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Reimagining EFL Classrooms: The Transformative Potential of AI Tools in Language Learning

Sehrish Aslam[1], Mahwish Abid[2], Afshan Abbas[3]

[1]National University of Sciences and Technology (NUST), Pakistan
[2]Lecturer, International Islamic University, Islamabad (IIUI), Pakistan
[3]Assistant Professor, International Islamic University, Islamabad (IIUI), Pakistan

Abstract

The integration of Artificial Intelligence (AI) in education, particularly within English as a Foreign Language (EFL) classrooms, is transforming teaching and learning by enabling personalized instruction, automating routine tasks, and supporting data-driven pedagogical decision-making. Growing demands for efficient classroom practices and increased student engagement have accelerated the adoption of AI-assisted tools, including chatbots and language support systems, in EFL contexts. This study utilizes a literature review and a descriptive mixed-methods design to investigate effective strategies for implementing AI in authentic classroom environments and to assess its measurable educational impact. Data were collected from multiple sources, including platform analyses of ChatGPT, QuillBot, and Diffit; semi-structured interviews with seven English as a Foreign Language (EFL) teachers selected from a sample of twelve; and six weeks of structured classroom observations conducted across three secondary schools in Pakistan. The classroom implementation included specific AI-supported pedagogical practices such as using AI to provide feedback on writing, guiding revision exercises, adapting reading content with AI, vocabulary enhancement exercises, and evaluating AI-generated content with the teacher. These practices were observed using structured classroom observation protocols and compared to teacher feedback and interaction with AI platform to develop the reported indicators. This study investigates the potential of AI-enabled systems to support continuous monitoring of student performance and to provide real-time, adaptive feedback to enhance learning outcomes. The results demonstrate a 27% reduction in teacher grading workload and show that 83% of participating teachers reported improved student writing performance following AI integration. However, 58% of teachers expressed concerns regarding over-reliance on AI tools and the potential for inaccuracies in AI-generated grammar feedback. Although AI offers significant pedagogical potential to enhance engagement, efficiency, and instructional effectiveness, its effective implementation depends on targeted teacher training, pedagogical adaptation, and rigorous oversight of AI-generated outputs. This study provides empirical classroom-based evidence from a resource-constrained context, underscoring both the opportunities and challenges of AI-integrated learning environments. The findings advance understanding of AI's role in supporting language education and underscore the importance of responsible, context-sensitive adoption in English as a Foreign Language (EFL) instruction.

Keywords: *Learning Analytics, Adaptive Instruction, English as a Foreign Language (EFL) Classrooms, Artificial Intelligence in Education, Teacher Workload Reduction, Student Engagement.*

1 Introduction

1.1 Background

Artificial Intelligence (AI) has brought a paradigm shift in language teaching by taking language education from ideology to reality, and a powerful support in the modern classroom, especially in the era of the prevalence of generative AI tools such as ChatGPT in today's classrooms. Since 2023, AI tools in the context of EFL classroom application have been a promising area of study; however, they have centred on how beneficial they are for the EFL classroom in terms of building a sense of engagement among learners and offering them content-supported feedback and pedagogical support. The research conducted in the last few years clearly demonstrates the growing integration of AI tools in EFL writing and feedback, which assists in delivering personalized scaffolding and writer feedback, along with writer control and autonomy. Studies have used various methods, such as systematic reviews, to illustrate the benefits of integrating tools like ChatGPT into this writing process, which could

include increased students' writing fluency, aid in idea generation, and reduced teachers' workload in marking, particularly in large-scale school settings or disadvantaged classrooms. Much focus has been placed on such benefits, but there is also concern for creating incorrect content, becoming overly reliant on the tools and potential issues around integrity and transparency of assessments [2], [4].

To comprehend the integration of AI into language education, one must have a thorough understanding of existing theories and models in SLA and pedagogy. Understanding the integration of Artificial Intelligence in language learning requires familiarity with the theories and models of both second-language acquisition (SLA) and pedagogy. The tradition of Computer-Assisted Language Learning (CALL) can be considered as one of the basic frameworks of investigating the role that technology plays in language learning processes [3]. The Input Hypothesis explains why comprehensible input is important, coherent with AI tools providing adaptive explanations and simplified input [14]. Correspondingly, scaffolding is highlighted by Vygotsky's Sociocultural theory, and this is also reflected in AI tools that offer support and feedback within students' zone of proximal development [15].

The interactionist strand, namely the Interaction Hypothesis from Long, explains that the success of language learning occurs when there is an interactionist dialogue process and feedback cycles that occur. This is now applied in the development of language in the AI conversation that is currently used in tools like Chat GPT [16]. The Output Hypothesis of Swain fosters writing development by focusing on the role that writing plays in helping the learner develop accuracy and fluency, particularly in writing revision tasks made easier by AI assistance [17]. In addition, the theory of formative evaluation by Black and Wiliam emphasizes the importance of the feedback loops, which can be directly applied to the feedback system created by AI technology in EFL writing instruction [18].

The adoption and integration of AI tools with students can be examined through the lens of the Technology Acceptance Model (TAM), which explores how the perceived use and usefulness influence student acceptance [19] and the TPACK framework [20] that focuses on the intersection of technological, pedagogical and content-related knowledge. In sum, the aforementioned work suggests that AI is being used as a pedagogical mediator, which can be seen as changing teaching and learning as well as assessment in EFL classrooms.

As the educational context continues to evolve, AI in English Language Learning, as a new tool, has become a groundbreaking method for teaching English, creating a transformative change in education. This change mandates an ‘after-thought' from educators regarding the role of the teacher, instructional planning and feedback to learners. As obtained in modern classroom-based studies, AI-enhanced learning shows a vast potential in increasing student engagement, effectiveness, and efficiency in connection to formative assessment writing tasks, thereby easing teachers' workload [10],[12]. The findings are consistent with the emerging trajectory in the learning analytics discipline, which underscores the importance of AI in real-time decision making and adaptation in learning.

Moreover, AI is just in the nascent stage in the education space in Pakistan. Additionally, the national plan on digital transformation, Digital Pakistan Vision and increased internet connectivity in schools are being facilitated, but significant differences are seen in the access to digital efforts in schools, attributed to a lack of support and awareness of teachers regarding the installation, upgrading and use of technology and a lack of infrastructure [1]. In sum, using AI in EFL classrooms is context-specific, and empirical studies of its use in real classroom contexts are required based on real classroom practices, rather than theory. The current study focuses on the employment of artificial intelligence (AI) tools, particularly ChatGPT, QuillBot, and Diffit, in secondary English as a foreign language (EFL) classrooms in Pakistan. It is one of several empirical studies on the efficacy of language learning and AI that emerged after 2023 and examines them through the lenses of teachers' workload, involvement with students, feedback and input to students, and effectiveness in teaching.

1.2 Objectives of the Study

The objectives of this research paper are to:

- Evaluate and reflect on how AI technologies, such as language chatbots (ChatGPT, QuillBot and Diffit), are being integrated into language education and evaluation for use in the classroom
- Discuss how AI could help to enhance teachers' tasks, such as efficiency in assessing and school preparation.
- Examine how well students engage with and comprehend AI-enabled learning tasks, paying particular attention to writing assignments and feedback systems.



- Recognize the challenges educators encounter in the context of applying AI tools in education on a pedagogical, technical, and ethical level.
- Provide concrete recommendations and solutions based on evidence that will benefit the effective use of AI in EFL classrooms in resource-constrained contexts.
- Share evidence-informed insights to facilitate informed use of AI in EFL classroom integration in low-resource contexts.

1.3 Scope and Significance of the Study

The English as a Foreign Language (EFL) context is the target of the current study for understanding the use of Artificial Intelligence (AI) technology in three secondary schools of Pakistan. It picks up learning action items in the classroom where the teacher and students are engaged in an activity, adopting techniques of pedagogical AI. The research also takes place in the classroom with semi-structured interviews and student and lesson observations, whilst data analysis is also carried out from AI platforms to examine the involvement of AI tools in classroom practices and students' participation in authentic classroom settings. In the context of language learning in developing countries, this study is a contribution to an increasing body of research involving the use of AI. The recognition of AI's role in education is increasing, especially its use of LA (learning analytics) and adaptive teaching; however, the empirical evidence on this is limited and is weaker, especially in Pakistani contexts, and even more so in classroom and EFL contexts [8], [11]. This study offers relevant recommendations to teachers, curriculum developers and even to the policy makers, keeping in mind the digital education revolution being probed in Pakistan and the Vision of Digital Pakistan. This enables more contextually-appropriate use of classroom technology by understanding opportunities and challenges of integrating AI technologies in the low-resource classroom.

2 Methodology and Data Collection

2.1 Research Design

The interview-type technique is used on a qualitative case study approach in this research to explore how Artificial Intelligence (AI) tools are being integrated and what effect they are having upon teaching and learning of English as a Foreign Language (EFL) in the EFL classrooms of Pakistan. Another research design involves a mixed methods approach, with both qualitative data and quantitative data (from classroom records and logs on the AI platform). This enables a whole-school and quantitative evaluation of school activities and users' capabilities for the use of AI-supported material and processes in terms of real school settings. This research follows the interpretivist perspective that concentrates on the ideas, views, and experiences of the teachers themselves, their pedagogical changes, and their interactions with released learners in the use of AI-supported environments. This approach allows for a broad picture of the impact of AI without relying on statistical generalisations. Thus, this methodological approach is aligned with the research conducted so far, called qualitative research, and it was emphasized that it was necessary to do more in-depth research study of the digital transformation of education in this way [8], [11]. The study explored AI integration as a pedagogical intervention, not just a technological adoption, to ensure methodological transparency in relation to the implementation of AI. The intervention comprised of four classroom practices: AI-supported writing development (brainstorming, drafting, and revising with ChatGPT); AI-assisted language feedback (paraphrasing, and vocabulary enhancement with QuillBot, under teacher supervision); AI-generated instructional adaptation (using Diffit to simplify the reading material according to the learner-level); and reflective AI engagement (discussing, evaluating, and modifying AI-generated suggestions instead of taking them at face value).

The practices were guided by teachers with AI serving as a pedagogical tool and not as a substitute for teaching. This is in line with Technology Pedagogical Content Knowledge (TPACK) that emphasizes blending technology tools with appropriate teaching strategies and subject knowledge **[20]**.

2.2 Sampling Technique

Purposive sampling was used for selecting the institutions as well as the participants, and as a result ensured enough relevant and rich data. On the other hand, Pakistan has chosen four secondary schools for a longer observation of the classrooms to see how much AI-based tools are being used in classrooms, access to such tools, and to see the infrastructure of the classrooms. The schools in Pakistan were then deliberately chosen based on digital infrastructure (the amount of AI Tools used in their classroom), and the accessibility of schools to have more time to observe them during the class. This method allows for a variety of learning opportunities in which to investigate the uses of AI in EFL class settings. Additionally, all the participants were English for Foreign Language (EFL) teachers selected based on their meeting the purposeful sampling and had prior and practical experience applying AI tools (e.g., ChatGPT, QuillBot, Diffit) in English teaching.

2.3 Data Sources

This study has adopted several sources of qualitative data, where the methodological triangulation was carried out:

- To obtain the answers to this, seven teachers from the twelve EFL teachers were selected from three Pakistani secondary schools (School A, School B and School C) through a semi-structured interview technique.
- In addition to this, observations of the classrooms were performed over six weeks by relying on an observation checklist with the specifics of engagement, participation frequency, AI's usage, and task completion behaviour. The observation checklist assessed five dimensions of pedagogy:

i. AI integration strategy – how teachers integrated AI-based activities.
ii. AI tool interaction by student – how often students use AI tools and for what reasons during learning tasks.
iii. Teacher mediation practices – explanation, correction, and evaluation of AI-generated outputs.
iv. Learning activity results – completion of writing, revision, comprehension activities.
v. Student reflective engagement – students' ability to evaluate and modify AI suggestions.

This observation framework enabled the study to shift from simply quantifying the availability of AI and to attending to the effect that AI-supported pedagogy had on classroom practices.

- AI platforms (ChatGPT, QuillBot, and Diffit) usage logs and analytics were gathered, including the frequency of task completion, usage patterns of responses and interaction with AI, and the teacher-reported summary of GPT3 output.
- The researcher made field notes and reflected observation journals during classroom visits.
- Several instruments were used in this study:
  Content was generated, and feedback was provided with ChatGPT, paraphrased using QuillBot and adapted and simplified using Diffit.

2.4 Data Collection Procedure

First, semi-structured interviews with EFL teachers were conducted to gain insight into their thoughts, teaching methods, and challenges related to the adoption of certain AI tools in their classrooms. Qualitative interviews with EFL teachers were subsequently performed on a semi-structured design to gather information about their opinions, instructional practices, and problems in using specific AI tools in the EFL class. After it, six weeks of classroom observations were conducted to capture interactions between teachers and the AI, how students interacted with technology, and how technological tools were used as language skills progressed. The activities that took place for six weeks of observation were based on a pedagogical sequence facilitated by AI. At first the teachers set the learning objective and then gave traditional teaching. Students then participated in AI-assisted tasks such as writing preliminary responses, asking for feedback from AI, revising their responses, and discussing what they did with their teacher and classmates. In addition, students started by making their own drafts and then refined the language and compared feedback using AI tools. Teachers assessed the extent to which AI suggestions enhanced clarity, accuracy, and organization. Diffit generated material was used to facilitate reading activities, adapting the material according to students' ability levels, comprehension discussions were then held. In all activities, teachers maintained responsibility for validating AI-generated suggestions. This process guaranteed that the results measured were for the effectiveness of AI-

supported pedagogical practices and not merely for exposure to AI technology. The last step was to generate statistics regarding the usage patterns, feedback loops and job productivity with the help of AI algorithms and tools like ChatGPT, QuillBot and Diffit on these platforms. Moreover, this study applied purposive sampling techniques for the selection of schools, which ensured that the learning context of secondary education in Pakistan is different in different schools. In addition, purposive sampling techniques were used to select schools considering diversity in the learning context in the secondary education system in Pakistan.

2.5 Data Analysis

To find recurrent patterns pertinent to the goals of the study, thematic analysis was used. Data familiarization, preliminary coding, topic creation, and category refinement were all steps in the structured coding process. The following categories were used to arrange important themes:

- AI-assisted teaching methods
- The efficiency and workload of the teachers.
- Induction, transition to Year 6, transition to Year 7, participation in lessons to be addressed as a whole school issue.
- Challenges in applying AI, such as technological, ethical and educational concerns

A quantitative indicator was computed by well-defined measurement procedures. The estimated 27% reduction in grading workload was based on the average teaching workload before and after teachers set up AI-assisted feedback in the 6-week intervention period. The grading time for similar assignments was documented by teachers and the percentage difference was determined as:

Workload Reduction (%) = (Pre-AI grading time – Post-AI grading time) / Pre AI grading time × 100

Likewise, the indicator of student engagement (83%) was determined by a composite engagement index, which was derived from three observable aspects of student engagement: frequency of participation in class, completion of AI-supported learning activities, and frequency of interaction with AI platforms. All indicators were coded based on classroom observation and platform interaction and then aggregated to calculate the overall engagement percentage. A cross-case comparison of the selected schools was also performed to identify the similarities and differences in AI use cases. In the qualitative approach, quantitative indicators on the platform could be used to give supporting descriptive evidence, such as engagement percentages and a reduction in grading time.

2.6 Ethical Considerations

The study kept to acceptable guidelines in conducting research. Teachers consented to be interviewed and observed as part of this study. Teachers agreed to participate in observing and interviewing before any data was gathered. Besides, to preserve participant and institutional confidentiality, all data were anonymized. AI platform analytics and documentation were only viewed in a summative manner, which did not involve accessing or disclosing private or sensitive student information. Also, to uphold academic integrity and avoid intellectual property breaches, all sources cited in the work were properly cited.

3 Results

The conclusions are based on a thematic analysis of classroom observations, interviews and Analytics results generated by ChatGPT, QuillBot and Diffit conducted in three secondary schools in Pakistan in English as a Foreign Language (EFL) classrooms.

3.1 Impact of AI on Instructional Efficiency and Classroom Outcomes

In EFL contexts, AI tools significantly impacted aspects of classroom processes and teacher effectiveness was measurable. Triangulation of quantitative findings was achieved using records from the AI platform, teacher workload logs, structured classroom observation scores and semi-structured interview coding. The indicators reported are therefore evidence of several sources and not individual perceptions. Three measurable outcomes were chosen for the analysis—instructional efficiency, student engagement, and teacher perceptions of AI-supported learning.

Given the importance of transparency around the measurement process, Table 1 includes operational definitions, sources of data, and methods of calculating each indicator reported. This clarifies how the effectiveness of the AI was measured in a genuine classroom environment.

Table 1. Triangulated Summary of Key Quantitative and Coded Findings

Indicator	Result	Operational Definition	Data Source	Measurement Approach	Interpretation
Teacher workload: grading time reduction	27% decrease	Reduction in average time spent on grading per assignment after AI integration	Teacher logs, semi-structured interviews, and observation records	Pre–post comparison of self-reported grading duration (baseline vs. 6-week AI-assisted period), cross-validated through weekly logs	Indicates improved instructional efficiency and reduced grading burden
Student engagement in EFL tasks	83% engagement rate (composite index)	Level of active participation in the classroom and AI-supported learning tasks	Classroom observation checklist, AI platform interaction logs	Composite index combining: (i) participation frequency, (ii) task completion rate, (iii) AI interaction frequency across observed sessions	Reflects increased learner involvement in AI-supported classroom activities
AI dependency concerns among teachers	58% (n=7 teachers sample)	Proportion of teachers expressing concern about over-reliance on AI tools by students	Semi-structured teacher interviews	Thematic coding of interview transcripts; binary coding (concern/no concern) followed by frequency calculation	Indicates perceived risk of reduced learner autonomy
Feedback inconsistency (qualitative indicator)	Thematic recurrence across cases	Variability in accuracy, alignment, and pedagogical appropriateness of AI-generated feedback	Teacher interviews, classroom observation notes	Thematic analysis (coded recurrence across three schools); no numerical scaling applied	

Implementing the Artificial Intelligence (AI) tools in EFL classrooms showed positive, measurable results in terms of instructional efficiency, student engagement, and teachers' perceptions in the three EFL schools involved. Three types of data were used to draw the findings outlined in this section: data from the AI platforms (ChatGPT, QuillBot, Diffit), structured classroom observations, and semi-structured teacher interviews, as summarized in Table 1.

The teacher's instructional efficiency was improved notably in grading workload. Teacher logs pre- and post-integration, along with data from the teacher interviews, show an average of a 27% decrease in grading time per assignment. This decrease is attributed to the incorporation of writing support and AI automation in providing feedback, which made evaluation processes more efficient and less repetitive. This trend was confirmed through cross-validation with teachers' weekly logs and observation records across the three schools.

Behavioural and interactional aspects of participation were measured via a composite engagement index of students' engagement level. It combined classroom observation elements (such as participation frequency, how the task was completed, responsiveness in AI-supported activities) with elements of interactions on the AI platforms (frequency of using the AI platform for query, revision, or feedback). The observed instructional moments had a score of 83%, indicating that students participated consistently throughout instruction in AI-supported classrooms. This type of engagement was prominently seen in the writing tasks, where students actively edited the outputs with the help of suggestions generated by AI.

The results, however, also illustrate significant pedagogical issues. Thematic analysis of semi-structured interview responses revealed that teachers (n=7) reported concerns about dependency on AI. AI-generated outputs' use by students, as well as their impact on students' tendency to simply use pre-formulated phrases rather than writing on their own, and their potential to develop weaker critical thinking skills, were all cited as concerns by teachers. This means that AI can also offer benefits for efficiency, engagement, and preserve risks of learner autonomy if managed properly.

The third, repeated qualitative finding throughout the three schools was feedback inconsistency. AI feedback was not accurate, aligned with the curricula, and/or contextually appropriate for all teachers and classrooms. Thematic analysis also identified repeated examples where the AI feedback needed to be corrected by the teacher or adapted to the context by the teacher, as there was no quantification in numbers, but it was confirmed that there was a need for teacher mediation in the AI-supported learning system.

Conclusively, the findings reveal the positive side of integrating AI into instruction and the issues of dependency and feedback reliability. The results are dependent on the classroom infrastructure as well as the extent of teacher mediation, further highlighting the need for proper and contextually appropriate application of AI tools in EFL classrooms.

3.2 The Participation Level and Interactions among the Students in the Classroom

There were differences in student engagement across the three schools, but there is overall evidence that the use of AI learning support activities increased student engagement, especially in text-based activities. The findings are generated in a triangulated design that involves the structured observation of the classrooms as well as the interaction logs of the AI platform.

Students were fully engaged in writing tasks that used AI tools throughout, in School A, where writing integration into the digital infrastructure was relatively developed. The students' engagement was consistently high in School A, where writing integration with a digital infrastructure was relatively developed, and AI-supported writing activities were implemented. The observation data gathered showed that there was a high frequency of task drafting and revision, especially when relying on writing support from ChatGPT. Pupils used the AI suggestions to make active changes to their writing and swapped off making judgments and comparisons with each other's pieces. Through AI interaction logs, too, rigorous prompts for revision and feedback questions frequently surfaced, suggesting ongoing engagement with the tool during class use.

School B had moderate but structured student engagement, indicative of access to a selection of digital tools. The observation in the classroom demonstrated that using QuillBot to paraphrase the tasks prompted students to compare the written text and the newly written sentences, thereby helping to enhance their vocabulary and grammar knowledge. In this context, engagement had a more directive and teacher-led aspect, with students mainly interacting with AI tools in specific instances during class. The amount of time spent using AI showed some regular intervals but not continuous use, and appeared to be effective.

For School C, where digital infrastructure was scarce, and with a focus on engagement, AI support was more reliant on teacher facilitation. During observations, less baseline participation was observed, but there was an increase when the AI tools were used with the support of the teachers for activities. For example, the AI-generated reading passages were simplified, then presented together for students to

discuss comprehension concepts. In this context, AI was used as a supporting tool in the teaching process, not as a tool for the student.
In all three schools, there was a clear consensus. Classroom observation and interaction logs indicated:

- increased willingness of students to participate in writing-related tasks
- higher levels of peer discussion during revision activities
- improved responsiveness when AI-generated feedback was mediated by teachers

Overall, engagement was strongest when AI tools were integrated into structured pedagogical activities and actively guided by instructors, highlighting the importance of instructional design in maximizing AI effectiveness.

3.3 Concerns about Adopting AI

Although the implementation of AI tools was found to have certain positive effects on engagement and efficiency, the study raised a few common issues related to their use in EFL. These concerns were identified through systematic coding of the semi-structured interviews and supported by classroom observation notes.
Students potentially relying too heavily on AI outputs was a big worry for teachers at all three schools. Data from interviews provided evidence that some students felt an increased need to use tools like ChatGPT to compose and recreate tasks, and sometimes produced written output that required little use of them as tools of retelling and summarizing. Teachers noted that the use of AI to scaffold writing enhanced the students' writing fluency but limited opportunities for critical thinking and independent writing in some instances.
This was especially visible in School B when revising activities with the help of paraphrasing through QuillBot. Teachers noted that some learners produced grammatically improved products without being well aware of the grammar changes. This suggested that the opinion is leaning more towards the surface learning and less towards conceptual understanding, particularly when the AI outputs are without reflection.
In school C, there were more issues about the misunderstanding of the feedback produced by AI. In group learning scenarios, students were sometimes taking decisions without adequate critical thinking, due to poor digital readiness and the teachers' mediation. In group learning scenarios, digital readiness was low and students sometimes accepted suggestions from AI without moving past the initial idea. Inadequate digital literacy was emphasized by teachers as a major issue, causing challenges with accepting corrections created by AI without critical thinking, leading to potential teaching and learning discrepancies.
In all schools, teachers highlighted the problem of the misalignment of AI feedback with the school and pedagogical contexts. There was evidence that:

- The grammar marks provided by an AI system were not always in alignment with curriculum expectations.
- Suggested revisions occasionally lowered the standards of academic rigor.
- Sometimes, there were conflicts between curriculum suggestions and teacher guidance. There were sometimes conflicts between AI-generated suggestions and teachers' instructions.

The issues raised indicate the need for teacher validation when adopting AI tools for classroom use. Although AI systems offer immediate feedback and scaffolding, they can generate results that may not be clearly understood and need to be interpreted within the context of learning goals and curricular expectations.
The overall results indicate that AI presents a double-edged sword in EFL classrooms: it boosts engagement and efficiency, yet it also presents thought-provoking challenges for pedagogical approaches, specifically in areas of learner autonomy, the development of critical thinking skills, and reliability of feedback.

3.4 Thematic Synthesis

A summary of the four emerging patterns is what follows: The following is a summary of the four patterns that emerged from the data: Instructional efficiency, Student engagement, Pedagogical flexibility, and Concerns related to dependence on AI. The quality of digital infrastructure in schools had an impact on the differences between schools.

Table 2. Summary of Thematic Findings

Theme	*Description*	*Implication*
Instructional efficiency	Reduced workload	More teaching time
Learner engagement	Higher participation	Improved motivation
Pedagogical adaptation	Strategy changes	Blended learning
AI dependency	Overuse by students	Need for guidance
Feedback reliability	Inconsistent output	Teacher validation needed

The findings are summarized thematically in Table 2, which shows a recurrent idea in the implications of AI technologies for EFL teaching. The greatest benefits occur on the part of the students as it enhances their work efficiency, and on the part of the teachers as it cuts down on their workload because it involves automated systems in assessing and providing feedback on students' work. This kind of efficiency provides the teacher with a much greater pedagogical advantage; more time available for spending with students and more time available for planning interactive lessons.

The second main theme from the Learner engagement is that the use of AI in the classroom encourages students to be more engaged. At this present moment, the use of AI in L2 appears to have promoted the degree of interaction and responsiveness in language learning, particularly in writing and skills-based learning, as indicated by the level of students' motivation and involvement in learning.

Additionally, the pedagogical adaptation theme underscores the activity of pedagogical adaptation and not just the introduction of Artificial Intelligence tools. The trend here is an increase in the blending of learning methodologies with the help of artificial intelligence (AI) supported learning platforms to make the class more efficient.

But the results indicate serious difficulties. Some pupils are over-reliant on AI outputs, particularly in the context of reliance on AI as a main source of inspiration in their writing, which may have an impact on pupils' thinking and language development. The reliability of the feedback given by AI has also been questioned due to the possible inaccuracies and irrelevancies in the feedback. Post-secondary services may also be needed to ensure accuracy in the feedback given by AI.

Lastly, the results revealed that over the broader spectrum of the use of AI, the impacts as listed by the teachers ranged from "efficient" to "engaging students to participate," to "various" and "in between," depending on how much control and intent there was in the pedagogical use, as well as the infrastructure and digitalisation of the educational environment.

4 Conclusion

Although the results were overall favourable to the role of AI in EFL teaching, the study highlighted several common issues regarding the integration of AI tools in EFL. These concerns were obtained from semi-structured interviews that were systematically coded and confirmed with notes that were taken in the classroom.

One of the main fears teachers shared in all three schools was the potential for students to rely on AI-created responses. Data collected by interviewing the students demonstrated that some students have been adopting the tools created by ChatGPT to draft and paraphrase tasks, at times producing outputs that required little or no independent processing. Teachers noted that AI-technology enhanced the writing fluency of instruction, but found that it sometimes limited opportunities for critical thinking and independent writing.

This concern can be seen especially in School B, where activities were rephrased through QuillBot. The observation points detected that some students' attention was on producing grammatically improved products rather than grasping the changes in the language. This hiked the chances that the problem would have been learned at a superficial level instead of some conceptual understanding, particularly if having the AI answer had been taken for granted.

For School C, the concerns were more directly related to misunderstandings of the AI-generated feedback. However, in the absence of robust digitization and increased dependence on teacher assistance, students sometimes blindly embraced the recommendations the AI system provided, especially in activities involving group tasks. Lack of digital literacy was noted as a factor that encourages teachers to follow AI feedback uncritically, which presents the risk of misalignment in teaching.

In all schools, teachers also pointed to problems of misalignment between AI feedback and context and/or pedagogy. The data collected from observations and interviews showed that:

- Grammar corrections that resulted from IMBAI failed to always correspond to the course's expectations.
- Suggested changes often lowered the rigour within the curriculum below the required level.
- Tensions sometimes arose between the recommendations from the artificial intelligence system and the teacher's guidance.

Such concerns underline the importance of ensuring teacher buy-in when implementing AI technologies in the classroom. AI systems, while able to give a swift response and make scaffolding, still involve the time needed to give 'rubrics' for the outputs to ensure they are aligned with the learning objectives and curricular standards. Moreover, the results should be regarded as a proof of AI assisted pedagogical implementation in particular classroom contexts and not of the general effectiveness of AI tools. The results were contingent on teacher proficiency, the instructional design, student digital literacy and technological infrastructure. Future studies should include larger samples and experimental or longitudinal designs to investigate causal relationships between AI-supported teaching practices and language learning outcomes. Further, this study has some limitations, such as the small sample size and the schools included being situated in a particular region. Longitudinal studies are reportedly required to analyze the long-term effects on language learning outcomes, and comparative research is suggested to be conducted across different education systems and proficiencies to better understand the impact of AI on language learning trajectories. More studies are required to determine validated metrics of AI-based engagement and learning quality in L2 learning, there is a need for more studies.

REFERENCES

[1] D. Najmudin, L. Susanti, and I. Pebrian, “Digital transformation in education: Challenges and opportunities in the age of AI,” *PEDAGOGIA: Jurnal Ilmu Pendidikan*, vol. 23, no. 1, 2025. https://doi.org/10.17509/pdgia.v23i1.78405
[2] B. Matthews, “Generative AI, ethics, and language learning,” in *The Palgrave Encyclopedia of Computer-Assisted Language Learning*, 2025, pp. 1–5. https://doi.org/10.1007/978-3-031-51447-0_94-1
[3] P. Leitner, M. Khalil, and M. Ebner, “Learning analytics in higher education: A literature review,” in R. Klamma, F. Wild, and M. J. Ebner, Eds., *Learning Analytics: Fundamentals, Applications, and Trends*, 2017, pp. 1–23. https://doi.org/10.1007/978-3-319-52977-6_1
[4] S. N. PutriErito and T. D. Wijayatiningsih, “Exploring the impact of generative AI tools on English writing skills among English education students,” *Journal of English Language Learning*, vol. 9, no. 2, pp. 203–209, 2025. https://doi.org/10.31949/jell.v9i2.16302
[5] R. Parra Núñez and M. D. Castrillo De Larreta-Azelain, “The impact of using ChatGPT for feedback in EFL writing: A systematic review,” *Revista Internacional de Lenguas Extranjeras / International Journal of Foreign Languages*, 2025. https://doi.org/10.17345/rile23.4221
[6] P. J. Torres and Y. E. Kahveci, “Effectiveness of artificial intelligence (AI) in language teaching,” *Computers and Education: Artificial Intelligence*, vol. 9, p. 100522, 2025. https://doi.org/10.1016/j.caeai.2025.100522
[7] I. K. K. Gyonyoru, “Adaptive learning systems and artificial intelligence in language learning,” *Gradus*, vol. 12, no. 1, 2025. https://doi.org/10.47833/2025.1.ART.010
[8] M. N. Athallah, “Role of artificial intelligence in educational management: Systematic literature review,” *JurnalInovasiPendidikandanManajemen (JIPM)*, vol. 1, no. 1, pp. 43–54, 2025. https://doi.org/10.62568/jipm.v1i1.359
[9] K. Hariyanto, F. X. D. Kristianingsih, R. Maharani, and I. Kudus, “Artificial intelligence in adaptive education: A systematic review of techniques for personalized learning,” *Discover Education*, vol. 4, no. 1, 2025. https://doi.org/10.1007/s44217-025-00908-6
[10] P. R. Syafrayani, R. Ayunda, M. L. Molina, M. L. Hutasuhut, and M. Siregar, “Teachers’ perspectives on AI integration in EFL teaching: Perceived benefits and challenges,” *LINGUISTIK TERAPAN*, vol. 21, no. 1, pp. 27–40, 2024. https://doi.org/10.24114/lt.v21i1.64873
[11] A. Afaq, S. Mishra, M. Chaudhary, and T. K. Mishra, “Transforming education through big data analytics: Opportunities and impact,” in *Proc. 2025 International Conference on Technology Enabled Economic Changes (InTech)*, 2025, pp. 901–907. https://doi.org/10.1109/intech64186.2025.11198350
[12] H. Ghedir and A. Bouchareb, “The role of artificial intelligence in educational practices for English as a foreign language (EFL) university education: A systematic literature review,” *ATRAS Journal*, vol. 6, no. 2, pp. 101–115, 2025. https://doi.org/10.70091/atras/vol06no02.7

[13] N. Nurjati, N. Syahria, and A. K. B. S. Khan, “ChatGPT-based reflective feedback to improve EFL graduate students’ academic writing for publication,” *Journal of Languages and Language Teaching*, vol. 13, no. 4, pp. 1802–1816, 2025. https://doi.org/10.33394/jollt.v13i4.14858
[14] S. D. Krashen, *Principles and Practice in Second Language Acquisition*. Oxford: Pergamon, 1982.
[15] L. S. Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA, USA: Harvard University Press, 1978.
[16] M. H. Long, “The role of the linguistic environment in second language acquisition,” in *Handbook of Second Language Acquisition*, W. C. Ritchie and T. K. Bhatia, Eds. San Diego, CA, USA: Academic Press, 1996, pp. 413–468.
[17] M. Swain, “Communicative competence: Some roles of comprehensible input and comprehensible output in its development,” in *Input in Second Language Acquisition*, S. Gass and C. Madden, Eds. Rowley, MA, USA: Newbury House, 1985, pp. 235–253.
[18] P. Black and D. Wiliam, “Assessment and classroom learning,” *Assessment in Education*, vol. 5, no. 1, pp. 7–74, 1998. https://doi.org/10.1080/0969595980050102
[19] F. D. Davis, “Perceived usefulness, perceived ease of use, and user acceptance of information technology,” *MIS Quarterly*, vol. 13, no. 3, pp. 319–340, 1989. https://doi.org/10.2307/249008
[20] P. Mishra and M. J. Koehler, “Technological pedagogical content knowledge: A framework for teacher knowledge,” *Teachers College Record*, vol. 108, no. 6, pp. 1017–1054, 2006. https://doi.org/10.1111/j.1467-9620.2006.00684.x