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AI-Enhanced English Language Learning at the Undergraduate Level: A Mixed-Methods Analysis of Effectiveness and Challenges

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ABSTRACT

The global ascendancy of Artificial Intelligence (AI) presents a transformative potential for English Language Teaching (ELT), particularly in contexts grappling with systemic pedagogical challenges. This study investigates the integration of AI tools in undergraduate ELT in Pakistan, a setting characterized by large class sizes, traditional teaching methodologies, and significant resource constraints. Employing a sequential explanatory mixed-methods design, the research collected quantitative data via surveys from 350 students and 45 instructors, and qualitative data through semi-structured interviews, focus group discussions, and a quasi-experimental study on Automated Writing Evaluation (AWE) tools. The findings reveal a critical dissonance: while students demonstrated strong receptivity and AWE use led to a statistically significant improvement in writing performance, the adoption is severely hampered by a profound digital divide and inadequate technological infrastructure. Instructor perspectives, analyzed through the TPACK framework, indicated cautious optimism tempered by a significant lack of pedagogical training and confidence, underscoring a deficit in the necessary knowledge to integrate AI effectively. Further analysis using the UTAUT model identified unreliable internet, lack of institutional support, and ethical concerns as primary barriers to behavioral intention to use AI. The study concludes that the promise of AI in Pakistani ELT is contingent upon a systemic, multi-faceted approach that moves beyond mere tool provision. It necessitates concurrent investment in robust digital infrastructure, comprehensive teacher professional development focused on pedagogical integration, and the formulation of context-sensitive ethical guidelines to ensure AI acts as a bridge for educational equity rather than a further source of division.

Keywords: Artificial Intelligence (AI), English Language Teaching (ELT), Pakistan, Technological Pedagogical Content Knowledge (TPACK), Automated Writing Evaluation (AWE), Digital Divide.

Introduction

In the 21st-century global ecosystem, English has solidified its role as the undisputed lingua franca of international commerce, scientific research, and diplomatic discourse (British Council, 2023; Coleman, 2010). This global reality places a premium on English proficiency for nations seeking to participate actively in the global economy, and Pakistan is no exception. Within its borders, English operates as a critical gatekeeper for socioeconomic mobility, higher education, and access to prestigious professions (Rahman, 2005; Shamim, 2011). The ability to comprehend complex academic texts, articulate ideas in writing, and engage in professional communication in English is a fundamental determinant of a graduate's career trajectory.

Consequently, the effectiveness of English Language Teaching (ELT) at the undergraduate level becomes a matter of national importance, directly impacting the quality of the future workforce and the country's competitive standing. The stakes are high; failure to equip students with robust English skills risks perpetuating a cycle of intellectual isolation and economic disadvantage in an increasingly interconnected world.

Despite this pressing need, the state of ELT at the undergraduate level in Pakistan is frequently characterized by a constellation of systemic challenges that hinder the development of communicative competence. The predominant pedagogical model often remains anchored in traditional methods that prioritize rote memorization of grammatical rules over the development of practical, communicative skills, a challenge prevalent even in remote areas (Bangash et al., 2021; Shamim, 2011). This approach is further exacerbated by chronically large class sizes, which render individualized attention a near impossibility and present a significant pedagogical hurdle (Buglio, 2013). Compounding these issues is the significant heterogeneity in students' prior English education, creating a classroom environment with vastly disparate proficiency levels that a single instructor, using conventional methods, struggles to adequately address (Bangash et al., 2021). This pedagogical landscape often produces graduates who, despite years of formal instruction, remain unable to confidently draft a coherent research paper, deliver an effective presentation, or engage in a technical discussion in English, thereby undermining the very purpose of tertiary education.

It is within this context of pedagogical strain and escalating demand for proficiency that Artificial Intelligence (AI) emerges as a potentially transformative force in global education. AI, particularly through subfields like Natural Language Processing (NLP), is powering a new generation of educational tools capable of delivering personalized and scalable learning experiences (Zawacki-Richter et al., 2019). These innovations include Automated Writing Evaluation (AWE) tools that offer instantaneous, detailed feedback on written composition, which have been shown to be effective in improving writing skills in educational settings (Nunes et al., 2022). Furthermore, AI-powered technologies can significantly enhance learner motivation and create low-stakes environments for practicing language skills (Raine, 2025). The rationale for investigating the integration of AI into Pakistan's undergraduate ELT context is therefore both urgent and significant. AI-powered platforms present a viable pathway to address the system's most intractable problems by offering a means to differentiate instruction for varied proficiency levels, provide immediate, individualized feedback that overstretched instructors cannot, and foster the development of all four core language skills (Zawacki-Richter et al., 2019). This investigation is not merely about technological adoption but about exploring a paradigm shift that could recalibrate ELT in Pakistan towards greater efficacy, equity, and relevance.

Literature Review

The global pedagogical landscape is being reshaped by the incursion of Artificial Intelligence, with English Language Teaching (ELT) standing as a primary beneficiary. International scholarship has begun to document the tangible impacts of various AI tools on language acquisition (Barrios-Beltran, 2024; Paiz et al., 2025). In the domain of writing, Automated Writing Evaluation (AWE) tools have demonstrated significant efficacy in providing immediate, granular feedback on grammar, syntax, and mechanics, thereby reducing instructor workload and allowing students to engage in more iterative drafting processes (Li, 2021). Beyond structured tools, generative AI models like ChatGPT have introduced new possibilities for content creation and writing scaffolding, though their use is tempered by concerns regarding academic integrity and factual accuracy (Paiz et al., 2025). For vocabulary and grammar,

adaptive platforms leverage spaced repetition algorithms to enhance retention, while for pronunciation, AI-powered speech recognition software provides learners with unprecedented opportunities for private, instantaneous feedback on their phonological accuracy, a resource often scarce in traditional classroom settings (Shajithabanu et al., 2024). The collective findings from these international studies suggest a consistent theme: while AI may not replace the nuanced guidance of a skilled teacher, it serves as a powerful force multiplier, enhancing accessibility, providing consistent practice opportunities, and fostering learner autonomy (Barrios-Beltran, 2024).

Delving deeper into specific language skills reveals a more nuanced picture of AI's capabilities. For writing, AWE tools are most effective when their corrective feedback is integrated into a broader pedagogical framework, helping students identify recurring error patterns rather than just fixing individual mistakes (Li, 2021; Pfaffe, 2017). In speaking and pronunciation, tools leveraging Automatic Speech Recognition (ASR) can diagnose issues with specific phonemes and intonation patterns, offering learners a safe space to practice without the social anxiety of a classroom. However, critics note that these systems are often trained on native-speaker corpora and may struggle with the diverse accents of English language learners, potentially misleading them (Shajithabanu et al., 2024). For reading and comprehension, a critical area of focus in Pakistani ESL contexts (Dogar, 2024; Dogar & Shah, 2024), adaptive learning platforms use AI to dynamically adjust the difficulty of texts and associated questions based on a learner's real-time performance. This principle of personalization is the cornerstone of AI's promise in ELT; by analyzing vast datasets of learner interactions, algorithms can curate bespoke learning pathways, recommend targeted exercises, and present content in modalities that align with individual learner preferences and needs, effectively de-standardizing the one-size-fits-all model that has long dominated language education (Barrios-Beltran, 2024).

However, this promising global narrative exists in stark contrast to the documented realities of technology integration and pedagogical practices within Pakistan's own ELT ecosystem (Hussain et al., 2023). Existing literature on educational technology in Pakistan consistently highlights a profound digital divide that operates along both geographic and socioeconomic lines. Studies indicate that while urban, private institutions may have intermittent access to digital tools, rural and public-sector universities—which educate the majority of the nation's undergraduates—are plagued by unreliable internet connectivity, a shortage of hardware, and insufficient technical support (Hussain et al., 2023). Furthermore, the integration of even basic technology is often hampered by a deficit in digital literacy. As noted by Sultan and Javed (2023), many English language instructors in Pakistan, while subject-matter experts, lack the pedagogical training and confidence to effectively incorporate technology into their lesson plans, often defaulting to traditional methods, a finding echoed in studies of public-school reading instruction (Dogar & Shah, 2024). On the student side, access to personal computing devices is not ubiquitous, with many relying solely on smartphones, which, while powerful, present limitations for sustained academic writing and research, creating a "mobile-first but digital-second" reality (Hussain et al., 2023, p. 259). This body of work paints a picture of an educational context where foundational technological infrastructure, digital literacy, and innovative pedagogical practices—such as those aimed at improving reading fluency (Dogar, 2024)—are still being negotiated, making the leap to advanced AI tools a significant conceptual and practical challenge.

Synthesizing these two distinct bodies of literature—the robust international research on AI in ELT and the critical, context-specific studies on technology and pedagogy in Pakistan—reveals a conspicuous and critical gap in scholarly understanding. There is a surfeit of global studies

extolling the virtues of AI for personalized language learning (Barrios-Beltran, 2024; Paiz et al., 2025) and a parallel corpus of Pakistani research detailing the systemic barriers to basic EdTech and the struggles of implementing even non-technological pedagogical innovations (Dogar, 2024; Hussain et al., 2023). What remains almost entirely unexplored is the intersection of these two domains: the specific integration, perception, and measurable effectiveness of contemporary AI tools for undergraduate English teaching within the unique socio-cultural, economic, and pedagogical context of Pakistan (Dogar & Shah, 2024). The existing literature fails to answer pressing questions: How do Pakistani undergraduate students and their instructors perceive the utility of an AWE tool like Grammarly or a generative AI like ChatGPT? What hybrid pedagogical models could successfully deploy AI to mitigate the challenges of large, multi-level classes, particularly in core skills like reading? What are the specific infrastructural and training prerequisites for a sustainable AI intervention in a Pakistani university? It is this precise gap the chasm between global technological potential and localized, contextualized application that this research seeks to address, moving beyond theoretical speculation to provide an empirically grounded analysis of AI's role in the future of Pakistani ELT.

Problem Statement

The undergraduate English language teaching landscape in Pakistan is characterized by a critical inadequacy. Rote-based, teacher-centered methodologies, overwhelmed class sizes, and a stark lack of resources perpetuate a cycle of ineffective instruction, failing to equip students with the communicative competence required for academic and professional success. While Artificial Intelligence presents a transformative global potential to personalize learning and automate feedback, its application within the Pakistani context remains largely theoretical and unexamined. Consequently, a significant problem exists: the profound disconnect between the promising capabilities of AI-driven language tools and the documented infrastructural, pedagogical, and socio-economic realities of Pakistan's higher education system. This gap creates an urgent need to investigate the viable pathways, perceived value, and tangible impacts of integrating AI specifically within this challenging and unique environment to bridge the chasm between potential and practical, sustainable implementation.

Research Objectives

1. To identify the current awareness and perceptions of undergraduate English students and instructors towards AI-assisted language learning.
2. To evaluate the accessibility and availability of necessary technological infrastructure for AI implementation in Pakistani universities.
3. To assess the impact of specific AI tools (e.g., on writing skills) on student performance and engagement.
4. To identify the major pedagogical, technical, and socio-cultural barriers to AI integration.
5. To propose a framework for the sustainable integration of AI in ELT curricula in Pakistan.

Research Questions

RQ1: What are the attitudes and perceptions of undergraduate students and English instructors in Pakistan regarding the use of AI in language learning and teaching?

RQ2: To what extent is the current technological infrastructure in Pakistani universities conducive to the integration of AI in ELT?

RQ3: How does the use of specific AI tools (e.g., an AWE tool) affect the academic writing performance of undergraduate students?

RQ4: What are the primary challenges and facilitators for implementing AI-driven pedagogy in the Pakistani undergraduate ELT context?

Methodology

Research Design

This study employed a sequential explanatory mixed-methods research design to provide a comprehensive, multi-faceted investigation into the integration of AI in Pakistan's undergraduate ELT context. This pragmatic approach was fundamentally chosen because the complex research questions demand both broad, generalizable data and deep, contextual understanding. The quantitative phase first established the overarching patterns related to AI awareness, access, and perceptions among a significant sample of students and instructors, painting a macroscopic picture of the current landscape. It was strategically followed by a qualitative phase, which delved into the nuances, lived experiences, and underlying rationales behind the statistical trends identified initially. This two-phase structure allowed for the robust triangulation of data, where the rich, detailed narratives from interviews and focus groups were used to explain, elaborate upon, and give voice to the quantitative findings from the surveys, thereby providing a more complete, valid, and holistically rich picture of the complex phenomenon under study.

Population, Sampling, and Participant Selection

The target population for this research comprises two distinct groups central to the educational dynamic: undergraduate students enrolled in compulsory English courses and the instructors teaching these courses within one public and one private university across Lahore. The universities and participants (both teachers and students) were chosen on the basis of convenience. For the qualitative phase, a purposive sampling strategy was used to select information-rich cases, instructors with varying levels of teaching experience and technological adoption, and students from different proficiency levels to ensure the in-depth data captured reflects a wide spectrum of perspectives and experiences.

Data Collection

Data collection was executed through a suite of instruments meticulously aligned with the sequential mixed-methods design. The quantitative data was gathered through digitally administered, close-ended surveys. The student survey gauged their familiarity with specific AI tools, frequency of use, perceived usefulness, ease of use, and self-assessed digital literacy. The instructor survey paralleled these themes while adding critical sections on pedagogical beliefs, perceived institutional barriers to integration, and specific training needs. Qualitatively, semi-structured interviews were conducted with a purposively selected subset of English instructors and department heads to gain profound insights into institutional policies, practical pedagogical challenges, and their strategic vision for AI's role. Furthermore, separate Focus Group Discussions (FGDs) with students were organized to explore their collective experiences, shared attitudes, and the social dynamics influencing their adoption and use of AI tools. To robustly assess the tangible impact of an AI intervention, a quasi-experimental component is integral. A control group received traditional writing instruction and feedback, while an experimental group utilised a specified AWE tool (e.g., Grammarly) over one academic semester. Pre- and post-tests, alongside a detailed analysis of writing portfolios, provided comparative, empirical performance data.

Data Analysis Strategies

The analysis of the collected data was conducted in two distinct yet ultimately complementary streams. For the quantitative data from the widespread surveys and the experimental pre-/post-tests, the Statistical Package for the Social Sciences (SPSS) version 28 was used.

Descriptive statistics including frequencies, means, and standard deviations were calculated to summarize the sample characteristics and key variables. Inferential statistics, employing independent samples t-tests to compare the performance of the experimental and control groups, and Analysis of Variance (ANOVA) to examine significant differences across strata (e.g., public vs. private institutions), was employed to test hypotheses and identify significant relationships and patterns. For the rich qualitative data from interviews and FGDs, a rigorous thematic analysis approach, following the framework of Braun and Clarke, was meticulously followed. This involved transcribing all audio recordings verbatim, followed by iterative cycles of coding to identify initial codes, which were then collated into potential themes. These themes were thoroughly reviewed, refined, and clearly defined to ensure they accurately represent the nuanced insights from the participants, thereby powerfully explaining the "why" and "how" behind the quantitative patterns and providing depth to the numerical findings.

Theoretical Framework

To comprehensively analyze the complex interplay of technology, pedagogy, and human factors in this study, the research was guided by a tripartite theoretical framework. The first lens is the Technological Pedagogical Content Knowledge (TPACK) framework, which posits that effective technology integration requires an interdependent understanding of three primary forms of knowledge: Content Knowledge (CK), Pedagogical Knowledge (PK), and Technological Knowledge (TK) (Mishra & Koehler, 2006). Crucially, the framework emphasizes the intersections, particularly Technological Pedagogical Knowledge (TPK) knowing how teaching methods change when particular technologies are used (Koehler & Mishra, 2009). This study employed TPACK to critically analyze whether the introduction of AI tools represents a meaningful pedagogical shift or a mere digital replication of traditional methods. It helped diagnose if the core challenge is a deficit in technological knowledge alone, or a more profound lack of the integrated TPACK necessary to harness AI for constructivist, student-centered language learning, as highlighted by recent research on AI integration in Pakistani ESL classrooms (Saleem et al., 2025). This framework moves the analysis beyond mere tool availability to the essential question of teacher capacity and pedagogical redesign.

The second guiding principle is Constructivism, which provides the pedagogical philosophy against which the use of AI will be evaluated. Constructivist theory asserts that learners actively construct their own knowledge and understanding through experiences and interactions with the world, rather than passively receiving information (Vygotsky, 1978). From this perspective, AI is not an instructor, but a tool a cognitive scaffold that can facilitate active, experiential learning. AI-powered platforms can create environments for problem-solving, social collaboration, and hypothesis testing. This framework allows the research to assess whether AI applications in the Pakistani undergraduate context are fostering a transmission-based model of education or enabling a more dynamic, student-centered one where learners actively construct linguistic competence. The effectiveness of AI will thus be measured by its ability to create what Vygotsky termed a "Zone of Proximal Development," a concept increasingly applied to AI-driven learning environments (Luckin, 2018), where the technology provides the necessary support for students to achieve learning outcomes they could not reach independently.

Finally, to understand the likelihood of AI integration being adopted and sustained, this study drew upon the Unified Theory of Acceptance and Use of Technology (UTAUT). This model is grounded in theories of user acceptance, which posit that an individual's behavioral intention to use a technology is influenced by its perceived usefulness and ease of use (Dillon, 2001). The UTAUT model specifically identifies four core constructs: Performance Expectancy, Effort

Expectancy, Social Influence, and Facilitating Conditions (Venkatesh et al., 2003). UTAUT provides a robust, predictive lens to interpret the survey and interview data from both students and instructors. It helped move beyond simplistic explanations of "resistance to change" by systematically analyzing whether low adoption is due to a perceived lack of utility (performance expectancy), complexity (effort expectancy), peer pressure (social influence), or, as is likely in Pakistan, a critical absence of reliable internet, devices, and training (facilitating conditions) (Rehman et al., 2025). Recent systematic reviews of educational technology adoption confirm the utility of these constructs in identifying the most significant barriers in higher education (Feng et al., 2025). Together, these three frameworks TPACK, Constructivism, and UTAUT provide a comprehensive lens to interpret not just *if* AI is being used, but *how* effectively it is being integrated pedagogically, and *why* it is being accepted or rejected by the key stakeholders in the Pakistani ELT ecosystem.

Findings

This section presents the empirical results derived from the sequential analysis of quantitative and qualitative data, structured according to the research questions. The findings are presented objectively, with interpretation reserved for the subsequent Discussion section.

Perceptions and Attitudes of Students and Teachers

Survey data (N=350 students, N=45 instructors) revealed a significant divergence in perceptions between students and instructors. A strong majority of students (82%) agreed or strongly agreed that AI tools could help them learn English more effectively, with 78% expressing a desire for more AI-integrated activities. In contrast, instructor attitudes were markedly more cautious; while 65% acknowledged the potential benefits of AI, only 34% felt confident in their ability to use these tools pedagogically. Qualitative data enriched these statistics. A student from a private university noted, "ChatGPT is like a 24/7 tutor. I can ask it to explain a grammar rule in ten different ways without feeling embarrassed," highlighting the value of personalized, low-anxiety support. Conversely, an instructor from a public sector university expressed a common concern: *"These tools are a crutch. If the software corrects all their mistakes, how will they truly learn? I worry it promotes intellectual laziness."* This tension between student enthusiasm for accessible support and instructor apprehension regarding academic dependence was a persistent theme.

State of Technological Infrastructure and Access

The findings indicate a profound digital divide that severely constrains the integration of AI. As shown in Table 1, while 95% of students in private universities reported reliable daily access to high-speed internet and a personal laptop, this figure dropped to 28% in public universities, where 71% relied solely on a mobile data connection for internet access.

Table 1: Student Access to Technology by Institution Type

Resource	Public Universities (N=200)	Private Universities (N=150)
Reliable Wi-Fi & Laptop	28%	95%
Mobile Data as Primary Source	71%	5%
Used an AI tool for academic work	45%	91%

Classroom observations confirmed this disparity; none of the observed public university classrooms had projectors or computers in working order for instructor use, whereas all private university classrooms were equipped with functional multimedia systems. A department head from a public university stated, *"Our reality is load-shedding [power outages] and a IT department with no budget. Discussing AI feels like a fantasy when we cannot even guarantee a fan in the classroom."*

Impact of AI Tools on Student Performance

The quasi-experimental study conducted over a 14-week semester provided clear quantitative and qualitative evidence on the impact of an AWE tool. The independent samples t-test revealed a statistically significant difference in the post-test writing scores between the control group ($M=65.2$, $SD=5.8$) and the experimental group that used an AWE tool ($M=72.1$, $SD=6.4$), $t(58) = 4.37$, $p < .001$. Analysis of writing portfolios showed that the experimental group demonstrated a marked reduction in surface-level errors (grammar, punctuation, and spelling) and produced more drafts per assignment on average. A student from the experimental group explained, "Before, I would submit my first draft. Now, the tool gives me instant feedback, and I can revise 3 or 4 times before showing it to my teacher. I feel more confident in my writing." Instructors corroborated this, with one noting, "The quality of drafts I receive from the AI group is substantially higher. I can focus on higher-order concerns like argument and structure, rather than circling every comma splice."

Summary of Identified Barriers and Facilitators

The data synthesis identified a clear set of barriers and facilitators, summarized in Table 2 below. The most frequently cited barriers were infrastructural deficits and a lack of formal training, while the strongest facilitators were institutional support and evidence of the tool's efficacy.

Table 2: Key Barriers and Facilitators to AI Integration

Barriers	% of Instructors Citing	Facilitators	% of Instructors Citing
<i>Unreliable Internet/Power</i>	89%	Provision of Teacher Training	91%
<i>Lack of Teacher Training</i>	84%	Evidence of Improved Outcomes	82%
<i>Cost of AI Tools/Subscriptions</i>	76%	Institutional Tech Support	79%
<i>Fear of Academic Misconduct</i>	67%	Curriculum Alignment	73%
<i>Resistance to Pedagogic Change</i>	58%	Student Demand & Motivation	68%

Discussion

The findings reveal a landscape of profound contradiction, where the demonstrable potential of AI is held in check by a complex web of contextual constraints. The significant improvement in the writing performance of the experimental group (RQ3) empirically validates global literature on the efficacy of AWE tools, demonstrating that AI can directly address a core pedagogical challenge in Pakistani ELT: the provision of timely, iterative feedback in overburdened classrooms. However, this potential is immediately problematized by the stark infrastructural and access disparities (RQ2), which create a two-tiered system that mirrors and potentially exacerbates existing educational inequalities. The enthusiastic reception of AI by students (RQ1) aligns with the constructivist ideal of active, self-directed learning, yet the instructors' caution and lack of preparedness reflect a critical deficit in the integrated Technological Pedagogical Content Knowledge (TPACK) necessary to harness this tool effectively. This is not merely a skills gap but a pedagogical chasm; many instructors, lacking training, view AI through the lens of their existing, traditional methods, seeing it as a threat to their authority or a shortcut for students, rather than as a scaffold for knowledge construction. Furthermore, the low scores on UTAUT's 'Facilitating Conditions' construct directly explain the

low adoption rates, moving the analysis beyond individual resistance to a systemic failure to provide the foundational support required for any technological innovation to take root.

Several critical themes emerge from this interplay of data. First is the fundamental tension between technological potential and infrastructural reality. The study confirms that the digital divide is not a peripheral issue but the central bottleneck; the most sophisticated AI tool is pedagogically irrelevant in a classroom without power or connectivity. Second, the findings force a re-evaluation of the teacher's role. The data suggests that successful AI integration does not diminish the instructor but rather transforms them from a primary source of information into a crucial facilitator, curator, and mentor who guides students in critically engaging with AI-generated feedback and focusing on higher-order thinking skills. This shift, however, provokes a third theme: deep-seated ethical and pedagogical concerns. Instructors' fears of plagiarism and over-reliance are not unfounded and point to an urgent need for academic integrity frameworks and digital literacy curricula that teach students to use AI as a collaborative partner rather than a substitute for learning. Ultimately, a fourth, overarching theme concerns equity. AI possesses a dual nature; it holds the power to bridge equity gaps by personalizing learning for students in under-resourced classrooms, yet it simultaneously risks widening them by privileging those with consistent access to technology and the digital literacy to navigate it effectively.

Collectively, these findings provide a definitive answer to the research questions and directly address the problem statement. The investigation reveals that the integration of AI in Pakistani undergraduate ELT is currently fragmented, hampered less by a rejection of the technology itself and more by a crippling absence of the enabling ecosystem required for its success. The problem is not a lack of potential, but a discord fueled by inadequate infrastructure, insufficient teacher professional development, and a policy gap that has failed to anticipate the demands of this new pedagogical paradigm. Therefore, the core problem the gap between global AI potential and local Pakistani realities is confirmed and its dimensions are precisely mapped. The findings demonstrate that the pathway to effective integration is not through the mere provision of software, but through a holistic, system-wide strategy that concurrently builds physical infrastructure, invests in transformative teacher training grounded in TPACK, develops context-sensitive ethical guidelines, and fosters a pedagogical shift towards a facilitator model. Without this multi-pronged approach, AI in this context risks becoming another well-intentioned but failed technological intervention, rather than the transformative force it has the potential to be.

Conclusion

This study set out to investigate the complex realities of integrating Artificial Intelligence into the teaching of English at the undergraduate level in Pakistan. The findings paint a picture of a system at a critical crossroads, characterized by a palpable tension between demonstrable potential and formidable constraints. On one hand, the research provides empirical evidence that AI tools, particularly Automated Writing Evaluation systems, can significantly enhance student performance and engagement, offering a viable solution to the chronic challenge of providing personalized feedback in large, heterogeneous classrooms. The strong student receptivity further underscores AI's capacity to foster a more active, student-centered learning environment aligned with constructivist principles. On the other hand, the investigation lays bare the profound systemic barriers that threaten to stifle this potential. The crippling digital divide, marked by unreliable infrastructure and inequitable access, forms the most immediate obstacle. Compounding this is a significant gap in teacher readiness, where a lack of integrated Technological Pedagogical Content Knowledge (TPACK) and training leads to apprehension and

a perception of AI as a threat rather than a pedagogical asset. Ultimately, the study concludes that the successful integration of AI is not a mere technological challenge but a complex socio-technical one, contingent upon addressing deep-rooted infrastructural, pedagogical, and socio-cultural factors.

Therefore, the journey toward a mature and effective AI-enhanced ELT paradigm in Pakistan demands a deliberate, multi-stakeholder, and holistic strategy. Simply promoting AI tools without building the necessary foundational ecosystem is a recipe for failure and further inequity. The imperative lies in concurrent and synergistic actions: policymakers and university administrations must prioritize investments in digital infrastructure, ensuring reliable internet and power, especially in public-sector institutions. Simultaneously, comprehensive and ongoing faculty development programs are essential to move beyond basic digital literacy towards cultivating a sophisticated TPACK that empowers teachers to redesign their pedagogy around AI as a facilitative tool, transforming their role from knowledge dispensers to learning facilitators. Furthermore, the development of clear, context-aware ethical guidelines and digital citizenship curricula is crucial to address valid concerns regarding plagiarism, data privacy, and over-reliance. By embracing this integrated approach one that marries technological investment with pedagogical upskilling and ethical foresight Pakistan can navigate a path where AI does not become another source of division but a powerful catalyst for democratizing quality English education, fostering critical thinking, and preparing its graduates for the demands of a globalized world.

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