

**THE ENDURING VALUE OF TEACHERS' HUMAN INTELLIGENCE IN THE
ERA OF ARTIFICIAL INTELLIGENCE**

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ABSTRACT

Artificial intelligence is altering how teachers plan lessons, generate materials, analyse learning data, provide feedback and undertake professional learning. These developments have prompted claims that increasingly capable systems may diminish the importance of teachers. This conceptual analysis examines the enduring value of teachers' human intelligence and explains how educational systems can organise productive teacher-AI complementarity. Contemporary peer-reviewed research, policy documents and recent Nigerian evidence were synthesised through a conceptual and thematic review. Sociocultural Theory and the Technological Pedagogical Content Knowledge framework provide the theoretical foundation. The analysis indicates that teachers' enduring contribution rests on integrated pedagogical judgement, relational understanding, moral responsibility, contextual interpretation, creative adaptation and the capacity to connect instructional decisions with the development of particular learners. AI can strengthen information processing, drafting, differentiation, analytics and routine professional tasks, but these advantages depend on teacher verification, educational purpose and accountable human decision-making. The study proposes a Teacher-AI Complementarity Framework that separates human-responsibility functions from AI-supported functions and connects both through a cycle of evaluation, adaptation, learner interaction and reflection. The article concludes that educational policy should protect and develop teachers' professional intelligence while building AI competence, governance safeguards and equitable infrastructure. AI should expand the teacher's capacity to teach; it should not define the purposes, relationships or responsibilities of teaching.

Keywords: teacher human intelligence; artificial intelligence; professional judgement; teacher-AI complementarity; educational leadership; AI competence

1. INTRODUCTION

Artificial intelligence has moved rapidly from a specialised field of computing into ordinary educational work. Generative systems can produce lesson outlines, explanations, questions, summaries, images and feedback in seconds, while learning-analytics systems can detect patterns across large bodies of student data. Tan et al. (2025), after reviewing 95 studies on AI in teaching and teacher professional development, reported substantial growth in applications that support instruction, assessment and learning analytics but found less research attention to the professional development teachers need for responsible integration. Correspondingly, Ogunleye et al. (2024) documented the rapid expansion of generative AI research in teaching and learning and identified continuing concerns about effective curricular use, assessment and institutional guidance. These developments require education systems to consider not only what AI can do, but also which dimensions of teaching remain dependent on human professional intelligence.

Recent scholarship also indicates that human relationships remain educationally consequential. Emslander et al. (2025), in a second-order meta-analytic review, found that positive teacher-student relationships were associated with academic achievement, motivation, executive functioning and well-being across the meta-analytic evidence they examined. These relationships involve more than the delivery of correct information. Teachers interpret hesitation, frustration, effort, silence, peer dynamics and changes in behaviour through continuing contact with learners. Such interpretation is fallible and must remain ethically disciplined, but it gives educational decisions a relational and developmental context that generated text or predictive scores do not independently possess (Emslander et al., 2025; Li et al., 2024).

UNESCO's current policy position places this human contribution at the centre of AI-enabled education. Miao and Cukurova (2024) define teacher AI competence through five dimensions covering a human-centred mindset, ethics, AI foundations and applications, AI pedagogy, and AI for professional learning. The framework explicitly presents teachers as designers and facilitators of learning and as guardians of safe and ethical AI use. Human-centred research reaches a similar conclusion from the design perspective. Alfredo et al. (2024), after analysing 108 studies on learning analytics and AI in education, stressed human control, stakeholder participation, safety, reliability and trustworthiness as major considerations in the design and deployment of educational AI. These positions imply that AI competence should strengthen professional judgement instead of displacing it.

Nigeria now faces this question at policy level. The Federal Ministry of Communications, Innovation and Digital Economy (2025) presents the National Artificial Intelligence

Strategy as a framework for ethical and inclusive AI adoption and identifies education among the sectors through which AI can support social development. The strategy also acknowledges infrastructure, skills, privacy, transparency and inequality as matters that require deliberate governance. At the teacher-preparation level, Adigun et al. (2025) found that Nigerian pre-service teachers' intentions to use AI for inclusive education were influenced by perceived ease of use and other contextual conditions, and the authors recommended clearer institutional policies and stronger integration of AI into teacher preparation. These Nigerian developments create an opportunity to move beyond technology acquisition towards a clearer account of the professional capabilities teachers require in AI-rich schools.

This article advances the concept of teachers' human intelligence as that account. The term does not refer narrowly to psychometric intelligence or to a claim that teachers outperform machines in every information-processing task. It denotes the integrated professional capacity through which teachers combine subject knowledge, pedagogical judgement, relational understanding, moral responsibility, cultural interpretation, creative adaptation and reflective decision-making in response to particular learners and educational purposes. The article argues that the value of this intelligence endures because teaching is a normative, relational and context-dependent profession. AI can extend teachers' reach and reduce routine burdens, but educational leadership and policy must organise that support so that human judgement remains responsible for purposes, high-consequence decisions and learner relationships. The study therefore examines what teachers' human intelligence means, which parts of it retain enduring educational value, how AI can augment instead of erode it, and which leadership, policy and planning arrangements can sustain productive teacher-AI complementarity.

Statement of the Problem

The increasing capability of generative AI creates a policy and management problem because education systems can mistake task automation for teacher replacement. AI can generate instructional materials and feedback quickly, but speed can encourage schools to automate decisions before establishing standards for accuracy, bias, privacy, professional review and educational appropriateness. UNESCO has cautioned that uncritical automation can narrow educational processes and weaken teacher-student relationships, while human-centred AI research continues to identify limited stakeholder participation and unresolved questions about control and trustworthiness (Alfredo et al., 2024; Miao & Cukurova, 2024). The risk is therefore two-sided: schools may underuse useful AI because of fear, or overuse it in ways that reduce teachers to supervisors of machine output.

The conceptual gap concerns how educational leadership, policy and planning should distinguish AI-supportable tasks from professional functions that require accountable human judgement. Existing research has examined AI literacy, teacher attitudes, professional development, generative AI applications and ethical risks, but the enduring value of teachers' human intelligence is often asserted without being organised into a clear educational model (Moylan et al., 2025; Sperling et al., 2024; Tan et al., 2025; Zhou et al., 2026). In Nigeria, the National Artificial Intelligence Strategy creates a wider policy direction for responsible adoption, while emerging teacher research signals the need for institutional preparation (Adigun et al., 2025; Federal Ministry of Communications, Innovation and Digital Economy, 2025). A conceptual framework is therefore needed to show what teachers must continue to own professionally, what AI can legitimately support, and how school systems can combine both without weakening educational judgement, relationships, cultural responsiveness or responsibility.

Objectives of the Study

The study seeks to: conceptualise teachers' human intelligence in relation to contemporary teaching; examine the dimensions of teachers' human intelligence that retain enduring educational value in the era of AI; analyse the appropriate complementary relationship between teachers' professional capabilities and AI-supported educational tasks; and propose educational leadership, policy and planning arrangements for strengthening teacher-AI complementarity while protecting professional responsibility and learner interests.

Conceptual Research Questions

The study is guided by four questions. How should teachers' human intelligence be conceptualised in contemporary education? Which dimensions of teachers' human intelligence retain enduring educational value as AI capabilities expand? How can AI augment teachers' work without displacing professional judgement, relationships and responsibility? Which educational leadership, policy and planning arrangements are required to sustain responsible and equitable teacher-AI complementarity?

2.0 LITERATURE REVIEW

2.1 Conceptual Review

Artificial Intelligence in Education

Artificial intelligence in education refers to the application of computational systems that perform functions such as pattern recognition, prediction, natural-language generation, automated classification, adaptive support and data-informed recommendation in educational settings. Generative AI extends this field by producing new text, images, audio, code and other symbolic outputs in response to prompts. Ogunleye et al. (2024) describe generative AI as a rapidly expanding component of teaching and learning practice, while Tan et al. (2025) identify applications across conversational systems, assessment, learning analytics and teacher professional development. The concept should therefore be differentiated from ordinary digital technology: AI systems do not merely store or transmit content; they infer patterns from data and generate or recommend outputs that can influence human decisions.

Teachers' Human Intelligence

Teachers' human intelligence is not an established psychometric scale in the literature and should therefore be defined carefully. In this article, it refers to the integrated professional capacity through which teachers interpret learners and contexts, draw on disciplinary and pedagogical knowledge, form judgements under uncertainty, establish educative relationships, make ethically accountable decisions and adapt action through reflection. This formulation builds on research that treats teacher knowledge as situated and integrative. Mishra and Koehler (2006), for example, argued that effective technology integration requires an interaction among technological, pedagogical and content knowledge instead of isolated technical skill. Sperling et al. (2024) later showed that AI literacy in teacher education must also encompass practical and ethical forms of knowing, not only technical understanding.

Professional Judgement and Pedagogical Decision-Making

Professional judgement refers to the reasoned selection of educational action when rules, data or routines do not fully determine what should be done. Teaching constantly presents such conditions because students differ in prior knowledge, language, motivation, disability, culture, pace and response to instruction. Moylan et al. (2025) report that teachers valued professional judgement when considering AI use because technologies can support decisions without carrying the professional responsibility for them. TPACK also explains why technology cannot be evaluated independently of pedagogy and content; a

tool that is technically capable may still be educationally inappropriate for a particular concept, learner or stage of development (Mishra & Koehler, 2006; Dogan et al., 2025).

Relational Understanding and Teacher-Student Interaction

Relational understanding refers to a teacher's continuing interpretation of learners through communication, observation, history and shared educational activity. It includes noticing when a learner's silence signals confusion instead of disengagement, when humour builds confidence instead of embarrassment, and when a nominally correct answer conceals fragile understanding. Emslander et al. (2025) found broad meta-analytic support for associations between positive teacher-student relationships and important academic and psychological outcomes. Li et al. (2024) further reported that structured teacher-student interaction improved learning in an experimental flipped-classroom setting, illustrating the educational significance of purposeful interpersonal exchange. These findings justify a careful claim: relational quality matters, but it should not be romanticised as a simple personal trait.

Moral Responsibility, Ethics and Accountability

Moral responsibility in teaching concerns decisions about what educational purposes should be pursued, how learners should be treated, which risks are acceptable and who must answer when decisions cause harm. AI systems can apply encoded rules and generate ethical-sounding explanations, but responsibility for high-consequence educational decisions remains institutional and human. Mouta et al. (2024) found that AI ethics in education involves multiple concerns that extend beyond technical accuracy, including justice, privacy and the values embedded in educational practice. UNESCO's guidance for generative AI likewise recommends a human-centred approach in which institutions protect data, establish appropriate regulation and maintain human oversight (Miao & Holmes, 2023).

AI Literacy and Teacher Professional Learning

Teacher AI literacy refers to the knowledge and dispositions required to understand AI capabilities and limitations, use tools appropriately, evaluate outputs, address ethical concerns and integrate AI with educational purposes. Sperling et al. (2024) found that AI literacy in teacher education remained underdeveloped and often leaned towards technical perspectives. UNESCO subsequently broadened the construct through a teacher competency framework that combines a human-centred orientation, ethics, technical foundations, pedagogy and professional learning (Miao & Cukurova, 2024). This broader conception is suitable because teachers need to know both how to operate systems and when their use is educationally justified.

Educational Leadership, Policy and Planning for AI Integration

Educational leadership for AI integration concerns the decisions through which school and system leaders define purposes, allocate resources, establish safeguards, prepare staff and evaluate whether technology improves education. It differs from technology procurement because purchasing software does not establish appropriate instructional use. Human-centred research recommends active participation of teachers and students in design and deployment decisions, while UNESCO's teacher framework calls for policy environments that support continuing teacher development and responsible use (Alfredo et al., 2024; Miao & Cukurova, 2024). Leaders must consequently address professional learning, data governance, curriculum alignment, assessment, accessibility and infrastructure as connected planning responsibilities.

Nigeria's National Artificial Intelligence Strategy provides a relevant policy setting. The Federal Ministry of Communications, Innovation and Digital Economy (2025) identifies education among the sectors through which AI may strengthen social development and gives substantial attention to responsible innovation, skills, governance, inclusion and infrastructure. However, a national AI strategy does not by itself determine how teachers should use AI in classrooms. Adigun et al. (2025) show that Nigerian pre-service teacher adoption is affected by contextual and institutional conditions. The researcher therefore argues that education authorities need an education-specific implementation layer that translates national AI goals into teacher competence standards, procurement rules, assessment guidance, data protection procedures and school-level professional support.

2.2 Theoretical Framework

Sociocultural Theory

Sociocultural Theory is associated principally with Vygotsky's account of learning and development, published in English in *Mind in Society* in 1978. The theory treats learning as a socially mediated process in which cultural tools, language and interaction support the development of higher mental functions. Its relevance to the present study is twofold. First, AI can be understood as a new cultural tool that mediates access to information, representation and problem solving. Second, the educational effect of a tool depends on the social organisation of its use. A generated explanation does not become learning merely because it is available; teachers help learners interpret, question, connect and gradually take greater responsibility for understanding. Sociocultural Theory therefore explains why the teacher remains important even when informational support becomes abundant: teaching organises mediated participation and connects tools with the learner's developmental needs.

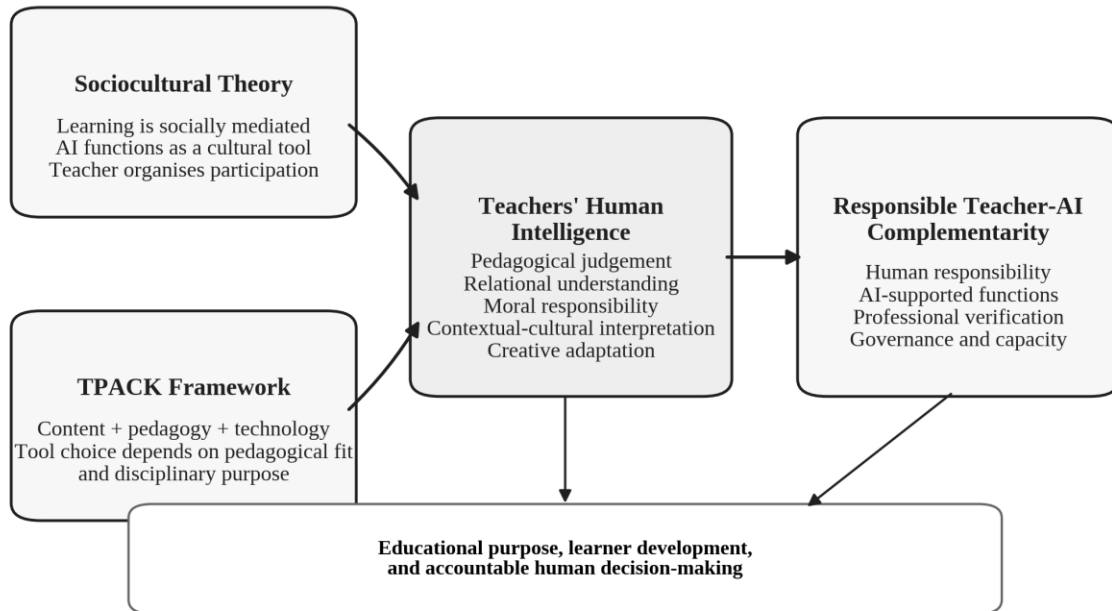
Technological Pedagogical Content Knowledge Framework

Mishra and Koehler (2006) developed the Technological Pedagogical Content Knowledge framework to explain the knowledge teachers require for thoughtful technology integration. TPACK proposes that effective use arises from interaction among knowledge of content, pedagogy and technology and the intersections among them. The framework remains relevant to AI because knowing how to prompt a system does not establish that the resulting activity supports a disciplinary goal or an appropriate pedagogical approach. Dogan et al. (2025) used TPACK to review teacher AI professional development and found it useful for examining how technical and pedagogical learning are combined. In this article, TPACK explains the integrative character of teachers' professional intelligence: AI competence acquires educational value only when teachers connect tool capabilities with subject matter, learner characteristics, assessment and pedagogy.

The two frameworks are complementary. Sociocultural Theory explains why learning remains relational, socially organised and mediated by cultural tools, while TPACK explains the professional knowledge required to select and integrate those tools. Together, they reject both technological determinism and technological rejection. AI can become an important mediating resource, but the teacher remains responsible for arranging educational interaction, selecting appropriate representations, monitoring understanding and adapting technology to pedagogical purposes.

Figure 1

Theoretical Integration of Sociocultural Theory and TPACK for Teacher-AI Complementarity



3. METHODOLOGY

The study adopted a conceptual and thematic review design. It did not collect primary data or calculate a pooled statistical effect. The review drew on peer-reviewed research, systematic and scoping reviews, foundational theoretical literature, UNESCO guidance, and authoritative Nigerian policy documents. Sources were identified through targeted searches of publisher databases, scholarly indexing services and official institutional portals using combinations of artificial intelligence in education, teacher AI competence, teacher professional judgement, teacher-student relationships, AI literacy, human-centred AI, teacher professional development, educational leadership and Nigeria AI policy.

Contemporary sources published principally from 2020 to August 2026 were prioritised for empirical and policy claims. Earlier works were retained where they supplied the theoretical foundation, particularly Sociocultural Theory and TPACK. Sources were selected when they directly addressed the teacher role, AI use in teaching, professional competence, relational dimensions of teaching, ethical governance or Nigerian adoption conditions. The analysis grouped evidence according to the four conceptual research questions and compared areas of convergence, qualification and limitation. The resulting

conceptual results are analytical deductions from the reviewed evidence and should not be interpreted as statistical findings from a new sample.

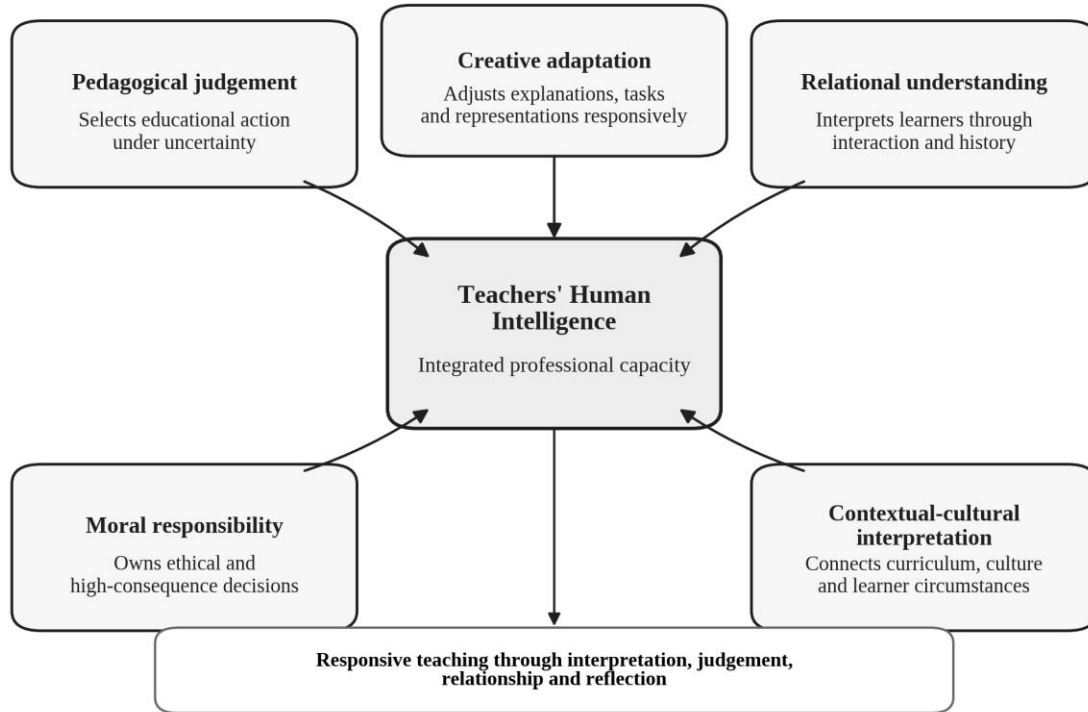
4. CONCEPTUAL ANALYSIS AND RESULTS

Teachers' Human Intelligence as Integrated Professional Capacity

The first conceptual result is that teachers' human intelligence should be understood as integrated professional capacity instead of as a competition with AI on speed, memory or text generation. Five dimensions recur across the reviewed evidence: pedagogical judgement, relational understanding, moral responsibility, contextual-cultural interpretation and creative adaptation. TPACK research explains the integration of disciplinary, pedagogical and technological knowledge, while recent teacher-AI studies show that professional judgement remains central when educators determine how AI outputs should influence teaching (Mishra & Koehler, 2006; Moylan et al., 2025). Teacher-student relationship research adds the relational dimension, demonstrating that the quality of educational relationships is associated with learning and well-being (Emslander et al., 2025).

Figure 2

Dimensions of Teachers' Human Intelligence as Integrated Professional Capacity



Enduring Human Functions in AI-Rich Education

The second result identifies several functions that should remain under direct human professional responsibility. Teachers must determine instructional purposes, interpret ambiguous learner responses, establish relationships, make high-consequence judgements, mediate cultural meaning and take responsibility for decisions affecting students. Chan and Tsi (2024) report perceptions that human qualities remain important to the teaching role, while Mota et al. (2026) identify facilitation, ethical guidance and human interaction as continuing dimensions of teacher work. Emslander et al. (2025) provide broader evidence that teacher-student relationships relate to multiple student outcomes. Taken together, these sources support a role transformation argument instead of a replacement argument.

AI as an Augmenting Resource for Teachers

The third result is that AI is most educationally defensible as an augmenting resource. The reviewed literature identifies practical benefits in lesson preparation, differentiation, resource generation, analytics, feedback support and professional learning (Filiz et al., 2025; Ogunleye et al., 2024; Tan et al., 2025). However, the quality of augmentation

depends on verification. AI-generated content must be checked for factual accuracy, curricular fit, developmental appropriateness, cultural relevance and bias. The teacher's work therefore shifts partly from initial production to informed evaluation and adaptation.

Risks of Mismanaging Teacher-AI Relations

The synthesis also identifies four risks that can diminish the value of both teachers and AI. The first is deskilling, where teachers repeatedly accept generated outputs and gradually practise less independent planning, explanation or assessment design. The second is automation bias, where machine recommendations receive excessive trust because they appear data-driven. The third is relational thinning, where screen-mediated support replaces time for dialogue and observation. The fourth is inequitable adoption, where schools with stronger connectivity, devices and training gain advantages while less-resourced schools face weaker access or use poorly supported systems. UNESCO and human-centred AI research give substantial attention to these risks through concerns about human control, inclusion, privacy and trustworthiness (Alfredo et al., 2024; Miao & Cukurova, 2024).

Leadership, Policy and Planning for Teacher-AI Complementarity

The fourth result is that productive complementarity requires a deliberate governance architecture. At system level, education authorities should define teacher AI competence, acceptable and prohibited uses, data-protection standards, procurement criteria and expectations for human review. At institutional level, leaders should provide professional learning, approved tools, technical support and opportunities for teachers to evaluate AI use collaboratively. At classroom level, teachers should retain responsibility for instructional purpose, adaptation, assessment interpretation and communication with learners. This distribution aligns with UNESCO's human-centred competency approach and with research calling for stronger stakeholder involvement in educational AI design (Alfredo et al., 2024; Miao & Cukurova, 2024).

For Nigeria, policy should connect the National Artificial Intelligence Strategy with education-specific implementation. The national strategy supports ethical, inclusive adoption and identifies education as a sector of social development, but schools require more detailed standards concerning teacher preparation, curriculum, assessment, privacy, local language and cultural relevance (Federal Ministry of Communications, Innovation and Digital Economy, 2025). Adigun et al. (2025) further indicate that teacher adoption depends on institutional and usability conditions. Consequently, teacher AI competence should be embedded in pre-service preparation, continuing professional development and

school leadership standards, accompanied by infrastructure planning that does not deepen disparities among schools.

Table 1
Functional Allocation in the Teacher-AI Complementarity Framework

Domain	Human professional responsibility	Appropriate AI support	Required safeguard
Educational purpose and consequential decisions	Determine goals; interpret learner evidence; make progression, discipline, safeguarding and other high-consequence judgements.	Generate options, retrieve information and organise supporting evidence.	Documented human review, transparency and accountable decision-making.
Planning, explanation and resource design	Select and adapt content to curriculum, pedagogy, culture and particular learners.	Draft lesson materials, examples, explanations and routine differentiation.	Teacher verification for accuracy, curricular fit, developmental appropriateness and bias.
Learner relationships and interaction	Interpret behaviour, motivation, silence, effort and changing learner needs through continuing interaction.	Support low-pressure practice, drafting and routine communication preparation.	Preserve teacher-student interaction; maintain human responsibility for protection and relational decisions.
Assessment and analytics	Interpret evidence of learning and make high-consequence assessment judgements.	Identify patterns, summarise data and prepare low-consequence feedback.	Human interpretation, assessment integrity, privacy and limits on automation bias.
Professional learning and routine work	Exercise reflective judgement and maintain independent professional reasoning.	Summarise information, assist drafting and reduce routine administrative burden.	AI competence, professional verification and protection against deskilling.
System leadership and governance	Set policy, competence standards, procurement rules, access priorities and evaluation expectations.	Provide approved tools, technical support and scalable assistance.	Privacy protection, equitable infrastructure, stakeholder participation and continuing evaluation.

Source: Author's conceptualization

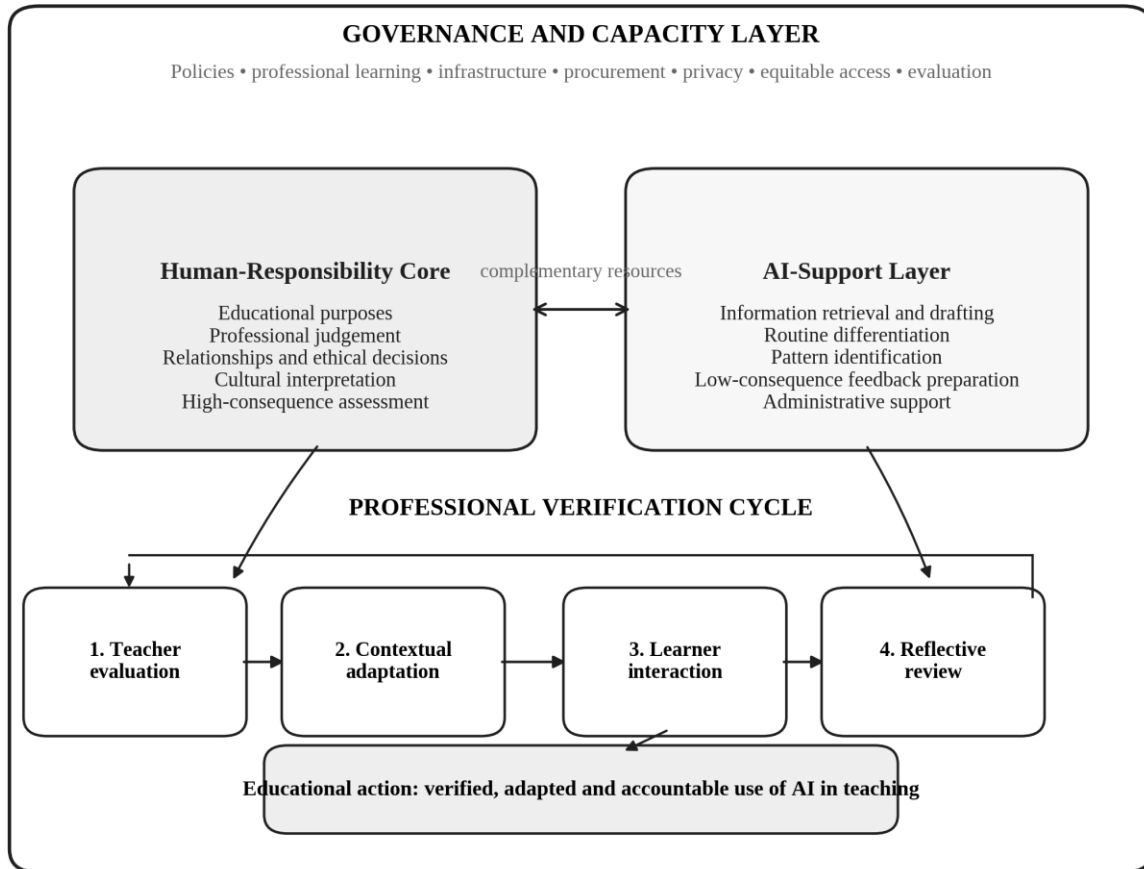
Teacher-AI Complementarity Framework

The conceptual synthesis produces a Teacher-AI Complementarity Framework organised around four layers. The first is the human-responsibility core: teachers retain responsibility for educational purposes, professional judgement, relationships, ethical decisions, cultural interpretation and high-consequence assessment. The second is the AI-support layer: approved systems may assist with information retrieval, drafting, routine differentiation, pattern identification, low-consequence feedback preparation and administrative work. The third is the professional verification cycle: every consequential AI output passes through

teacher evaluation, contextual adaptation, learner interaction and reflective review before it shapes educational action. The fourth is the governance and capacity layer: leadership provides policies, professional learning, infrastructure, procurement standards, privacy protection, equitable access and evaluation. The framework treats teacher and AI capabilities as different but combinable resources. Its central proposition is that educational benefit increases when AI reduces avoidable cognitive and administrative burden while teachers devote more professional attention to judgement, relationships, explanation, motivation and responsive teaching.

Figure 3

Teacher-AI Complementarity Framework: Human Responsibility, AI Support, Verification and Governance



DISCUSSION

The first result redefines the contemporary value of teachers away from information scarcity. Teachers no longer retain professional importance because students cannot access explanations elsewhere. Their enduring contribution lies in the professional synthesis of knowledge, context, relationship and responsibility. This interpretation extends Mishra and Koehler's (2006) account of integrated teacher knowledge and agrees with Moylan et al. (2025), who emphasise professional judgement in teachers' engagement with AI. It also avoids an unproductive human-versus-machine comparison. A system may generate more examples than a teacher, but the teacher remains responsible for selecting which example serves a particular learner and educational purpose.

The second result concerning relationships and responsibility is supported by evidence that teacher-student relationships correlate with academic, motivational and well-being outcomes (Emslander et al., 2025). However, the evidence should not be interpreted to mean that human teachers are always relationally effective. Poor teaching relationships can harm learning, and AI may sometimes provide low-pressure support that students find easier to access. The implication is that teacher preparation should strengthen relational competence and ethical practice, because human presence has educational value only when it is exercised professionally. AI can assist communication, but it does not remove the need for responsible adults who know students over time and can act when a learner requires protection, encouragement or a different instructional response.

The third result supports augmentation as the more defensible model of AI integration. Tan et al. (2025) and Filiz et al. (2025) document practical teaching benefits, while Sperling et al. (2024) and Zhou et al. (2026) show that teacher AI competence must extend beyond technical operation. The proposed verification cycle responds to this evidence by placing teacher evaluation between AI output and learner experience. Such a design can preserve efficiency without surrendering curricular, ethical or cultural judgement. It also provides school leaders with a practical test: an AI application should be reconsidered when staff cannot explain how outputs are checked, adapted and connected to learning goals.

The fourth result has direct implications for educational management and policy. Nigeria's National Artificial Intelligence Strategy creates a broad direction for responsible AI development, but educational adoption requires more specific rules for teachers and schools (Federal Ministry of Communications, Innovation and Digital Economy, 2025). UNESCO's framework offers a useful international reference because it combines technical, ethical and pedagogical competence (Miao & Cukurova, 2024). However, implementation should be adapted to Nigerian curriculum, infrastructure, languages,

teacher-development systems and data-protection requirements. The greatest policy error would be to treat AI as a procurement programme detached from teacher development and educational quality.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The article concludes that the enduring value of teachers' human intelligence lies in integrated professional judgement, relational understanding, moral responsibility, contextual interpretation and creative adaptation. Artificial intelligence can extend teachers' capacity through rapid generation, analysis, differentiation and administrative support, but these functions acquire educational value only when a responsible professional connects them to curriculum, learners and ethical purposes. The proposed Teacher-AI Complementarity Framework therefore places human responsibility at the centre, AI support around appropriate tasks, professional verification between machine output and educational action, and governance around the entire process. In the AI era, the teacher's role should not be preserved by resisting technology or by competing with machines on speed. It should be strengthened through deliberate professional development and policy that reserve judgement, relationships and responsibility for people while using AI to support better teaching.

5.2 Recommendations

1. The Federal Ministry of Education, teacher regulatory bodies and teacher-education institutions should develop a national teacher AI competence standard aligned with Nigerian curriculum and professional responsibilities. The standard should combine technical understanding, pedagogical application, ethical evaluation, privacy, bias recognition and professional judgement, and should guide both pre-service preparation and continuing professional development.
2. State education authorities and school proprietors should adopt a human-review policy for consequential AI-supported decisions. Assessment interpretation, student progression, discipline, safeguarding, special educational support and other decisions with substantial effects on learners should require documented review by a qualified teacher or authorised educational professional.

3. School leaders should organise AI adoption around instructional problems instead of product availability. Before procurement, schools should identify the educational need, consult teachers and learners, assess data and privacy implications, plan training, specify verification procedures and define indicators for evaluating whether the tool improves teaching or reduces avoidable workload.
4. Teacher professional-development providers should move beyond short technical demonstrations and use practice-based learning in which teachers evaluate AI outputs, redesign lessons, compare alternative responses, examine bias and discuss ethical cases. This approach should preserve teachers' independent planning and reasoning while developing confidence in productive AI use.
5. Curriculum and assessment authorities should redesign guidance for AI-rich learning so that assessment continues to reveal students' own understanding. Schools should combine supervised performance, oral explanation, drafts, project evidence and appropriate disclosure of AI support, thereby making teacher judgement central to interpreting learning evidence.
6. Federal and state planners should address infrastructure and access before treating AI use as a universal expectation. Connectivity, devices, reliable electricity, accessible tools, local-language support and staff capacity should be planned together so that AI adoption does not widen differences between well-resourced and poorly resourced schools.
7. Education research funders and universities should support longitudinal Nigerian studies of teacher-AI collaboration. Research should examine instructional quality, teacher workload, professional competence, student learning, equity, privacy and teacher-student relationships so that policy can be revised from evidence instead of technological enthusiasm.

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