefore positioned in PS AIMP as a recursive process rather than a separate competency. Educators use AI, observe the consequences, evaluate the quality of the resulting practice, identify problems and revise subsequent practice. This recursive dimension is particularly important because the technology itself is continually changing. Professional learning must therefore develop alongside, rather than merely before, AI adoption.

Convergence and Divergence in the Evidence

The literature demonstrates considerable convergence concerning several features of educator AI use. First, AI is increasingly used for teaching preparation, content development, feedback, formative assessment and related academic tasks (Mah & Groß, 2024; Baggia et al., 2026). Second, AI literacy, confidence and professional development are associated with educators' willingness and ability to engage with AI (Baig & Yadegaridehkordi, 2025; Tan et al., 2025; Williams, 2026). Third, trust, ethical concerns and uncertainty remain important influences on adoption (Lelescu et al., 2025; Lyu et al., 2025; Soleimani et al., 2025). Fourth, institutional policies and professional learning opportunities shape the conditions under which AI is used (Bacalso et al., 2026; Jogezai et al., 2025).

There is, however, divergence in the interpretation of AI's educational implications. Some evidence emphasises efficiency, productivity and expanded pedagogical possibilities, whereas other studies emphasise risks to academic integrity, professional autonomy, assessment validity and educational quality (Ofosu-Ampong, 2024; Khlaif et al., 2024). Differences also appear across disciplines and institutional contexts. Baggia et al. (2026) report systematic variation across generations, disciplines and institution types, reinforcing the argument that AI use should not be understood as context free.

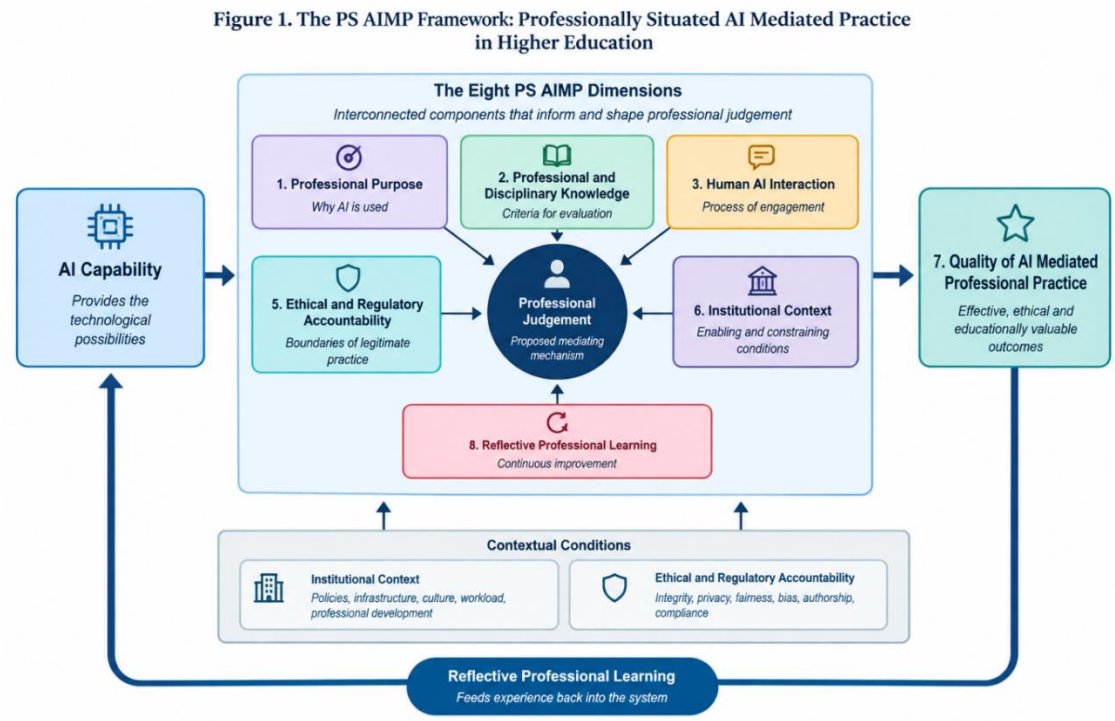
There is also a conceptual divergence between technology centred and profession centred explanations. Technology centred approaches tend to emphasise adoption, acceptance, usability and competence. Profession centred approaches place greater emphasis on agency, knowledge, judgement, ethics and context (Kahn et al., 2025; Mota et al., 2026). The latter perspective provides the stronger foundation for understanding the educational consequences of AI because it recognises that AI operates within professional activity rather than outside it.

Construction of the PS AIMP Framework

The reviewed literature suggests that the educational value of artificial intelligence cannot be explained by AI use, frequency of use, technical competence or AI literacy alone. AI becomes meaningful in higher education when educators connect its capabilities with professional purposes, disciplinary knowledge, interaction, institutional conditions, ethical responsibilities and reflection. The PS-AIMP framework therefore presents AI-mediated practice as a professionally situated process rather than simply a technological activity.

The framework consists of eight interrelated dimensions: AI capability and literacy, professional purpose, professional and disciplinary knowledge, human–AI interaction, institutional context, ethical and regulatory accountability, quality of AI-mediated professional practice, and reflective professional learning. These dimensions do not operate independently or in a fixed sequence. Instead, they interact within professional practice, with professional judgement positioned at the centre as the proposed mechanism through which AI capabilities may be translated into appropriate professional action and practice quality**.** The relationship is illustrated by figure 1.

Figure 1. The PS AIMP Framework: Professionally Situated AI Mediated Practice in Higher Education.



Source: Researcher, (2026)

AI Capability and Literacy

AI capability and literacy refer to the educator's ability to understand, access and use AI systems and to recognise their possibilities and limitations. This dimension provides the technological foundation for AI-mediated practice. However, capability alone does not guarantee quality practice. An educator may have strong AI skills but still use AI in ways that are inappropriate, inaccurate or unrelated to educational needs. AI capability therefore provides possibilities for action rather than automatically producing quality outcomes**.**

Professional Purpose

Professional purpose identifies what the educator intends to achieve through AI. AI may be used to support teaching preparation, learning resources, assessment, feedback, research or academic administration. The

starting point should therefore be the educational or professional need, followed by consideration of whether AI can appropriately address that need. This dimension keeps AI use focused on professional objectives rather than technology for its own sake.

Professional and Disciplinary Knowledge

Professional and disciplinary knowledge provides the basis for evaluating AI-generated information. Educators use subject knowledge, pedagogical knowledge and professional experience to identify errors, omissions, weak explanations and inappropriate content. This knowledge is important because AI can produce information that appears convincing while being inaccurate or unsuitable for a particular discipline or group of learners. Professional knowledge therefore helps educators determine whether an AI output is educationally defensible.

Human–AI Interaction

Human–AI interaction describes how educators engage with AI systems. It includes prompting, questioning, comparing responses, checking information, requesting alternatives, revising outputs and deciding whether to accept, modify or reject AI suggestions. The educator remains an active participant throughout this process. Human–AI interaction is therefore not simply the operation of a technological tool; it is an ongoing process of engagement, evaluation and adaptation.

Institutional Context

Institutional context refers to the conditions within which educators use AI. Policies, leadership, infrastructure, access to digital technologies, workload, professional development and disciplinary expectations can either support or constrain AI use. These conditions influence what educators can do, but they do not completely determine what they do. Educators continue to exercise professional agency and make decisions within their particular institutional environments.

Ethical and Regulatory Accountability

Ethical and regulatory accountability establishes the boundaries for responsible AI use. Educators need to consider academic integrity, privacy, data protection, fairness, bias, transparency, authorship, intellectual property and institutional requirements. An AI application may be technically effective but still inappropriate if its use conflicts with ethical principles, professional responsibilities or institutional and regulatory requirements. Ethical accountability is therefore part of the decision-making process rather than an issue added after AI has been used.

Quality of AI-Mediated Professional Practice

Quality of AI-mediated professional practice represents the principal outcome of the framework. Quality extends beyond efficiency or the production of technically impressive outputs. It includes effective teaching and learning, appropriate learning resources, sound assessment and feedback, student engagement, fairness, inclusion, academic integrity and professional accountability. AI use is therefore considered successful when it contributes meaningfully to educational purposes while maintaining professional and ethical standards.

Reflective Professional Learning

Reflective professional learning makes AI-mediated practice continuous rather than one-time. Educators learn from their experiences of using, evaluating and adapting AI. Reflection can help them identify weaknesses, improve their interaction with AI and refine future decisions. In this way, experience informs learning, while new learning influences subsequent AI-mediated practice.

Professional Judgement as the Proposed Mediating Mechanism

Professional judgement occupies the centre of the PS-AIMP framework. It refers to the educator's ability to

interpret information, evaluate evidence, consider professional and contextual requirements, and make responsible decisions. In AI-mediated practice, judgement helps determine whether an AI capability is relevant, how it should be used, which parts of an AI output should be retained or modified, and when an output should be rejected. It provides the basis for the framework's mediation proposition**.** The framework does not claim that mediation has already been empirically established. Rather, it proposes that professional judgement may help explain how AI capability is translated into quality AI-mediated professional practice**.** In conceptual terms, AI capability creates possibilities, while professional judgement helps determine how those possibilities are interpreted and acted upon. The resulting decisions may then influence the quality of professional practice.

Integrated Logic of the PS-AIMP Framework

Taken together, the eight dimensions form an interconnected system of professionally situated AI-mediated practice. AI capability and literacy provide the capacity to engage with AI. Professional purpose identifies the intended educational goal. Professional and disciplinary knowledge provides the basis for evaluating AI outputs. Human–AI interaction enables educators to explore, question and adapt those outputs. Institutional context shapes the conditions within which AI is used, while ethical and regulatory accountability establishes the boundaries of acceptable practice. Professional judgement brings these considerations together when educators decide what to accept, modify or reject. The resulting quality of AI-mediated professional practice represents the principal outcome, while reflective professional learning feeds experience back into future practice. In other words, AI capability does not necessarily lead directly to quality educational practice. Rather, professional judgement may be an important mechanism through which AI capabilities are interpreted and translated into professional action, within particular knowledge, ethical, institutional and contextual conditions. This proposition provides a basis for future empirical research to test whether, and to what extent, professional judgement actually mediates the relationship between AI capability and the quality of AI-mediated professional practice.

Theoretical Differentiation of PS AIMP

PS AIMP differs from technology acceptance models by treating intention to use and actual AI use as antecedents or behavioural manifestations rather than as the ultimate indicators of successful integration. It also extends AI literacy frameworks by recognising that AI literacy enables educators to understand and operate AI but does not, by itself, determine educational quality. Similarly, while pedagogical technology frameworks emphasise the integration of technological, pedagogical and disciplinary knowledge, PS AIMP foregrounds the professional judgement through which educators determine whether, how and for what purpose AI should be used in particular educational situations. In this sense, AI capability addresses what AI can do, AI literacy addresses how educators understand and operate AI, while professional and disciplinary knowledge establishes whether AI outputs are intellectually and pedagogically credible**.**

PS AIMP further differs from purely ethical frameworks by positioning ethical and regulatory accountability within, rather than outside, professional decision making. The framework therefore conceptualises professional judgement as the central mechanism through which these dimensions are brought together**:** it determines what should be done in a particular professional situation, while ethical and regulatory accountability establishes what must or must not be done. The ultimate concern is consequently not AI adoption itself, but the quality of AI mediated professional practice produced through these decisions. PS AIMP thus shifts the theoretical focus from technology use to the professionally situated process through which AI capability is interpreted, evaluated, governed and transformed into educationally legitimate practice.

Professional Judgement as the Proposed Mediating Mechanism

As illustrated in Figure 1, professional judgement occupies the central position in the PS AIMP framework because it is proposed as the mediating mechanism through which AI capability contributes to the quality of AI mediated educational practice. AI capability provides educators with the capacity to access and use AI systems, but this capability alone does not determine the quality of the resulting practice. Professional

judgement intervenes between AI capability and practice by enabling educators to interpret AI outputs, evaluate their accuracy and relevance, consider pedagogical and disciplinary requirements, assess ethical and regulatory implications, and decide whether to accept, adapt, verify or reject AI generated outputs. In this sense, it represents the process through which the potential afforded by AI is converted into professionally appropriate action.

The proposed mediating relationship is therefore based on a three part logic. First, AI capability provides the technological possibilities available to the educator. Second, professional judgement determines how those possibilities are interpreted and acted upon within a particular professional situation. Third, the resulting decisions contribute to the quality of AI mediated professional practice. The strength and direction of this process are expected to depend on professional and disciplinary knowledge, AI literacy, ethical and regulatory accountability and institutional context, while reflective professional learning enables educators to evaluate experience and refine subsequent judgement. Therefore, Professional judgement is proposed as the decision making process that translates capability into professionally legitimate educational practice.

This mediation claim is theoretical rather than an established statistical finding. The reviewed literature provides evidence for the importance of professional judgement, educator agency, disciplinary knowledge, ethical reasoning and contextual factors in AI mediated practice, but it does not establish through formal mediation analysis that professional judgement statistically mediates the relationship between AI capability and educational quality. PS AIMP therefore advances professional judgement as a theoretically specified mechanism that can be empirically tested. This proposition may explain why similar AI technologies can produce different educational outcomes among university educators. Access to the same AI system does not guarantee comparable educational practice because educators differ in disciplinary knowledge, professional experience, pedagogical understanding, ethical awareness and capacity to evaluate and adapt AI outputs. Professional judgement determines whether AI generated information is credible, whether it is appropriate for a particular educational purpose and context, and whether it should be accepted, modified or rejected.

Therefore, PS AIMP framework shifts attention from the technological capacity of AI to the quality of the professional decisions through which that capacity is converted into educational practice. The proposition generates a clear agenda for future empirical research. AI capability could be operationalised through educators' capacity to access, understand and use AI systems; professional judgement through the quality of decisions concerning the interpretation, verification, adaptation and application of AI outputs; and quality of AI mediated professional practice through indicators such as pedagogical appropriateness, disciplinary accuracy, learner relevance, ethical compliance and professional quality. Longitudinal and explanatory studies could test whether increases in AI capability are associated with improved educational practice and whether this relationship becomes stronger when accompanied by higher levels of professional judgement. Such evidence would provide a direct empirical test of the central PS AIMP proposition and determine whether professional judgement functions as the mediating mechanism theoretically proposed by the framework.

Implications for Higher Education

The framework has several implications for universities. First, professional development should move beyond basic AI tool training. Training educators to operate particular applications is insufficient if they cannot evaluate outputs, identify limitations and connect AI use with pedagogical and disciplinary purposes. Professional development should therefore integrate AI literacy with professional knowledge, ethics and judgement. Second, universities should avoid evaluating AI integration primarily through adoption rates. A high proportion of educators using AI does not necessarily indicate high quality educational practice. Institutional evaluation should examine how AI is being used, for what purposes and with what consequences. Third, institutions should develop policies that provide clear principles while allowing appropriate professional discretion. Excessively restrictive policies may discourage legitimate experimentation, while excessively permissive policies may create inconsistency and risk. The objective should be responsible professional use supported by clear institutional expectations. Fourth, assessment policies should recognise that AI has altered the relationship between assessment, authorship and knowledge production. Educators require support to redesign assessment in ways that preserve meaningful evidence of

learning while recognising legitimate forms of AI assistance. Fifth, universities should create opportunities for educators to share experiences of AI mediated practice. Professional communities can help educators compare strategies, identify risks and develop collectively informed approaches.

Implications for Kenya and Other African Higher Education Contexts

The PS AIMP framework has particular relevance for African higher education contexts, where AI adoption occurs alongside substantial differences in infrastructure, institutional capacity, digital access, language, disciplinary resources and professional development opportunities. The Kenyan context is especially important because higher education institutions are increasingly encountering AI while simultaneously addressing broader questions of digital transformation, quality assurance, employability and educational equity. African higher education institutions should therefore avoid importing AI adoption models without contextual adaptation. Institutional policies need to recognise local professional realities, infrastructure conditions, disciplinary needs and educational priorities.

The PS AIMP framework offers a context sensitive alternative because it does not assume that the same AI application will produce the same educational value everywhere. Instead, the framework asks how educators interpret AI within their professional and institutional circumstances. This has implications for university leadership, teacher education and continuing professional development. AI capacity building should include critical evaluation of AI outputs, disciplinary verification, ethical reasoning, data responsibility, assessment redesign and professional judgement. The African context also creates opportunities for locally grounded AI research. Research should examine how educators use AI across different disciplines, languages, institutional types and resource environments. Such research can contribute evidence that is currently underrepresented in the global AI in higher education literature.

Propositions for Empirical Testing

The conceptual synthesis generates a set of propositions that provide an empirical agenda for examining professionally situated AI mediated practice in higher education. Higher levels of AI capability are expected to be positively associated with educators' capacity to engage in AI mediated educational practice, while AI literacy is expected to strengthen educators' ability to interpret and evaluate AI generated outputs. Professional and disciplinary knowledge is further expected to strengthen the relationship between AI capability and the quality of AI mediated educational practice by providing the substantive and pedagogical criteria required to assess and apply AI outputs appropriately.

The framework further proposes that professional judgement mediates the relationship between AI capability and the quality of AI mediated professional practice. Ethical and regulatory accountability is expected to strengthen the likelihood that professional judgement will result in responsible AI mediated practice, while institutional context is expected to influence the conditions under which educators exercise professional judgement. Reflective professional learning is also expected to contribute to the continuous improvement of AI mediated professional practice by enabling educators to evaluate experience, refine their decisions and adapt their future use of AI. Finally, the relationship between AI capability and the quality of educational practice is expected to vary across disciplinary and institutional contexts because educators operate within different knowledge structures, professional expectations and organisational conditions.

These propositions are intended to guide empirical investigation rather than to represent established causal or statistical findings. Their value lies in providing a theoretically coherent basis for examining how AI capability, professional knowledge, judgement, accountability, institutional conditions and reflective learning interact to shape the quality of AI mediated educational practice in higher education.

LIMITATIONS AND FUTURE RESEARCH

A First limitation concerns the rapid development of AI. Evidence published even a short time ago may reflect tools, institutional policies and professional practices that have already changed. This makes longitudinal research particularly important. Second, much existing research relies on self reported

perceptions, intentions and practices. Such evidence is valuable but does not necessarily demonstrate actual behaviour or educational outcomes. Future research should therefore combine surveys with observation, analysis of AI mediated teaching artefacts, assessment evidence, interviews and longitudinal measures.

Third, evidence remains uneven geographically. More research is needed from African, Asian and other underrepresented higher education contexts to determine whether conceptual relationships identified in predominantly Western settings hold across different institutional and cultural environments.

Fourth, the proposed mediating role of professional judgement remains theoretical. Future research should develop valid measures of professional judgement and examine whether it statistically mediates the relationship between AI capability and quality of educational practice. Future studies should also investigate whether professional judgement operates differently across disciplines. For example, the criteria governing AI mediated practice in education, medicine, law, engineering, humanities and social sciences may differ substantially. Comparative disciplinary research would therefore provide an important test of the framework's explanatory scope.

CONCLUSION

Artificial intelligence is increasingly becoming part of university educators' professional practice, but its educational significance cannot be adequately explained by adoption, frequency of use or technical competence alone. Current evidence demonstrates that educators use AI selectively across preparation, teaching, feedback, assessment, research and related academic activities. Their engagement is shaped by AI literacy, professional development, trust, institutional conditions, disciplinary cultures and ethical concerns.

The critical issue, however, is what educators do between receiving an AI capability and producing an educational action. AI systems can generate information, suggestions and content, but they cannot by themselves determine whether those outputs are educationally appropriate. That determination remains a professional responsibility.

This article therefore proposes Professionally Situated AI Mediated Practice as a conceptual framework for understanding AI use by university educators. PS AIMP integrates professional purpose, professional and disciplinary knowledge, human AI interaction, professional judgement, ethical and regulatory accountability, institutional context, quality of AI mediated professional practice and reflective professional learning. The framework's central proposition is that professional judgement is the mechanism through which AI capability is translated into educationally legitimate and professionally accountable practice**.** This proposition does not imply that professional judgement has already been statistically demonstrated as a mediator. Rather, it identifies a theoretically grounded relationship that deserves empirical investigation.

The significance of PS AIMP consequently lies in shifting the analytical question from whether educators use AI to how educators professionally judge what AI should do, what they should do with AI generated outputs, and how those decisions affect the quality of educational practice**.** Such a shift is important for higher education policy, professional development, institutional governance and future research. It places AI within the professional activity of teaching rather than treating AI as an independent technological force. In doing so, it preserves the centrality of educator agency, disciplinary knowledge, ethical responsibility and reflective professional learning while recognising the transformative capabilities of artificial intelligence.

REFERENCES

1. Bacalso, F. D., Villamor, F. E., Paclipan, C. P., Orquia, C. J. B., Rendon, I. P., Albiso, A. T., & Himang, C. M. (2026). Institutional approaches to generative AI management in higher education: A systematic review. Frontiers in Education, 11, 1814426. https://doi.org/10.3389/feduc.2026.1814426
2. Baig, M. I., & Yadegaridehkordi, E. (2025). Factors influencing academic staff satisfaction and continuous usage of generative artificial intelligence (GenAI) in higher education. International Journal of Educational Technology in Higher Education, 22, 5. https://doi.org/10.1186/s41239-025-00506-4

3. Baggia, A., Tratnik, A., & Brezavšček, A. (2026). University teachers' perceptions, attitudes, and practices with generative AI: A systematic literature review with a meta-analytic component. Quality & Quantity, 60, 14107–14139. https://doi.org/10.1007/s11135-026-02717-x
4. Cabellos, B., de Aldama, C., & Pozo, J.-I. (2024). University teachers' beliefs about the use of generative artificial intelligence for teaching and learning. Frontiers in Psychology, 15, 1468900. https://doi.org/10.3389/fpsyg.2024.1468900
5. Jogezai, N., Baloch, F. A., Jaffar, M., & Khilji, G. (2025). From technology to pedagogy: Determinants of university faculty's pedagogically relevant use of generative AI. Quality Assurance in Education, 33(4), 618–634. https://doi.org/10.1108/QAE-12-2024-0255
6. Kahn, P., Carrigan, M., Smith, P., Murtagh, L., Liu, R., & Song, F. (2025). Teacher agency and generative artificial intelligence: Teaching in higher education as a responsive, cultural activity. Learning, Media and Technology. https://doi.org/10.1080/17439884.2025.2575993
7. Khlaif, Z. N., Ayyoub, A., Hamamra, B., Bensalem, E., Mitwally, M. A. A., Ayyoub, A., Hattab, M. K., & Shadid, F. (2024). University teachers' views on the adoption and integration of generative AI tools for student assessment in higher education. Education Sciences, 14(10), 1090. https://doi.org/10.3390/educsci14101090
8. Lelescu, A., Sava, S., Grosseck, G., & Malita, L. (2025). Exploring trust in generative AI for higher education institutions: A systematic literature review focused on educators. Humanities and Social Sciences Communications, 12, 1961. https://doi.org/10.1057/s41599-025-06253-1
9. Lyu, W., Zhang, S., Chung, T., Sun, Y., & Zhang, Y. (2025). Understanding the practices, perceptions, and (dis)trust of generative AI among instructors: A mixed-methods study in the U.S. higher education. Computers and Education: Artificial Intelligence, 8, 100383. https://doi.org/10.1016/j.caeai.2025.100383
10. Mah, D.-K., & Groß, N. (2024). Artificial intelligence in higher education: Exploring faculty use, self-efficacy, distinct profiles, and professional development needs. International Journal of Educational Technology in Higher Education, 21, 58. https://doi.org/10.1186/s41239-024-00490-1
11. Mah, D.-K., Knoth, N., & Egloffstein, M. (2025). Perspectives of academic staff on artificial intelligence in higher education: Exploring areas of relevance. Frontiers in Education, 10, 1484904. https://doi.org/10.3389/feduc.2025.1484904
12. Miao, F., & Cukurova, M. (2024). AI competency framework for teachers. UNESCO. https://doi.org/10.54675/ZJTE2084
13. Miao, F., & Holmes, W. (2023). Guidance for generative AI in education and research. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000386693
14. Mota, F. B., Cabral, B., Pinto, C. D., Braga, L. A. M., Comarú, M. W., & Lopes, R. M. (2026). The evolving role of higher education teachers in the age of artificial intelligence: A scoping review. Frontiers in Education, 11, 1813497. https://doi.org/10.3389/feduc.2026.1813497
15. Ofosu-Ampong, K. (2024). Beyond the hype: Exploring faculty perceptions and acceptability of AI in teaching practices. Discover Education, 3, 38. https://doi.org/10.1007/s44217-024-00128-4
16. Soleimani, S., Farrokhnia, M., van Dijk, A. M., & Noroozi, O. (2025). Educators' perceptions of generative AI: Investigating attitudes, barriers and learning needs in higher education. Innovations in Education and Teaching International, 62(5), 1598–1613. https://doi.org/10.1080/14703297.2025.2530767
17. Tan, X., Cheng, G., & Ling, M. H. (2025). Enhancing teachers' AI competency: A professional development intervention study based on intelligent-TPACK framework. Computers and Education: Artificial Intelligence, 9, 100521. https://doi.org/10.1016/j.caeai.2025.100521
18. Wainaina, P. K., & Sun, Y. (2025). Educators' perceptions and willingness to integrate generative artificial intelligence in teaching and research: Evidence from Kenyan higher education. Discover Education, 4, 347. https://doi.org/10.1007/s44217-025-00820-z
19. Williams, A. (2026). An integrated AI literacy framework for higher-education teachers: A critical review and conceptual synthesis. Cogent Education, 13(1), 2698137. https://doi.org/10.1080/2331186X.2026.2698137