LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
LJLLR
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

FROM TOOL USE TO PEDAGOGICAL JUDGEMENT: A CONCEPTUAL FRAMEWORK FOR TEACHER AI LITERACY IN AI-ASSISTED FEEDBACK ON ESL ACADEMIC WRITING IN PAKISTANI UNIVERSITIES

Aqsa Javed[*1], Prof. Dr Abrar Ajmal[2]

[*1]*English Language Center, Minhaj University, Lahore Pakistan*
[2]*Director, English Language Center, Minhaj University, Lahore Pakistan*

[*1]aqsa.eng@mul.edu.pk, [2]abrar.ajmal@mul.edu.pk

DOI: https://doi.org/10.5281/zenodo.23560184

Keywords
AI literacy; ESL academic writing; AI-assisted feedback; teacher education; ChatGPT; Pakistan; higher education

Article History
Received: *25 June 2026*
Accepted: *16 September 2026*
Published: *16 October 2026*

Copyright @Author
Corresponding Author: *
Aqsa Javed

Abstract

Generative artificial intelligence (AI) has come into ESL writing classrooms in the university faster than the teachers, institutions and policy can catch up. In Pakistan, where English is the main language of higher education and where access to digital technologies is not uniform, the issue is not whether learners are using AI tools to generate feedback on their writing, but whether teachers possess literacy skills to lead the way. It is a narrative review and conceptual analysis reporting no new empirical data. It combines existing literature on AI-generated writing feedback, studies on teachers' and students' perceptions of ChatGPT in Pakistan, and national metrics for connectivity and AI policy. According to the review, perception surveys dominate Pakistani evidence, concerns regarding academic integrity and critical thinking are common, and there is a lack of studies that explore what teachers do when they incorporate AI feedback into the process of writing instruction. Based on AI literacy frameworks, Technological Pedagogical Content Knowledge (TPACK), and the Technology Acceptance Model (TAM), the article proposes a four-dimensional model of teacher AI literacy (conceptual, technical, pedagogical, and ethical-critical), aligns it with the stages of an AI-assisted feedback cycle, and presents five testable propositions. Some implications for the teacher education, institutional policy and research design in Pakistani higher education are discussed.

INTRODUCTION

Writing is one of the most challenging skills demanded of university students in their second language and is one of the most fully evaluated skills. As a result, cognitive descriptions have long portrayed writing as a collection of unique thinking processes, and pedagogical analyses have suggested that process-based instruction of writing, together with explicit knowledge of the genres that learners are expected to produce, would be beneficial to their learning (Badger & White, 2000; Flower & Hayes, 1981; Hyland, 2007). Within those strategies, feedback is the fuel of the improvement process; it is where a writer's draft encounters a reader's response, and, it is where the decision making for revision takes place. However, in large classes, teachers are able to provide limited individual feedback, and that is a practical constraint

LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
LJLLR
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

that affects many ESL settings (Steiss et al. 2024). This is all about to change with the advent of Generative AI. Chatbots powered by Large Language Models provide detailed feedback to a draft within seconds, suggest rewordings of the text, and explain the grammatical choices required when needed. Kasneci et al., (2023) listed some of the educational opportunities and some of the risks of these models, such as over-reliance, bias, and threats to the validity of assessment, while Godwin-Jones, (2022) characterized intelligent writing assistance as a transition rather than the replacement of a tool for correcting text with a tool that works with the author. Warschauer et al. (2023) suggested that the AI-generated text poses real affordances and contradictions, especially for second-language writers, regarding equity, authorship, and learning. Whether AI tools should be allowed to be used or not is not the question teachers need to ask – it's how to make them part of a feedback cycle that allows the learner to be the one writing the learning. Pakistan provides a unique context to ask this question. English is the main language in the higher education and academic research but most of the students have learnt English as their second or third language along with Urdu and regional languages. As of January 2025, an estimated 45.7% of Pakistan's population (116 million) was using the internet, rising to 45.6% by October 2025 (117 million). The aggregates reveal that there is a significant variation in access cost and quality, but that digital tools are making it to a large number of students at the university age and in increasing numbers. The existence of their use by Pakistani students is clearly visible: In a study of 400 students at four universities in Pakistan, 92.25% of the ChatGPT users reported using it free of charge, English language was the main language of interaction and 251 students (62.75%) were worried about academic integrity (Alghazo et al., 2025). The federal cabinet gave its approval to Pakistan's first National AI Policy in July 2025, which makes AI education a national priority (Business Recorder, 2025). However, evidence of teachers' uptake and attention to policy is not matched by uptake. While perceiving students' and teachers' perspectives as key factors in understanding generative AI in English education, the majority of existing studies in Pakistan on this topic are based on this perception (Alghazo et al., 2025; Kanwal et al., 2023; Shakil & Siddiq, 2024). Teachers' own narratives consistently highlight trust and digital literacy as obstacles (e.g., Asad et al., 2024). Less is known about the skills teachers need to evaluate if the AI feedback is correct, to create tasks that maintain cognitive engagement in the learning process, or to fairly evaluate work when using AI. These questions are about teacher AI literacy and they're what this article is about. The article provides answers to three questions. The first question asks the researchers what international research has shown regarding the quality and application of L2 writing feedback from AI.RQ1: What has the international research shown about the quality and application of L2 writing feedback from AI? RQ2: How do teachers and students in Pakistan's universities view and use generative AI? RQ3: In this context, what conceptual framework can be proposed to link teacher AI literacy to the use of AI for feedback practice, and what propositions can be forwarded for further research? The contribution is threefold: it provides a summary of the diverse nature of evidence in Pakistan; it offers a framework that connects teacher AI literacy to the phases of a feedback loop; it presents a set of propositions that can be further explored through classroom and survey research. The conceptual background of the review is outlined in Section 2, the review method is described in Section 3, the review findings are presented in Section 4, the framework is developed in Section 5 and the implications, limitations, and conclusions are discussed in Sections 6 to 9.

2. Conceptual Background

2.1 AI literacy and teacher AI competence

AI literacy is a set of skills that allows people to critically assess AI technologies, communicate with and collaborate with AI, and utilize AI as a tool in everyday and professional life (Long & Magerko, 2020). After summarising the literature, Ng et al. (2021) identified four components of knowledge and understanding of AI: using and applying AI, evaluating and creating AI, and AI ethics. UNESCO's AI

LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

competency framework for teachers (Miao & Cukurova, 2024) also divides the competency into a human-centred mindset, ethics of AI, AI foundations and applications, AI pedagogy, and the use of AI for professional development. The frameworks vary in terms of language, but they have a common thrust: literacy is not just about the ability to operate. If a teacher is capable of writing an effective prompt but can't tell if a user is using a non-native language, can explain why a piece of writing may look like a machine translation, or can determine when a text is not suitable to share with a chatbot, then s/he has tool skills, not AI literacy.

2.2 Teacher knowledge and technology acceptance

Two models are established to find teacher AI literacy in practice. Mishra and Koehler (2006) emphasized that rather than the integration of technology being just a matter of technological knowledge, it requires a combination of technological, pedagogical, and content knowledge, as described by the Technological Pedagogical Content Knowledge (TPACK) framework. In the case of ESL writing, the content knowledge encompasses genre knowledge, rhetorical structure and second-language development; pedagogical knowledge encompasses the sequencing of drafting, feedback and revision; and technological knowledge entails knowledge of what language models can and cannot do. The Technology Acceptance Model (TAM) suggests that perceived usefulness and perceived ease of use influence technology adoption (Davis, 1989), and has been used in ChatGPT adoption studies, such as those of Pakistani faculty (Alghazo et al., 2025; Iqbal et al., 2022). The two models would go hand-in-hand. While TAM helps to explain whether teachers are adopting AI tools, TPACK helps to explain the extent to which they incorporate them into pedagogy. Even the two alone are not sufficient to explain the ethical judgment that the feedback which is assisted or informed by artificial intelligence requires, and hence the framework that is suggested in Section 5 includes an ethical-critical dimension.

2.3 Feedback in process-genre writing pedagogy

In a process-genre classroom, writing is a process that happens in phases of preparation, modelling, drafting, feedback and revision (Badger & White, 2000; Hyland, 2007). Feedback can be effective only if the learner actively processes it and not just passively receive it; research on automated feedback in L2 writing indicates that the value of the feedback to the learner is influenced by his/her trust in the feedback and how the learner reacts to the automated comments (Ranalli, 2021). There is some evidence of the benefits of structured process-genre instruction that can be measured from the studies conducted in Pakistan, such as those of Ajmal and Irfan (2020) who found that writing anxiety of academic-writing learners was lower following the process-genre module than the traditional module. For the purposes of this article, the process of using AI to generate feedback is conceptualized as being in five stages: (1) designing a task and a prompt, (2) generation of feedback by the AI, (3) evaluation of the correctness and usefulness of the feedback by the teacher or learner, (4) revision by the learner of the written text, and (5) assessment and integrity, in which the final text is evaluated and authorship is reflected. These stages are used to frame the structure of Section 5.

3. Review Method

The study type is a narrative review and is appropriate for this type of literature review, for interpretive synthesis, for conceptual frameworks, and for lack of exhaustive coverage and effect size estimation (Grant & Booth, 2009). The selection of sources was done by searching for the following combinations of the terms ChatGPT, generative AI, ESL/EFL writing, feedback, teacher perceptions, AI literacy, and Pakistan, which were then chained from retrieved articles on publisher, repository, and open-access journal websites in September and October 2026. Theoretical studies from any time period were included, while empirical or review studies on generative AI were limited to 2019–2026. Articles that had been peer-reviewed, those

LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
LJLLR
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

from the UNESCO, recognised data sources, and those conducted in Pakistani universities or that focused on second language writing were placed at the top priority. The review is not exhaustive. There was no formal database protocol used, nor was there any dual screening or quality appraisal and so the results should be interpreted as an informed synthesis and not as a full count of the literature. If the sample size or design of a Pakistani study is mentioned in this article based on a summary of the study, that is not the primary source, but another source, then the name of the other source is written in the text and the information should come from the other source and not the Pakistani study, prior to quoting the information from other works that use the Pakistani study. No new data were collected and figures 1 and 2 re-plot numerical values published in the sources citTable 1. Pakistani and related studies informing the review.

4. Review Findings

International evidence on AI feedback in L2 writing (RQ1) Outside of Pakistan, there are signs that AI feedback is not a cure-all or a problem by itself. To illustrate this, Steiss et al. (2024) asked raters to grade 200 human feedback and 200 ChatGPT feedback on the same high school-level essays. While human feedback was rated higher overall in all categories, aside from the language-based comments, feedback quality was found to be consistent regardless of learners' language status, and the authors believe that generative AI could continue to be used for initial drafts or when a well-trained educator is not available. It's an important finding for large classes: AI feedback is not the same as expert human feedback, but might be a fair substitute if expert feedback is lacking—and someone is able to assess its quality. Pedagogical studies are in the same direction. Barrot (2023) discussed the challenges and opportunities of using ChatGPT in second-language writing tasks, highlighting its potential as a writing aid for idea generation, language support, and feedback, as well as its risks in terms of accuracy, authorship, and plagiarism. Su et al. (2023) presented the potential of using ChatGPT in argumentative writing instruction and highlighted the significance of task design and teacher guidance in this context. Kohnke et al. (2023) made a compelling case for the necessity of new digital skills for language teachers and learners to make good use of ChatGPT. The need for such skills is highlighted by the detection issue: Liang et al. (2023) found several popular GPT detectors to have a high rate of false-positive identification of non-native English speakers' writing as AI-generated. The overuse of such detectors by ESL teachers could lead to punishment of exactly the students for whom the course was designed. More general reviews warn of the lack of pedagogical foundation in educational AI research. Zawacki-Richter et al. (2019) found in their systematic review of 146 articles on the role of AI in higher education that there was only a weak link to pedagogical theory and a limited focus on ethical risks. Combined, the international literature indicates that AI feedback is helpful but not uniformly so, its effects on teaching is context-dependent, and ethical and equity risks, such as detector bias, exist. 4.2 Pakistani evidence on teachers, learners, and AI (RQ2) The summarized reviews of the Pakistani and closely related studies are shown in Table 1. There are three elements to this oeuvre that stand out. First, there is confusion among professionals on teachers' attitudes and perceptions which tend to be risk-taking. Shakil and Siddiq (2024) explored the perspective of ESL teachers on ChatGPT as a threat to the analytical writing of their graduate students and found that teachers were concerned about students using ChatGPT to generate generic text and plagiarising. Plagiarism and generic text production were the concerns expressed by ESL teachers (as summarised by Alghazo et al., 2025). As summarized by Alghazo et al., Kanwal et al. (2023) found that university instructors perceived ChatGPT as a convenient resource for providing immediate information that could cater to diverse student needs but recognized concerns related to the potential for dependency, ethical implications, and limitations in critical thinking. In a qualitative review of teachers' perceptions of ChatGPT in the teaching of English, Asad et al. (2024) pointed out that trust and low digital literacy are

LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
LJLLR
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

among the primary barriers. These studies suggest ambivalence – a blending of perceived usefulness and uncertainty surrounding integrity and cognitive dependence.

Study	Context and sample	Design	Findings relevant to AI-assisted writing feedback
Alghazo et al. (2025)	400 university students, four provinces; convenience sample (71% female)	Quantitative questionnaire	Mean perceived benefit 3.71/5; differences by institution type and degree level; accuracy was the most common primary concern; 251 respondents reported integrity concerns.
Shakil & Siddiq (2024)	ESL teachers at public-sector universities (30 teachers, as summarised by Alghazo et al., 2025)	Perception survey	ChatGPT perceived as a threat to graduate learners' analytical writing; plagiarism concerns.
Kanwal et al. (2023)	University teachers (600, as summarised by Alghazo et al., 2025)	Survey	Benefits: fast access to information, varied needs; challenges: over-reliance, ethics, reduced critical thinking.
Iqbal et al. (2022)	20 university faculty (as summarised by Alghazo et al., 2025)	TAM-based attitude study	Concerns about plagiarism and cheating; recognised value for lesson planning and assessment.
Asad et al. (2024)	Educators' perspectives on ChatGPT in English writing pedagogy	Narrative review	Opportunities for personalised learning; challenges of trust and low digital literacy.
Faiz et al. (2023)	EFL writing in Pakistan	Conceptual / discussion	Explores balancing ChatGPT assistance with skill development in writing.
Osama et al. (2023)	Researchers with limited English proficiency	Commentary	ChatGPT can support scientific writing but cannot replace human expertise.
Ajmal & Irfan (2020)	Pakistani academic-writing learners	Experimental	Process-genre module associated with lower writing anxiety than traditional instruction.

Note. Sample details for Shakil & Siddiq, Kanwal et al., and Iqbal et al. are taken from the summary in Alghazo et al. (2025) and should be checked against the original papers.

Second, there is evidence among students of a widespread use and ambivalence. The largest study among the Pakistani university students conducted in this review involved 400 students, which were taken through convenient sampling method by Alghazo et al. (2025). The mean perceived benefit of ChatGPT was 3.71 on a 5-point scale and was significantly associated with institution type ($F = 4.328$, $p = .014$) as well as degree level ($F = 7.800$, $p < .001$). Students of private universities ($M = 3.92$) gave higher ratings

LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
LJLLR
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

to benefits than did students of government universities (M = 3.69) and semi-government universities (M = 3.63); and master's students (M = 3.92) gave higher ratings to benefits than undergraduates (M = 3.66) or doctoral (M = 3.53) students. Institutional differences could relate to resources and exposure to technology, which the authors suggest; this interpretation is consistent with the equity concern raised in Section 4.3, but was not tested directly. The same research reported that 57.75% of students in total disagreed that ChatGPT has led to a decrease in their ability to think deeply. The primary concerns most frequently chosen were accuracy of information (n = 138), dependency on AI (n = 70), and academic integrity (n = 47). The practice of verifying ChatGPT was a mix: 148 students reported always verifying ChatGPT content with other sources, 141 sometimes did, and 40 do not.

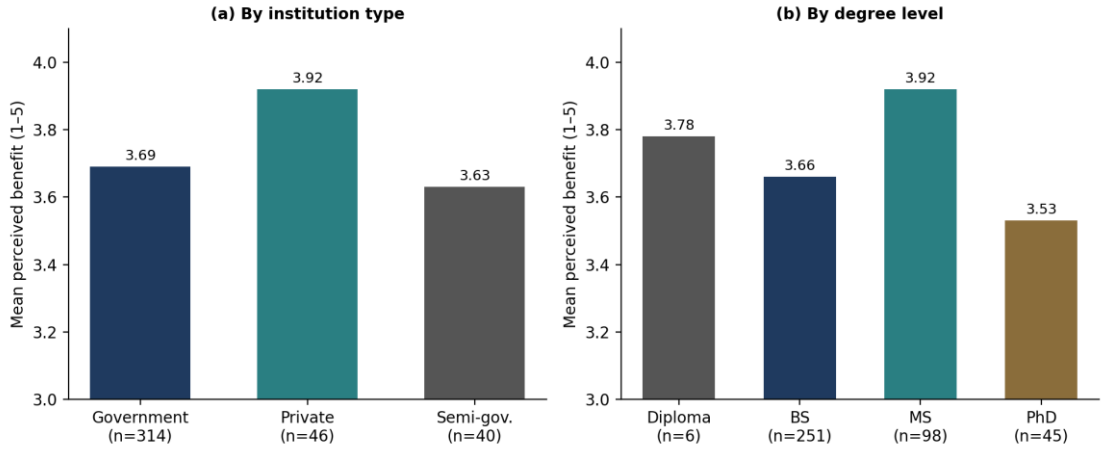


Figure 1. Mean perceived benefit of ChatGPT for learning (1–5 scale) among 400 Pakistani university students, by (a) institution type and (b) degree level. Values re-plotted from Alghazo et al. (2025), Tables 4 and 5.

Third, research into instruction in the third language is very limited. Faiz et al. (2023) set out to see how ChatGPT can be used to support EFL learners in writing without compromising learning, and Osama et al. (2023) suggest that ChatGPT can help support researchers who have an inadequate level of English proficiency but can't replace their personal skills. Both are useful, but neither is a study of what teachers do in feedback cycles, it is conceptual or commentaries. In the case of process-genre pedagogy research in Pakistan, however, suggests that well-designed writing cycles can be investigated and measured (Ajmal & Irfan, 2020). The two lines of work (Generative AI and feedback-cycle pedagogy) have not been united in published research in Pakistan yet, although a non-systematic search limited this claim. 4.3 Infrastructure and policy context Teacher practice is not solely due to teacher knowledge. Figure 2 shows that internet users in Pakistan rose from 111 million in January 2024 to 116 million in January 2025 and 117 million in October 2025 (Kemp, 2024, 2025, 2026). The proportion of people using the internet remained around 45.6 to 45.7% over these dates, so the absolute increase in online user numbers was roughly equal to the number of people in the population which also increased, and over half of the population were still not online. Institution-level connectivity is also not implied as a national average ignores the differences between urban and rural areas; between institutions, and between men and women. The fact that most of the ChatGPT learners used a free version (Alghazo et al., 2025) is a reminder that the tools

LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
LJLLR
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

and features that learners can access are influenced by cost, and a teacher creating an activity for providing feedback using AI should not make that assumption.

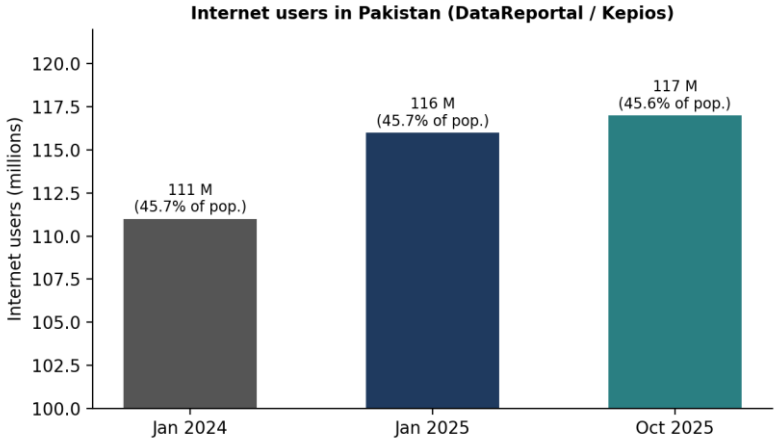


Figure 2. Internet users in Pakistan, millions and share of population. Source: DataReportal / Kepios (Kemp, 2024, 2025, 2026).

At policy level, the federal cabinet approved the National AI Policy 2025 on 30 July 2025. Official and press summaries describe an ecosystem-building strategy that includes AI education, innovation and venture funds, cybersecurity and ethics safeguards, a target of training one million AI professionals by 2030, and an AI council to oversee implementation (Business Recorder, 2025; MoITT, 2025). In the publicly reported highlights, this review found no explicit provision for teacher AI literacy in language education, although the full policy document and later implementation plans should be consulted. If language-specific guidance is absent, decisions about AI-assisted feedback are likely to be made by individual teachers and departments, which makes teacher AI literacy more, not less, consequential.

4.4 Synthesis: four gaps

The review identifies four gaps. (1) Perception versus practice: most of the Pakistani studies measure teacher's and student's perception of ChatGPT, but not what teachers do in the classroom with ChatGPT's AI feedback. (2) Measurement of teacher AI literacy: research studies typically measure attitudes and familiarity, not the multidimensional competencies of AI literacy, so the extent to which teachers can actually do something is not clear. (3) Pedagogical integration: AI use does not often link to the pedagogical model of writing instruction, including process-genre cycles, and the question of how AI is integrated into the cycle is not discussed. The barriers to policy enactment mentioned in part (4) – clarity of policy, professional development, and infrastructure – are not modelled with teacher knowledge. 5. A Framework of Teacher AI Literacy for AI-Assisted Feedback (RQ3) 5.1 Four dimensions of teacher AI literacy The framework builds on the concept of teacher AI literacy outlined by Ng et al. (2021), Miao and Cukrova (2024), and TPACK (Mishra & Koehler, 2006) and proposes four aspects of teacher AI literacy that are pertinent to writing feedback. Conceptual literacy involves a comprehension of the fact that language models produce likely texts rather than factually correct information, meaning that fluent feedback could be incorrect, and that models can also produce bias. Technical literacy involves knowing how to use tools, how to provide prompts for genre, level and assessment and the privacy considerations of uploading student texts. Pedagogical literacy is TPACK-informed judgment about when and how AI feedback fits in a process-genre cycle, such as using it during the drafting stage and putting genre and disciplinary feedback to teachers and peers. Ethical-critical literacy involves being cognizant of authorship,

LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
LJLLR
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

integrity and equity, as well as being able to teach critical awareness for the learner to check and challenge AI products, especially when the product is written by someone other than the native language speaker such as an AI detector (Liang et al., 2023). 5.3 Aligning the feedback cycle with 2-D systems.5.4 Bridging the feedback cycle with 3-D systems. When applied to the 5 stages of the feedback cycle introduced in Section 2.3, the 4 dimensions become very real. Table 2 shows the types of teacher judgements needed at each stage.

Table 2. Teacher AI literacy dimensions mapped onto the AI-assisted feedback cycle

Stage of cycle	Conceptual	Technical	Pedagogical	Ethical-critical
1. Task and prompt design	Knows that tool limits shape what can reasonably be asked	Writes prompts that specify genre, level, and rubric	Positions AI as scaffold, not author; aligns with genre goals	Sets disclosure rules; avoids uploading identifiable student data
2. Feedback generation	Understands output is probabilistic, not verified	Chooses tool and version; manages settings	Restricts AI to suitable draft stages	Considers cost and access (e.g., free-tier limits)
3. Feedback evaluation	Recognises plausible errors and fabricated references	Cross-checks against other sources or tools	Models critical comparison of AI and teacher feedback	Notices bias, including toward local English usage
4. Learner revision	Knows that revision requires learner decisions	Uses version history or track changes to show learner choices	Uses reflective revision logs	Guards against over-reliance and uncritical acceptance
5. Assessment and integrity	Knows detectors are unreliable	Collects process evidence (drafts, logs)	Assesses process and genre knowledge, e.g., through brief oral defence	Treats non-native writers fairly; avoids detector-only judgements

Note. Original synthesis by the author, informed by Ng et al. (2021), Mishra & Koehler (2006), Liang et al. (2023), and Steiss et al. (2024).

5.3 Beliefs and enabling conditions

Literacy alone does not determine practice. TAM suggests that teachers' perceived usefulness and ease of use of AI tools shape their willingness to integrate them (Davis, 1989), and the Pakistani teacher studies reviewed above show that usefulness is often weighed against integrity concerns (Alghazo et al., 2025; Iqbal et al., 2022; Kanwal et al., 2023). Enabling conditions, namely institutional policy, infrastructure, and professional development, are expected to determine whether literacy is translated into practice. Figure 3 shows the resulting framework, situated in the Pakistani university context and leading to learner and institutional outcomes.

LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

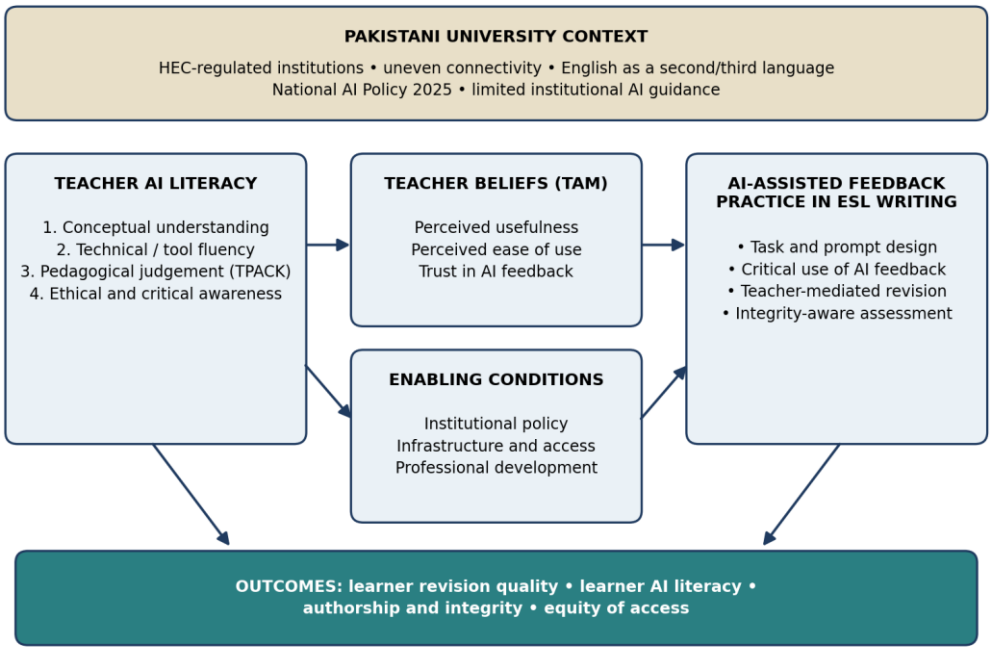


Figure 3. Conceptual framework: teacher AI literacy, beliefs, and enabling conditions shaping AI-assisted feedback practice in Pakistani university ESL writing.

5.4 Propositions

The framework yields five propositions that can guide empirical work (Table 3). They are offered as hypotheses for testing, not as findings.

Table 3. Propositions and indicative measures

No.	Proposition	Indicative measure
P1	Teachers with higher pedagogical literacy will position AI feedback as a draft-stage scaffold followed by teacher or peer mediation, rather than as a substitute for human feedback.	Task designs and lesson plans coded for AI role; classroom observation
P2	Perceived usefulness will predict AI adoption, but ethical-critical literacy will moderate whether adoption supports or erodes academic integrity.	TAM scales plus AI literacy scale; integrity-related practices
P3	Institutional policy clarity and professional development will moderate the relationship between teacher AI literacy and enacted practice, so that high literacy without enabling conditions yields little change in practice.	Survey of institutional conditions; comparison across institution types
P4	Teachers' AI literacy will be positively associated with learners' verification behaviour and critical use of AI feedback.	Learner self-report and revision logs (e.g., share who verify output)

LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
LJLLR
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

No.	Proposition	Indicative measure
P5	Teachers with lower ethical-critical literacy will place greater reliance on AI-detection tools when judging authorship.	Interview data and assessment-policy documents

6. Discussion

According to the review, there is a transition point for Pakistani research. The initial research focused on teachers' and students' acceptance of ChatGPT, and the findings suggest that many teachers and students accept it, although there are concerns regarding integrity, accuracy, and critical thinking (Alghazo et al., 2025; Kanwal et al., 2023; Shakil & Siddiq, 2024). The next wave should question why some applications of AI feedback are pedagogically useful and others are not. International research indicates that the gap isn't so much about the tool itself, as it is about how it's integrated into the learning process (Steiss et al., 2024; Su et al., 2023) – and that's exactly where teacher AI literacy comes in. There are three points that need to be highlighted. First, the Steiss et al. (2024) finding that human feedback was typically better, while ChatGPT was competitive on criteria-based comments suggests a division of labour, not a replacement.First, the Steiss et al. (2024) finding that typically, human feedback was better, but that ChatGPT was competitive on criteria-based comments suggests a division of labour, not a replacement. High pedagogically-literate teachers could allow AI to grade with criteria-based comments on early versions; only rhetorical, discipline-specific, and genre-related comments could be made by human readers. This division follows the process genre pedagogy which regards writing as a process and as a socially situated genre (Badger & White, 2000; Hyland, 2007). Second, because perceived benefit varied by institution type (Alghazo et al., 2025), it is possible that feedback using AI will exacerbate institutional inequalities already in existence between better and less well resourced institutions. This risk would not be addressed by a literacy framework that does not focus on access and cost. Third, there is the issue of detector bias against non-native writers (Liang et al., 2023) which means that integrity responses themselves can be inequitable, and response to assessment redesign is more defensible. The framework also explains why professional development that is limited to the use of tools is likely to be inadequate. Both the adoption of AI without conceptual, pedagogical and ethical-critical literacy and a ban on AI leave the pedagogical question unanswered, as the teachers who operate the technologies without understanding them may do so in an uncritical manner. On the other hand, the fact that many students use AI to check work at least sometimes (Alghazo et al., 2025) provides a point of leverage for teaching rather than a starting point.

7. Implications

Table 4 summarises implications for the main stakeholders. They follow from the framework and the reviewed evidence but should be treated as provisional until the propositions are tested.

Table 4. Implications by stakeholder

Stakeholder	Recommended actions
ESL teachers	Define which feedback stages may use AI and which may not; require learners to submit drafts and a short note on how AI feedback was used; teach verification of AI comments; avoid detector-only judgements of authorship.

LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
LJLLR
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

Stakeholder	Recommended actions
Universities and departments	Issue clear, discipline-sensitive AI guidelines for writing courses; provide equitable access to approved tools; redesign assessment to include process evidence such as drafts, revision logs, and brief oral discussion.
Higher Education Commission and policy makers	Link implementation of the National AI Policy 2025 to teacher AI literacy, including language and writing instruction; fund professional development outside major cities; monitor equity of access across public and private universities.
Teacher educators and PD providers	Design programmes around the four literacy dimensions rather than tool tutorials alone; use TPACK-informed practice tasks in which teachers plan and evaluate AI-assisted feedback cycles.
Researchers	Move from perception surveys to classroom-based and mixed-methods designs; validate multidimensional teacher AI literacy instruments for language teaching; study feedback cycles longitudinally.

8. Limitations and Directions for Future Research

There are a number of limitations to this article. This is a narrative and non-systematic review hence some relevant studies might not be included especially in journals of Pakistan which are not thoroughly indexed. Parts of the study details are from secondary summaries, and should be checked against the originals. The field is also dynamic, and conclusions regarding specific tools can quickly be outdated as models, tools and institutional rules change as soon as they are published. Last but not least, the framework and propositions are deductive and are not supported by empirical testing. Future studies could be carried out in four directions. Firstly, instrument development: A validated multidimensional AI literacy scale for language teachers in universities that has been adapted to Pakistan and translated in both English and Urdu. Second, to classroom-based research, such as design-based research where teachers apply and adapt AI-based feedback cycles. Third, mixed methods designs that included surveys across provinces, institution types, and interviews and analysis of actual AI feedbacks and revision logs, to overcome the gap in the perception of AI use versus actual practice. Fourth, comparative and longitudinal studies focused on learner outcomes such as revision quality, genre awareness, academic integrity, and/or academic outcomes to assess the impact of teacher AI literacy on learning.

9. Conclusion

The use of Generative AI is already embedded in the way university students in Pakistan write, and policy attention for the teaching of AI is increasing, however, little has been studied about the teachers' literacy when it comes to using Generative AI rather than students' and teachers' opinions. In the international evidence examined, four gaps have been identified, and a framework has been suggested that conceptualises teacher AI literacy in four aspects (conceptual, technical, pedagogical, and ethical-critical), in relation to the steps of an AI-assisted feedback cycle and in relation to teacher beliefs and institutional conditions. The main thesis is that the question isn't whether or not AI should be permitted in the ESL writing classroom, but whether teachers are able to make informed pedagogical decisions related to it. Testing the five propositions would provide Pakistani universities, teacher educators and policy makers with an evidence base for testing them.

LIBERAL JOURNAL OF LANGUAGE AND LITERATURE REVIEW
LJLLR
An International Double-Blind Peer-Reviewed Open Access Journal
ISSN (Online): 3006-3175 | ISSN (Print): 3006-3167
Volume 5, Issue 8 October, 2026

REFERENCES

Ajmal, A., & Irfan, H. (2020). Effects of process-genre approach on writing anxiety among English academic writing learners in Pakistan. Journal of Business and Social Review in Emerging Economies, 6(2), 741–752. https://doi.org/10.26710/jbsee.v6i2.1215

Alghazo, R., Fatima, G., Malik, M., Abdelhamid, S. E., Jahanzaib, M., Nayab, D. e, & Raza, A. (2025). Exploring ChatGPT's role in higher education: Perspectives from Pakistani university students on academic integrity and ethical challenges. Education Sciences, 15(2), 158. https://doi.org/10.3390/educsci15020158

Asad, M. M., Shahzad, S., Shah, S. H. A., Sherwani, F., & Almusharraf, N. M. (2024). ChatGPT as artificial intelligence-based generative multimedia for English writing pedagogy: Challenges and opportunities from an educator's perspective. The International Journal of Information and Learning Technology, 41(5). https://doi.org/10.1108/IJILT-02-2024-0021

Badger, R., & White, G. (2000). A process genre approach to teaching writing. ELT Journal, 54(2), 153–160. https://doi.org/10.1093/elt/54.2.153

Barrot, J. S. (2023). Using ChatGPT for second language writing: Pitfalls and potentials. Assessing Writing, 57, 100745. https://doi.org/10.1016/j.asw.2023.100745

Business Recorder. (2025, July 30). Federal cabinet approves National AI Policy 2025. https://www.brecorder.com/news/amp/40375361

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340. https://doi.org/10.2307/249008

Faiz, R., Bilal, H. A. B., Asghar, I., & Safdar, A. (2023). Optimizing ChatGPT as a writing aid for EFL learners: Balancing assistance and skill development in writing proficiency. Linguistic Forum: A Journal of Linguistics, 5(3), 24–37.

Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. College Composition and Communication, 32(4), 365–387. https://doi.org/10.2307/356600

Godwin-Jones, R. (2022). Partnering with AI: Intelligent writing assistance and instructed language learning. Language Learning & Technology, 26(2), 5–24. https://hdl.handle.net/10125/73474

Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. Health Information & Libraries Journal, 26(2), 91–108. https://doi.org/10.1111/j.1471-1842.2009.00848.x

Hyland, K. (2007). Genre pedagogy: Language, literacy and L2 writing instruction. Journal of Second Language Writing, 16(3), 148–164. https://doi.org/10.1016/j.jslw.2007.07.005

Iqbal, N., Ahmed, H., & Azhar, K. A. (2022). Exploring teachers' attitudes towards using ChatGPT. Global Journal for Management and Administrative Sciences, 3(4), 97–111. https://doi.org/10.46568/gjmas.v3i4.163

Kanwal, A., Hassan, S. K., & Iqbal, I. (2023). An investigation into how university-level teachers perceive ChatGPT impact upon student learning. Gomal University Journal of Research, 39(3), 250–265. https://doi.org/10.51380/gujr-39-03-001

Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., ... Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. Learning and Individual Differences, 103, 102274. https://doi.org/10.1016/j.lindif.2023.102274

Kemp, S. (2024). Digital 2024: Pakistan. DataReportal. https://datareportal.com/reports/digital-2024-pakistan

Kemp, S. (2025). Digital 2025: Pakistan. DataReportal. https://datareportal.com/reports/digital-2025-pakistan

Kemp, S. (2026). Digital 2026: Pakistan. DataReportal. https://datareportal.com/reports/digital-2026-pakistan

Kohnke, L., Moorhouse, B. L., & Zou, D. (2023). ChatGPT for language teaching and learning. RELC Journal, 54(2), 537–550. https://doi.org/10.1177/00336882231162868

Liang, W., Yuksekgonul, M., Mao, Y., Wu, E., & Zou, J. (2023). GPT detectors are biased against non-native English writers. Patterns, 4(7), 100779. https://doi.org/10.1016/j.patter.2023.100779

Long, D., & Magerko, B. (2020). What is AI literacy? Competencies and design considerations. In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (pp. 1–16). ACM. https://doi.org/10.1145/3313831.3376727

Miao, F., & Cukurova, M. (2024). AI competency framework for teachers. UNESCO. https://doi.org/10.54675/ZJTE2084

Ministry of Information Technology and Telecommunication, Government of Pakistan. (2025). Federal Cabinet approves Artificial Intelligence (AI) Policy 2025 [Press release]. https://www.moitt.gov.pk

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. Teachers College Record, 108(6), 1017–1054. https://doi.org/10.1111/j.1467-9620.2006.00684.x

Ng, D. T. K., Leung, J. K. L., Chu, S. K. W., & Qiao, M. S. (2021). Conceptualizing AI literacy: An exploratory review. Computers and Education: Artificial Intelligence, 2, 100041. https://doi.org/10.1016/j.caeai.2021.100041

Osama, M., Afridi, S., & Maaz, M. (2023). ChatGPT: Transcending language limitations in scientific research using artificial intelligence. Journal of the College of Physicians and Surgeons Pakistan, 33(10), 1198–1200.

Ranalli, J. (2021). L2 student engagement with automated feedback on writing: Potential for learning and issues of trust. Journal of Second Language Writing, 52, 100816. https://doi.org/10.1016/j.jslw.2021.100816

Shakil, E., & Siddiq, S. (2024). ESL teachers' perceptions about ChatGPT as a threat to analytical writing abilities of ESL learners at graduate level. Pakistan Languages and Humanities Review, 8(1), 115–128. https://doi.org/10.47205/plhr.2024(8-I)10

Steiss, J., Tate, T., Graham, S., Cruz, J., Hebert, M., Wang, J., Moon, Y., Tseng, W., Warschauer, M., & Olson, C. B. (2024). Comparing the quality of human and ChatGPT feedback of students' writing. Learning and Instruction, 91, 101894. https://doi.org/10.1016/j.learninstruc.2024.101894

Su, Y., Lin, Y., & Lai, C. (2023). Collaborating with ChatGPT in argumentative writing classrooms. Assessing Writing, 57, 100752. https://doi.org/10.1016/j.asw.2023.100752

Warschauer, M., Tseng, W., Yim, S., Webster, T., Jacob, S., Du, Q., & Tate, T. (2023). The affordances and contradictions of AI-generated text for writers of English as a second or foreign language. Journal of Second Language Writing, 62, 101071. https://doi.org/10.1016/j.jslw.2023.101071

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education: Where are the educators? International Journal of Educational Technology in Higher Education, 16, 39. https://doi.org/10.1186/s41239-019-0171-0