

Generative AI and Personalized English Language Learning: A Case Study of NUML English Language Advanced Diploma Learners

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Abstract

The present research seeks to explore the positive impacts of Generative AI on personalized learning particularly focusing on prompt engineering among the students of Advanced Diploma in English Language at the National University of Modern Languages, Islamabad Pakistan. Personalized learning is a practice of adapting educational experiences to students' specific needs and preferences. This process is enhanced by AI tools, especially when they use learner-generated prompt. These tools help students learn more efficiently by providing individualized support and immediate feedback. This study employs a qualitative method. In order to collect data, ten participants of advanced diploma were requested to provide written feedback about their experiences with generative artificial intelligence. The goal of the research was to evaluate how generative AI improved writing abilities, increased learners' interests and active engagement in work, enhanced critical thinking, and enabled more personalized learning experiences. The results indicated that students' educational experiences were improved by generative AI interactions. This study provides valuable information about effectiveness of AI in language education and how it might shape future teaching methods particularly in Pakistani higher education context.

Keywords: Potential, personalized learning, Generative AI, written feedback, higher education.

1. Introduction

Language has been a major concern of human interest, and it has been changing with the increase in knowledge, technology and pedagogy. Linguistics and applied linguistics emerged in the twentieth century, bringing to fore the structural features of language and its teaching and learning features, in which, the importance of using the right methods of teaching and learning languages became extremely crucial. The twenty first century brought with it a radical change in education and this change has been majorly brought about by advancements in technology. Ahmed (2025) states that Artificial Intelligence (AI) has become one of these innovations that provide learners with specific tools to realize personalized results due to the adaptive feedback, personalized study routes, and the ability to interact.

In 21st century, particularly generative AI is significant innovation in the field of personalized training. Compared to traditional digital tools, it gives learners an opportunity to engage with language that dynamically reacts to their feedback and speed and encourages autonomy, creativity, and critical thinking. Such functionalities help in surrounding the concept of learner centered pedagogy, where learners' needs determine the kind of education that should be provided, instead of students being supposed to practice standardized methods of learning. The mentioned technologies enhance learning that are more cognitive and reflective as well as favour the skills development.

Although this has a potential, the adoption of AI in higher education, particularly in the developing world like Pakistan, is a big challenge. The efficacy of AI based learning systems depends on factors such as a variety of student background, lack of digital literacy, inequality of access to digital resources, and institutional preparedness. This is especially so in the language learning programs whereby the level of proficiency, prior exposure and motivation to the English language vary greatly among the students. Therefore, although Generative AI brings about

possibilities of engaging, improved and personalized learning, the levels to which the technologies can be successfully implemented and how they are perceived and benefited by students necessitate additional empirical studies.

The existing body of research indicates that AI developed learning systems improve learning outcomes through flexibility, real time feedback, and engaging experiences. Nonetheless, some research gap concerning the discussion of specific ideas of how Generative AI could be applied to the learning of the English language in Pakistani universities is evident. The already available research concentrates on the international settings or hypothetical possibilities, and few is based on real world study experiences, issues and results of students in Pakistan. This paper aims to address that by examining how Generative AI can be used to elevate personalized learning, interaction, critical thinking, and writing abilities in the Advanced Diploma English students at the National University of Modern Languages (NUML), Islamabad, which is considered one of the best language universities in Pakistan.

This study is an attempt to explore pedagogical and practical issues in English language teaching with regard to the AI intervention in teaching practices. The individualized learning models, where the instruction is based on the pace, needs, and preferences of a particular student are largely known to be effective and inclusive compared to traditional uniform approaches. These Gen-AI based models potentially have become very handy that enabling instant support, and also encouraging the higher order thinking and scaffold the writing development. As a result, it's necessary to incorporate these techniques and tools in higher education particularly in Pakistan. In future, the policy-making decisions adopt these technologies to make fruitful and beneficial in terms of advancing teaching technique, pedagogical activities, and formulation of curriculum.

¹ How to Cite

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The importance and relevance of this study is very obvious based on various stakeholders. Firstly, students, it helps in developing critical thinking, enhancing writing proficiency, and improving the learning experiences via direct interactions with AI based technologies. Secondly, curriculum developers and instructors, it provides helps in effective implementation of AI tools like prompt engineering and scaffolding activities to enhance the efficiency and effectiveness in pedagogical practices. Thirdly, it facilitates the policy and decision makers offering maximum evidence on infrastructure, access, and readiness issues required to make the adoption of AI sustainable. Finally, the study helps in adoption of Generative AI increase learner centered, inclusive, and contextually relevant language education in Pakistan.

This study is based on experiences of learners using Generative AI that provides insights to the successful implementation of AI assisted pedagogy that fills an empirical gap. It highlights the possibility of technology change in language education and the real contextual issues in Pakistani higher education.

1.2 Objectives of the Study

1. To investigate the impact of prompt engineering based Generative AI on personalized learning for English language learners.
2. To identify the significance of Generative AI in overall engagement, improving writing abilities, and critical thinking among students.
3. To examine the benefits and anticipated challenges of using Generative AI tools in English language learning environments.

1.3 Research Questions

1. How does Generative AI, via prompt engineering, helps in improving personalized learning for English language learners?
2. Does using Generative AI really improve the overall engagement, critical thinking, and writing abilities?
3. What anticipated benefits and challenges are in using Generative AI tools in an English language learning environment?

1.4 Delimitations of the Study

This research study exclusively concentrates on students enrolled in the National University of Modern Languages (NUML) English Language Advanced Diploma program in Islamabad. It only looks at students' perceptions and written feedback based on temporal, spatial, and specific research requirements

1.5 Definition of Key Terms

- **Generative AI:** A branch of artificial intelligence that produces human-like text, ideas, or content in response to prompts given by users. In this study, it refers to tools such as ChatGPT that assist learners in improving their English language skills.
- **Personalized Learning:** An instructional approach that adapts learning experiences to meet the specific needs, goals, and pace of each learner.
- **Prompt Engineering:** The process of designing or refining prompts to guide AI systems toward meaningful, accurate, and contextually relevant responses.
- **Critical Thinking:** The ability of learners to analyze information, evaluate ideas, and form independent judgments in the learning process.

- **Engagement:** The level of motivation, interest, and active participation that learners demonstrate while interacting with AI based learning tools.

2. Literature Review

2.1 The Evolution of AI in Language Learning

Within the past twenty years, the concept of Artificial Intelligence (AI) has been actively changing the field of studying the language and the process of its teaching. In the early days of research, mainly adaptive learning technologies were being studied and designed to deliver instruction tailored to the progress of the learner and feedback tendencies. Li and Hegelheimer (2018) researched these adaptive systems, which increased the accuracy of linguistics and the motivation of learners but were not always profound enough to encourage further thinking or creativity. Likewise, Kukulska-Hulme (2019) observed that the initial case of AI implementation in education was to primarily automatize repetitive feedback and assessment processes instead of facilitating more personalized or student-centered learning. Regardless of how fundamental such studies were, personalization was seen as a process conducted algorithmically and not as a dynamically learner centered process.

2.2 From Adaptive Learning to Generative AI

With the advent of Generative Artificial Intelligence (GenAI) and Large Language Models (LLMs), like ChatGPT or GPT based models, the pedagogical possibilities of AI improved significantly. The tools, in contrast to the previous adaptive models, are capable of generating original, context aware responses, and, therefore, allow a form of collaborative knowledge construction between the computer and the learner. As stressed by Dos Santos et al. (2023), this paradigm shift from rule based automation to a more interactive model marks a pedagogical turn, as learners are now able to actively discuss their understanding and imaginative thinking with machines.

In their study, Kasneci et al. (2023) supported such a claim by pointing to the fact that, with the help of generative models, students are able to engage in the repeated expression of ideas and also get prompt feedback to improve the structure, coherence, as well as the linguistic accuracy of the expression. They however warned that unquestioning use of AI generated responses can result in superficial learning conditions and overreliance, which brings the question of authenticity in academic research.

2.3 The Role of Prompt Engineering in Personalized Learning

An important part of GenAI based learning is prompt engineering, it is the process of making accurate and intentional instructions to evoke the desired response in AI systems. The systematic review by Lee & Palmer (2025) recognized prompt engineering as a new literacy in academia and substantiated with a position that the usefulness of GenAI tools lawfully relies on the capability of learners to formulate meaningful prompts. Their analysis combined 78 studies and found that timely training leads to development of autonomy and metacognitive awareness, however, too many educators downplay it as a pedagogical factor.

Likewise, Kakun & Tytenko (2023) have shown that structured prompts may greatly improve academic performance in terms of analytical and writing skills because they enable the student to put tasks into a clearer framework. Their employment observed that teacher training was also wanting where frequently the instructors are not adequately trained in teaching students to create successful prompts. Park & Choo (2024) furthered this debate by offering working frameworks of how the timely design activities can be incorporated in language activities. These guidelines promote the

use of iterative testing, reflectivity, and collaboration, which are the most important principles of personalized learning.

Although there is increasing interest, even in cases where the immediate engineering research is in areas of permanence, the direct engineering research has their component of being experimental or conceptual, without any longitudinal evidence of skill development being maintained. Thus, although the opportunities of personalization of learning that are available through prompt engineering are enormous, it is still not extensively implemented in classroom settings especially in developing nations.

2.4 Generative AI and the Development of Writing and Critical Thinking

Some of the recent studies have focused on how generative tools modify writing competence, creativity and critical thinking. An experimental study by Yang et al. (2024) demonstrates that active learning in which students revised and reviewed AI recommendations resulted in much better-quality essays as opposed to passive learning. In the same fashion, Lin & Lee (2024) also discovered that reflective use of AI in writing assignments facilitated higher levels of metacognition and self-control. These results can be discussed as per the idea that the educational value of GenAI does not lie in its text-generating capabilities but its ability to make learners analyze, assess, and refine ideas.

The process of democratizing GenAI, however, may also have an adverse impact on the digital divide, critics caution, as less experienced and digitally literate learners can be used as unwitting victims. According to Holmes et al. (2019), without being instructed to use AI as a learning partner, students can readily think of it as a shortcut. This sustains the necessity of AI literacy being pedagogically structured especially in situations of higher education whereby independent learning is being stressed.

2.5 AI in Language Education: The Pakistani Context

The studies on AI-assisted language learning are not very old in Pakistan, yet they are gradually increasing. Ejaz and Jamil (2024) examined the extent to which English proficiency and student motivation in university students relies on the integration of Generative AI tools, which can facilitate the phenomenon of task-based learning, mediated by technology. Their results point to a high likelihood of user engagement and higher accuracy in writing processes, but the research also demonstrated several limitations including poor consistency in internet access and little knowledge in the use of AI tools on the part of the instructors.

Ahmed (2025) reviewed adaptive learning systems in Punjab universities with cognitive load and digital preparedness focus and found that improvements are persistence and self-regulated but there are some infrastructural barriers discouraging the elaboration. These results resonate with Rahman & Waseem (2022), who emphasized on the digital divide and unequal institutional preparedness as key hindrances to use AI to teach language in Pakistan.

The Aslam et al. study (2025) fills a significant gap in the literature by examining how Generative AI (GenAI) may advance higher-order cognitive abilities in EFL writing, beyond its conventional use to enhance grammar and vocabulary. Dependency and cognitive shift are issues that the authors acknowledge (Hua et al., 2023), but they also expand on new findings that indicate deeper cognitive processes could be scaffolded by dialogic and reflective engagement with AI (Jacob et al. 2024; Noroozi and associates. 2025). Therefore, their study adds

to the expanding body of literature by offering empirical, quasi-experimental evidence that scaffolded and critically facilitated Gen-AI use can significantly improve higher-order thinking skills in writing. It also draws attention to the educational circumstances required to reduce related risks. Finally, AI must not be assumed as the replacement for humans but considered as the cooperative partner that facilitates, democratizes and improves language acquisition and learning.

Collectively, these studies revealed that there is a high potential of Gen-AI based language learning in Pakistan with the constraints by differences in technological infrastructure, inadequate faculty training and student readiness. In addition, a minimal qualitative data revealed the students engagement with generative systems in actual classroom settings, especially prompt engineering, critical thinking, and writing development.

2.6 Emerging Gaps and Future Directions

The present literature review revealed the several critical gaps, justifying the importance and need of current research. To start with, although internationally, studies (e.g., Kasneci et al., 2023; Lee & Palmer, 2025) have also written about the educational potential of GenAI and prompt engineering, little has been written on the aspect of practical implications in creating resource limited situations. The Pakistani case is characterized by peculiar sociocultural and technological peculiarities that affect the interaction of the learners with AI.

Secondly, in the majority of empirical studies the results, which have been measured, are about short term, writing accuracy, or student satisfaction, not long term cognitive development or thinking critically. Process oriented studies that investigate how learners acquire skills in prompting and how they contemplate AI responses and how these experiences create more lasting learning outcomes do not exist.

Third, even though conceptual papers (Kakun & Tytenko, 2023) and practitioner focused guides (Park, 2024) provide useful pedagogical information, they are usually not systematically evaluated in the context of how they are implemented into practice. This creates a knowledge gap of how AI-based personalization can be scaffolded by the educators effectively at the various levels of proficiency.

Lastly, ethical and pedagogical issues, such as data privacy and academic integrity, overdependence and cognitive offloading, are yet to be investigated in the bodies of empirical investigations (Holmes et al., 2019). Research has suggested AI literacy models that would prepare students to not only utilize GenAI but also to be able to critique and morally negotiate its constraints.

To fill these gaps, the present research places itself in the niche between individualized English language learning, prompt engineering, and Generative AI, within Pakistani higher education. By gathering qualitative feedback on NUML Advanced Diploma students, its goal is to shed light on how students can imagine, be able to negotiate, and achieve learning benefits using AI applications within the learning context. The existing literature related to this study provides more learner-centered, and context specific observations that helps policymakers, educators, and curriculum designers with various strategical insights and solution to better integrate AI technologies into teaching language.

3. Methodology

3.1 Research Design

This research follows the qualitative descriptive case study design and the data collected from the Advanced Diploma English students at the National University of Modern Languages (NUML),

Islamabad, those are exposed to Generative Artificial Intelligence (AI) in personalized language learning. Qualitative method is chosen due to the possibility to dig deeper into the perceptions, attitudes and thoughts of learners in relation to AI-assisted learning (Creswell & Poth, 2018).

3.2 Participants

The sample of ten students is selected enrolled in Advanced Diploma from semester first and the second at NUML. The purposive sampling technique is adopted for data collection aiming that each of them has some experience in using Generative AI tools, such as Gemini, and ChatGPT, in their English classes. The demographic data are also captured; age and gender are taken as a way to give the background. Anonymity and confidentiality of the participants are maintained to promote truthful and open answers.

3.3 Data Collection

Data collection followed the ten open ended questions using written feedback. These questions are formulated to elicit students' perceptions of Generative AI tools, focusing on critical thinking, engagement, personalized learning experiences, perceived challenges and writing skills. Sample questions are given below:

1. How would you describe your overall experience of using Generative AI tools for learning English?
2. In what ways do you think Generative AI has helped you improve your writing skills?
3. Can you share an example of how using AI-generated prompts helped you think critically or differently about a topic?

Participants completed the feedback forms independently, reflecting on their experiences with AI tools. Open-ended questions provide rich qualitative data and allow learners to express their thoughts freely.

3.4 Data Analysis

The questions were analyzed with the help of a thematic analysis based on the six-stage framework of Braun and Clarke (2006). The process entails the familiarization to data, the coding of major ideas, the generation of themes, the revision and polishing of the themes, the definition and naming of themes and the interpretation of the same in relation to the research questions. Themes to be expected are Personalized Learning Experience, Improved Writing and Feedback, Enhanced Engagement, Critical Thinking and Creativity, and Challenges and Limitations. Responses of the participants have also been provided to generate and support themes.

3.5 Ethical Considerations

Ethical guidelines are enforced during the study. Participation was voluntary, and the students were well informed of the aim of the research, ways of collecting data and the fact that they can opt out of the study at any point. Written answers are made anonymous to preserve privacy of the participants and all the data are handled safely and utilized in this study only.

4. Data Analysis and Findings

Thematic analysis was employed to analyze the data gathered in this study based on the six steps model of data analysis proposed by Braun and Clarke (2006). The adoption of this approach was based on its flexibility and methodological approach to the identification, analysis and report patterns in the qualitative data. Thematic analysis enables extraction of meaningful themes and at the same time keeping the richness and depth of the experiences of the participants. The inductive methodology was applied, in

which the themes were conceived out of the data as opposed to them being introduced a priori; hence, the analysis is more likely to depict the views of the participants. The purpose of the analysis was to investigate how Generative AI tools are applicable to the learning of the English language uniquely, that is, writing development, engagement, critical thinking, and the sense of difficulties.

4.1 Familiarization with the Data

The initial step of the analysis was repetitive readings and engagement into written feedback of ten participants. Responses to the ten open-ended questions on the given feedback forms were scrutinized to bring out details of the experiences encountered by the participants. The preliminary results emphasized a mostly favorable attitude towards Generative AI tools when it comes to personalized learning, instantaneous feedback, and the support of writing skills in English. At the same time, the participants expressed their worries about over-reliance on AI, a decreased level of independent training, and possible complications with the complete implementation of AI in the classroom environment. At this point, the researcher made annotations of the data, including initial impressions, ideas that kept on surfacing, and patterns, which were the basis of the future coding of the research.

4.2 Generating Initial Codes

The second step involved systematizing the data by coding to establish important features and meaningful sub-sets. The step wise initial codes were produced that echoed latent and semantic information based on responses of each of the participants from sample. For example, the first code included *adaptive learning, personalized feedback, vocabulary enhancement, and grammar correction, writing support, confidence-building, critical thinking stimulation, over-dependence, engagement, cost barriers, teacher replacement concerns, and technical issues*. The coding is performed for all ten participants to comprehensively and consistently identify the unique perspectives and recurring ideas. It also analyzed to reflect the richness of individual experiences.

Supposing that, Participant 1 highlighted the versatility of AI for learning English, and stated that the AI "creates a good introduction for learning English" and it also positive effects on students learning. Participant 2 reiterated structured guidance and vocabulary enhancement, on the other hand, Participant 7 observed the AI as a professional tool for improving clarity and drafting letters. The variance in these responses coded under preliminary categories such as *writing development, practical utility and personalized support*.

4.3 Searching for Themes

Third step, grouping the original codes into general themes depending based on conceptual similarity. Codes referring to individualized instruction, meeting needs of learners, and customized access fell under the individualized learning. Codes that reflect grammar and sentence construction support, development of vocabulary, and help writing in a variety of contexts were incorporated under the writing development and language accuracy. In the same vein, codes that dealt with motivation, engagement, and confidence gains were gathered under improved learner engagement. Critical thinking and perspective expansion were used to group the instances of reflective thinking and critical analysis of prompts generated by AI. Lastly, codes about over-dependence, example of less creativity, issues of cost, access, and pedagogical anxiety were all merged under the topic of difficulties and restraints of AI application.

This process produced a preliminary thematic framework consisting of five candidate themes:

1. Personalized and adaptive learning
2. Writing development and language accuracy
3. Enhanced engagement, motivation, and confidence
4. Critical thinking and reflective learning through AI prompts
5. Challenges, dependence, and pedagogical concerns

4.4 Reviewing Themes

At the fourth stage, the themes of the candidates were under review to provide internal consistency and uniqueness. The themes were evaluated concerning the issues that had been coded and the dataset in general. As an example, as the writing development became a specific topic, the review process managed to remind the duality of the impact of AI: it has benefited writing skills yet has also threatened to decrease independent practice. On the same note, the theme of personalized learning was reinforced due to the attribute of consistency among the participants but refined by the differences in both the perceived adaptability and personal use patterns.

This step entailed ensuring that the themes together were reflective of the extent of the experiences of the participants and were sufficient in answering the research questions. There were no new significant themes in the dataset during the stage indicating that the data saturation was reached. The minor changes were the definition of sub-dimensions within every theme (e.g. distinction between academic and professional use of AI in the development of writing skills) and specification of the circumstances under which critical thinking improved.

4.5 Defining and Naming Themes

Five themes developed after refining to provide a good representation of experiences and perceptions of the participants. These themes only summarized the positive influences as well as the possible drawbacks of learning English with AI support.

Theme 1: Personalized and Adaptive Language Learning

The participants were regularly emphasizing the versatility of AI and the way it can fit their needs and the level of learning. Generative AI was viewed as a personal tutor that is able to provide customized feedback score, explanation, and content depending on what learners desired to achieve. The ability to change timing and place anytime and anywhere was highlighted as one of the major strengths on the flexibility where learners may read and practice English language at their pace. According to the participants, AI enabled them to concentrate on particular domains that they needed to enhance which included vocabulary or sentence construction hence learning became very personalized. "It is like having a complete package of learning in your pocket." (P7)

"AI has made learning English more personalized by offering tailored feedback." (P9)

This theme specifically answers the first research question of the contribution made by Generative AI to personalized learning via prompt engineering.

Theme 2: Writing Development and Language Accuracy

Another unifying strong theme between all participants was how AI could enhance writing skills. The participants noted improvements in corrections in grammar, vocabulary, sentence structure and style. The AI tools were also found to be helpful in writing in many aspects including academic assignments, essays and professional writing like letters. Some participants were cautious, arguing that

reliance on AI might limit opportunities for independent composition and critical self-reflection.

"AI helped to improve my writing by suggesting better vocabulary, correcting grammar and enhancing sentence structure." (P9)
 "I just gave a small sketch of a letter, and I got a very good written letter." (P7)

"It has rusted my writing skills due to over easy access." (P4)

Such a theme correlates with the second research question of the impacts of AI on the writing skills of learners.

Theme 3: Enhanced Engagement, Motivation, and Learner Confidence

Participants indicated that AI sessions made them more engaged and motivated to learn by making them interactive, more accessible, and enjoyable. The confidence of the learners was developed due to immediate responses and easy access to information especially in grammar, vocabulary and writing tasks. Confidence was often defined as task-dependent, becoming stronger in the way AI offered some corrective advice, but lesser in critical thinking.

"It has increased our interest and engagement in learning English." (P7)

"I feel more confident because the tool helped me identify and correct my mistakes." (P9)

The theme is relevant to the second research question, which implies the effects of AI on engagement and self-efficacy in learners.

Theme 4: Critical Thinking and Perspective Expansion

The participants had recognized that AI generated prompt supported critical thinking as it prompted them to explore various positions, information in the context and to make subtle reasoning. The most effective critical engagement involved the active assessment and amendments of AI outputs by learners instead of integrating them without thinking. A number of participants emphasized experience in AI that made them think differently regarding various issues, look at things from a new proper angle, or incorporate new information in their answers.

"I do think about a topic again and include or exclude something." (P7)

"AI suggested unique angles... which I didn't consider before." (P9)

This theme indicates that there is the possibility of AI benefiting higher-level cognitive abilities under the conditions of its implementation alongside the reflexive learning capacity of the learner.

Theme 5: Challenges, Dependence, and Pedagogical Concerns

Regardless of the overall positive feedback, the participants noted such issues as over-reliance, less creativity, technical constraints, barriers to premium access, and poor or irrelevant feedback. One of the same issues was that AI could easily take the place of or considerably reduce the effort of teachers when poorly implemented without instructions. Respondents pointed out that AI was to act as an additional resource, which facilitates teacher teaching, but not to take teachers out of the job.

"We totally dependent on AI, this is dangerous." (P1)

"It makes us lazy... it should not replace human teacher." (P6)

"Students will totally become dependent on it." (P2)

The theme is related to the third research question of perceived challenges and advantages of AI in English learning.

4.6 Summary of Findings

The thematic analysis demonstrated that Generative AI technologies have a significant beneficial effect on individual

learning, writing growth, involvement, trust, and critical thinking. Individual learning triggered by adaptive AI permits a learner to adapt his/her practice to personal needs, which increases efficiency and motivation. Writing development with the help of AI allows learners to enhance grammar, vocabulary, and stylistic competence, whereas AI prompts provoke students to think and take a side. The analysis, however, also reveals the possible challenges such as over-dependence, loss of creativity, technical setbacks and the reason why ethics has to be integrated to the classroom practices. These results indicate that Generative AI can greatly help to improve the process of learning the English language in conditions of the high importance of its controlled, balanced, and pedagogically correct application.

5. Discussion

The current research explored the possibilities of Generative AI tools to aid individual English language learning ability in the case of Advanced Diploma English learners of the National University of Modern Languages (NUML), Islamabad. Based on the results of ten respondents and evaluated using the thematic analysis model by Braun and Clarke (2006) to identify the primary themes, it became possible to single out five major assumptions: personalized and adaptive learning; writing development and language accuracy; enhanced engagement, motivation, and learner confidence; critical thinking and perspective expansion; and challenges, dependence, and pedagogical considerations. They are findings that are taken into consideration based on the available literature to bring out their theoretical and pedagogical relevance.

Additionally, in line with the initial research question on personalized learning, respondents found Generative AI to be an adaptive technology that can fulfil individual learning requirements. The AI was often compared to the tutorial, or personalized explanation/feedback at the pace of the learner. It is consistent with the findings of other studies which suggest that technology enhanced learning systems may benefit self-directed learning by customizing content based on learners' skills and objectives (Chen et al., 2021; Luckin et al., 2016). The flexibility of AI tools like ChatGPT and Gemini was appreciated because it allowed the learners to decide the complexity and depth of information based on their abilities, and it is close to the idea of scaffolding discussed by Vygotsky (1978) in the zone of proximal development.

In terms of writing development, the analysis has shown that the AI tools showed improvements in the grammar correction, vocabulary acquisition, structure of the sentences, and the appropriateness of style. These results are reflective of studies that show that AI writing assistants have the potential to enhance language accuracy and clarity in learners of second languages (Bai & Wang, 2022; Li et al., 2023). The presence of instant feedback allowed the learners to fix mistakes as rapidly as possible, demonstrating the presence of the noticing hypothesis (Schmidt, 1990), which suggests that to learn linguistic structures, a person must be specifically conscious of these forms in order to do so. Nonetheless, issues regarding reliance on AI in writing, overdependence on AI emerged, with some participants proposing that this overdependence would impede free writing. These issues echo the results of Kirschner & van Merriënboer (2013) who cautioned about the negative consequences of providing excessive external support and inhibiting the development of autonomous skills.

The motivational potential of AI tools is indicated by the theme of increased engagement and confidence in a learner. Respondents have claimed that learning elements of interaction and instant feedback were less fear and more engaging compared to the literature, which identifies that technology plays a crucial role in raising levels of learner motivation (Huang et al., 2021). Particular improvements in confidence were observed in gender- or vocabulary-related tasks, which may indicate that AI assistance can help remove affective impediments to language training (Dornyei & Ushioda, 2013). However, it is necessary to mention that the levels of confidence were not equally applied to all the areas of language; it is possible to mention that the learners were more confident about mechanistic components of language, and higher-level skills including writing and critical thinking were the sphere of careful self-evaluation.

The fourth theme highlights the importance of AI in the promotion of critical thinking in case the learners critically reflected and amended AI outputs. The participants claimed that AI-generated prompts and widened horizons helped them to think of alternative opinions promoting further thinking. This result is consistent with the arguments presented by Nye et al. (2019) and Holmes et al. (2019), who argue that it is possible with the help of AI to stimulate higher-order cognition where reflective pedagogical approaches are adopted. Nonetheless, the existing evidence indicates that effectiveness of AI in this aspect is closely related to the active interest of the learners in the material, which supports the need to provide instructional scaffolding in AI-enabled learning environment.

Although the general perceptions are positive, there were also major challenges that were pointed out by the participants. Excessive reliance on AI, less talent, technical concerns, price aspects, and the problem of loss of teacher-student interaction were eminent. These issues echo the wider debates of the morality and fairness of AI adoption in education (Zawacki & JECT, 2019). The participants displayed that AI must be incorporated as an aid not as substitute for human teachers. It enforced that AI is most effective as a supplement, not a replacement, for conventional pedagogical practices (Holmes et al., 2019). Overall, these findings indicate that Generative AI tools can be promising in promoting personalized English language learning, helping students develop writing, becoming more engaged, and reflecting on their learners in a pedagogically managed, balanced, and context-driven way.

6. Conclusion

This paper has examined how Advanced Diploma English learners feel about using Generative AI to receive personalized language learning services. It came up with five major themes based on thematic analysis of the feedback given by learners and these themes reported on the potential benefits and limitations of AI in language education. They identified the personalization of learning, acquisition of writing skills, better engagement and confidence, and stimulating critical thinking as qualities when reflected into the use of AI. Nevertheless, dependence, lack of creativity, technicalities, and guided integration were also raised. These results show that though AI can be useful for English language learners, the application should be pedagogically based to ensure that learning results can be as high as possible, and the autonomy of learners should be preserved.

7. Recommendations and Suggestions

The results of this study allow for the proposal of various pedagogical and policy-oriented recommendations. The first step

in integrating AI into EFL writing classes is to have clear pedagogical scaffolding in place. In order to help students use AI tools effectively, teachers must give them clear instructions. Additionally, they must be trained for critical assessment for AI-generated responses and guide students in incorporating them into their own ideas. Moreover, it is very critical to ensure the balanced usage of AI. The independent writing, introspection, and instructor-led feedback may continue to be essential elements of instruction in order to avoid over-reliance on AI, which may support rather than replace conventional language learning methods.

Apart from that, it is critical to enhance AI literacy for student and teachers. The AI literacy helps in understating the advantages and drawbacks of AI tools as well as, the ethical issues such as academic integrity, data privacy and biasness in data, data privacy. Moreover, the educational institutions should also place a high priority on equitable access to AI technologies, enhancing digital infrastructure and guaranteeing that students have dependable internet connectivity access to top-notch AI resources. Furthermore, the peer review sessions helps in encouraging students to discuss, evaluate and contrast AI-generated outputs in groups and also AI can be used cooperatively to improve critical thinking. Last but not least, ongoing assessments and evaluation of AI integration are required to determine its effect on student learning outcomes and to guide future advancements in instructional strategies and curriculum design.

8. Limitations and Future Research

This research comprehensively provides insightful information on implementation of generative AI into EFL writing. But still, this study has numerous limitations which need to be considered for further investigation. The first limitation is generalizability, a very small sample size of 10 students is taken from Advanced Diploma English learners from a single institution. The generally acceptable results need a larger and more varied populations from various educational contexts so it should be included in future research. Secondly, the limitation of subjective biases, a self-reported data about learners' perceptions could lead to several biases particularly when it comes to personal attitudes toward technology. For future researches the reliability and validity could be increased by combining observational data and cross-referencing results with objective performance metrics. Furthermore, since the primary focus of this study was on students' perspective, future research may examine the experiences, attitudes, and difficulties faced by teachers with the implementation of AI in English Language teaching and learning.

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Credit authorship contribution statement

Ms. Atika Rub Nawaz, Dr. Hazrat Umar, and ³Emaan Umar Khan: Writing – Review & Editing, Writing – Original Draft, Methodology, Formal Analysis, Conceptualization.

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