
| RESEARCH ARTICLE

Investigation of Students' Perceptions of the Use of Artificial Intelligence in Writing Assignments

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| ABSTRACT

This study examines the use of ChatGPT in three dimensions. First, it explores the purposes for which English language learners use the generative pre-trained model ChatGPT. Second, it examines the perceived positive and negative impacts on students when utilising this AI-powered tool to write their assignments. Third, it investigates instructors' perceptions of the positive and negative impacts of students who utilise this chatbot in writing assignments. The study focuses on higher education students majoring in English language and instructors who teach English language in higher education institutions. The study adopts a mixed-methods approach combining quantitative and qualitative methods. The first data collection method involved distributing a questionnaire to 50 students majoring in English language studies, with three types of questions: introductory items, Likert-scale, and open-ended questions, to answer the first and second research questions. For the third question, the researcher conducted semi-structured interviews with ten instructors. Findings revealed that students primarily use ChatGPT to clarify concepts and summarise information. Additionally, students' responses showed a positive attitude towards utilising this AI-based tool in writing assignments. In the open-ended questions, students frequently reported that ChatGPT enriched their grammar and vocabulary and enhanced the cohesion of their composition. However, overdependence on automated assistance in writing was found to be a concern for the majority of participants. Students showed a raised awareness of the potential drawbacks of over-relying on AI technology in writing, with regard to hindering critical thinking, information privacy, plagiarism, and ethical considerations. Instructors, on the other hand, demonstrated different attitudes; the majority agreed on integrating AI technology in the learning process under their instructions. Ultimately, the study underscores the importance for language instructors to be familiar with AI technology and stay current with its trends, enabling them to enhance the learning experience and help students maximise the benefits of AI while avoiding its potential pitfalls.

| KEYWORDS

Artificial intelligence, ChatGPT, student perceptions, instructor perceptions, academic writing, higher education, mixed-methods research

| ARTICLE INFORMATION

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1. Introduction

In his famous adage, Henry Ford verbalised his thoughts about creativity and innovation, sparking a debate about whether innovation should come from customer input or from visionary creators who focus on their own visions for a better future (Chen et al., 2020). This analogy suggests that we need to search beyond societal norms and innovate rather than simply improving existing systems. Such approaches have driven computer scientists to pursue advancements in technology capable of completing tasks that require human-level intelligence—a field called Artificial Intelligence (AI). These advancements have led to the development of Generative Pre-Trained Transformers, large language model-based chatbots that can generate human-like

texts. An example is ChatGPT, released by OpenAI in November 2022, which became the fastest-growing application worldwide, exceeding 100 million users in a short period (Stohr et al., 2024).

The applications of AI are of great importance for life, but more importantly, for education. According to Aldosari (2020), modern universities are no longer limited to delivering education alone; they now play a central role in promoting Sustainable Development (SD). The development of educational institutions can be achieved by integrating emerging technologies to make learning more effective and easier. The integration of AI in educational contexts is now permanent, and writing has undergone significant alterations following the advent of artificial intelligence (Mahdi & Alkhateeb, 2025). The integration of Generative AI tools has brought about remarkable changes to writing, including summarising, paraphrasing, and proofreading. As stated by Alharbi (2023), AI systems offer text generation and sentence completion suggestions, which aid students in every writing step.

Many researchers have examined the role of applications based on natural language processing (NLP) and large language models (LLMs), such as ChatGPT, in students' research and academic writing. Research has also investigated how students perceive the positive and negative impacts of this AI-based tool. It is crucial to explore how language learners perceive the use of this tool for writing in terms of both positive and negative impacts. Nevertheless, teachers' perceptions of students' utilisation of this tool are equally important. In this respect, the present study aims to investigate the attitude of English language students in higher education towards utilising ChatGPT in writing their assignments. Additionally, it examines language teachers' perceptions of this AI-powered tool in relation to language learners. The study also aims to explore the potential advantages and pitfalls of using AI-based writing tools to ultimately innovate techniques that aid students in optimising the benefits of AI technology without completely relying on automated assistance.

Numerous researchers have explored the potential advantages, challenges, and limitations of utilising the generative AI tool ChatGPT. However, despite significant advancements in artificial intelligence research, there remains a notable gap in understanding the dual-purpose impact of generative AI tools, such as ChatGPT, from the perspectives of both students and instructors. Existing studies inadequately address how students utilise ChatGPT, their perceptions of its potential benefits and drawbacks, and how teachers view its influence on students' learning experiences. This research aims to fill this gap by systematically investigating these dimensions, thereby contributing to a more comprehensive understanding of the pedagogical implications of generative AI in educational contexts. It will specifically explore the uses of the generative AI tool ChatGPT in academic writing through investigating students' perceptions of the positive and negative impacts of using the AI tool ChatGPT, and teachers' perceptions of the positive and negative effects of students' usage of ChatGPT.

This research will contribute to benefiting linguists, educators, and administrators in the educational field by increasing their awareness of the various ways in which students utilise ChatGPT. Evaluating students' and educators' perceptions of the impact of using chatbots for academic writing and understanding the nature of this impact whether positive or negative will support educators and stakeholders in developing guidelines and instructions to promote the benefits of using AI in academic writing and mitigate the negative impact. Therefore, this research aims to fill the existing gap and further enrich the existing literature.

2. Theoretical Framework

2.1 Artificial Intelligence: Definition and Branches

Artificial intelligence (AI) in our modern world resembles living in a fantastical wonderland. The word "artificial" means anything that is human-made. AI is a modern field of knowledge known to be an application of information systems concerned with understanding human intelligence nature and its imitations in order to create intelligent computers that can be trained to perform tasks requiring a high degree of specific abilities that only humans can possess: "inference, deduction, and perception" (Aldosari, 2020). It is the ability of systems to analyse outer data correctly, comprehend such data, and use this comprehension to achieve certain tasks employing flexible adaptation (Kaplan & Haenli, 2019). A significant distinction between AI and human or animal intelligence is that AI lacks emotions and awareness (August & Tasima, 2021).

Artificial intelligence can be classified in two ways. It can be classified by the intelligence types it exhibits as analytical (cognitive intelligence), emotional (human-inspired intelligence), and social intelligence (humanised AI). However, in its evolutionary stage, AI is classified as narrow (weak) and general (strong) intelligence (Kaplan & Haenli, 2019). John Searle (1980) stated that weak AI is merely capable of handling single or narrowly defined tasks, representing the most common type of AI used currently. Contrastively, general or strong AI, which researchers aspire to reach, attempts to construct machines with the ability to think and use cognitive reasoning as humans do (Bartneck et al., 2020).

2.2 Machine Learning and Deep Learning

Machine learning (ML) is a sub-field of artificial intelligence concerned with using algorithms that can recognise patterns in data, learn from these data, improve them over time, and draw conclusions when faced with new information without an explicit need to be programmed (Ramlakhan et al., 2022). August and Tsamia (2021) clarified the concept by stating that machine learning is an algorithm able to cluster information based on similarities and differences. Mitchell (1997) sub-categorised machine learning into three categories: supervised, unsupervised, and reinforcement learning.

Deep learning (DL) is a subset of machine learning that uses Artificial Neural Networks (ANN)—networks that imitate the human brain in processing data—with hidden or *deep* layers in order to analyse and learn from large amounts of information (Janiesch et al., 2021). It is effective with tasks requiring models with a hierarchical nature, such as audio and speech recognition and natural language processing.

2.3 Natural Language Processing

Natural language processing (NLP) is a branch of artificial intelligence and linguistics concerned with enabling computers to comprehend words and statements of human language, purposefully to communicate with machines in natural language (Khurana et al., 2023). It is classified into natural language understanding (linguistics) and natural language generation (NLG). The former refers to understanding natural language, including all branches of linguistics from phonology to pragmatics. Once human language is comprehended, natural language generation enhances the task of processing language into producing naturally coherent texts from internal representations (Khurana et al., 2023).

2.4 Large Language Models

Large language models (LLMs) are an advanced form of natural language processing in which models are trained on an extensive dataset of texts to perform language-related tasks with high accuracy and produce human-like texts (Kasneji et al., 2023). LLMs have reached state-of-the-art performance in various natural language tasks, such as translation, answering questions, and essay writing. They can support language learning and facilitate the development of various types of written texts. Recent studies have increasingly explored the crucial role of LLMs in the educational field and how they can potentially enhance students' learning outcomes. Wang et al. (2024) reported that a growing body of research on LLMs in education has demonstrated promising findings, particularly focusing on their effectiveness in assisting students with cognitively demanding tasks such as answering complex questions, correcting errors, and clarifying difficult concepts.

2.5 Transformers and Generative Pre-Trained Transformer

The transformer architecture, first introduced by Vaswani et al. (2017), has become a foundational model in natural language processing. It is a type of deep learning and neural network architecture that excels at generating sequential data such as natural language. The Generative Pre-Trained Transformer (GPT) is an artificial intelligence model developed by OpenAI, designed to comprehend and produce human-like text (OpenAI, 2023). According to Aydin and Karaarslan (2023), GPT models are trained on vast amounts of publicly available digital data within the field of NLP. These models possess the capability to comprehend and generate human-like text in multiple languages and generate a wide variety of written content. A prominent example of GPT is ChatGPT, which achieved more than one million subscribers in one week since its release on November 30, 2022 (Baidoo-Anu & Ansah, 2023). It is an AI chatbot powered by GPT-4, developed to interpret natural language inputs and produce real-time responses that closely resemble human communication.

3. Literature Review

3.1 Artificial Intelligence in Education

Due to mechanical advancements, the rapid development of technological systems has impacted and facilitated all aspects of people's lives around the globe. This advancement, referred to as artificial intelligence, has revolutionised the educational sector in recent years (Tri et al., 2021). According to Gabriel et al. (2022), AI acts like an effective learning aid crucial to refining the learning process. The history of the phrase "artificial intelligence" dates back to 1956 when John McCarthy held a two-month workshop at Dartmouth University, explaining that machines can be programmed to replicate any intelligence feature or cognitive function involved in learning (Pedró, 2020). Luckin and Holmes (2016) argue that artificial intelligence has been integrated into the educational field since the 1970s, focusing on developing computer-based systems to facilitate individualised learning and automate feedback and evaluation processes.

Artificial intelligence is permanently interrelated with education nowadays, marking a paradigm shift in learning. Aldosari (2020) highlighted that AI applications are significant for universities and educational institutions to the point that they cannot be abandoned, as universities contribute to society's sustainable development. Emerging AI in educational institutions functions as a tool to enhance learners' experiences, decrease dropouts, and provide an individualised learning atmosphere (Pedró, 2020). JISC (2021) noted that AI is now seen as a complement that supports teaching and learning rather than a substitution for instructors. Teaching is a complex process not limited to communicating knowledge but also improving socio-emotional skills; hence, AI is unlikely to substitute educators as it lacks such abilities (Kolchenko, 2018).

3.2 Challenges and Benefits of Artificial Intelligence

Alshater (2022), in a literature review, aimed to explore how AI, particularly ChatGPT, can advance academic research. The advantages included efficiency in research, accuracy, flexibility, and speed of the research process. Limitations included dependency on data quality, lack of accuracy due to ChatGPT's limited knowledge in the research domain, and the need for researchers to consider these limitations.

Perkins (2023) examined new technologies students started using in the post-pandemic period, mainly AI tools using large language models. The paper explored AI tools' new opportunities in digital writing and the challenges and concerns related to academic integrity, such as plagiarism and academic misconduct. The author concluded that LLM tools have the potential to produce coherent, original manuscripts that students can use in their assignments with no chance of being detected as AI-generative text.

Baidoo-Anu and Ansah (2023) examined the benefits and drawbacks of using ChatGPT and its role in revolutionising teaching and learning. One crucial benefit mentioned is that ChatGPT provides explanations tailored to students' level of understanding and their misconceptions of specific complex points, resulting in improved learning outcomes. However, they noted several inherent limitations, such as providing wrong answers and generating fake reports, references, and articles.

Zohery (2023) demonstrated several advantages of using ChatGPT in academic writing and publishing, particularly for students and early-career researchers, including generating hypotheses, writing literature reviews, selecting journals and references, paraphrasing, editing, and summarising. Islam and Islam (2024) explored the potential opportunities and challenges associated with using ChatGPT in academia, finding that ChatGPT significantly contributes to facilitating research tasks and serves as a valuable tool for personalised tutoring, revolutionising language skills, enhancing content creation, fostering critical thinking, and improving users' technological skills. However, challenges included machine-generated false or biased responses, dependence on accurate input, and over-reliance on automated assistance.

3.3 Students' Perceptions of Utilising AI in Writing

Phan (2023) explored students' perceptions of integrative AI technology in English writing classes using a mixed-methods approach with 100 students. Data analysis demonstrated that most students have a favourable attitude towards using such technology as a writing assistant tool, primarily due to its simplicity, flexibility, and accessibility, while noting challenges concerning students' anxiety towards technology and lack of tool options.

Utami et al. (2023) examined the influence of utilising AI on students' writing in Central Java, Indonesia. Results indicated that AI-based writing tools support students in conducting research, offer flexibility and user-friendly features, and make learning more interesting. Obstacles included a decline in the quality of academic papers among students who heavily rely on AI technology.

Almassaad et al. (2024) explored students' perceptions of using Generative Artificial Intelligence (GenAI) tools in Saudi Arabia among higher education students. Results showed that 78.7% of participants use AI-powered tools frequently, with ChatGPT being the most used. Students typically use writing assistant tools to clarify concepts, summarise, translate, and generate ideas. Primary challenges included subscription costs, misinformation, and reduced human interaction.

Keumalasari et al. (2024) investigated students' perceptions of utilising AI as a language learning tool in Indonesia. Findings showed that most students positively perceive using AI in language learning, with benefits including increased motivation and fostering comprehension of English language material.

Laili et al. (2024) examined students' views of utilising ChatGPT in learning English, identifying benefits such as vocabulary expansion, comprehension of complex ideas, and assistance in the writing process. Drawbacks included generating excessive

information, over-reliance on AI assistance, and lack of individualised responses. The study emphasised that human interaction is necessary alongside AI techniques in language learning.

4. Methodology

4.1 Research Approach

This study adopts a mixed-methods research paradigm, integrating both qualitative and quantitative approaches. By adopting triangulation i.e utilising multiple sources of data rather than relying on a single method, the study employs a mixed-methods approach combining survey and semi-structured interviews, which is suitable for investigating the uses, benefits, drawbacks, and attitudes toward using ChatGPT in writing assignments. According to Paradis et al. (2016), using various sources to collect data serves to increase the research's validity. The first method employed is a survey partly adapted from Laili, Wirawati, and Nashir's paper (2024), which was revised by three professors specialising in Applied Linguistics at the University of Bahrain. Semi-structured interviews were conducted with instructors, involving seven questions inspired by the work of Phan (2023).

4.2 Quantitative Instrumentation and Data Collection

The study was conducted in two phases. The first was the quantitative phase, where the author investigated students' usage of intelligent writing assistance and their perceptions of using AI in their writing. Data were collected from an online questionnaire using Google Forms. The questionnaire consisted of four parts: introductory closed-ended questions (education level, awareness of AI, and usage of AI writing tools), questions about AI writing tools and purposes for use (allowing multiple selections), 26 Likert-scale questions (1-5) evaluating agreement levels on various themes including motivation, clarifying concepts, grammar and vocabulary, writing quality, and critical thinking, and an open-ended question allowing students to share additional impacts. The survey was administered in March 2025.

4.3 Qualitative Instrumentation and Data Collection

For the qualitative phase, in-depth semi-structured interviews were conducted with instructors specialising in English language teaching. The interview consisted of seven questions exploring benefits and challenges of students' usage of AI assistance tools in writing from the instructors' perspective. Qualitative data were collected using WhatsApp utilising the Mobile Instant Messaging Interview (MIMI) technique, which offers significant time efficiency, detailed data, and flexibility for both researcher and participants (Kaufmann & Peil, 2020).

4.4 Research Population and Sampling

Using random sampling for both qualitative and quantitative data, the survey was administered to students from different educational levels and diverse backgrounds. The survey primarily targeted students who use AI-generated tools to write their English assignments. Participants included individuals at diploma, bachelor's, higher diploma, master's, and doctoral levels. A total of 50 students participated in the survey. For the qualitative component, semi-structured interviews were conducted with 10 English language instructors with various academic levels.

4.5 Data Analysis

Quantitative data were analysed using descriptive statistics through calculation of percentages to summarise students' use of ChatGPT and perceived benefits and drawbacks. Survey responses were exported from Google Forms into Google Sheets to facilitate analysis. Qualitative data were analysed through thematic coding to identify different issues and patterns raised by teachers, consequently illustrating how teachers perceive the impact of using AI assistance tools on students' writing.

4.6 Ethical Considerations

The Deanship of Graduate Studies and Scientific Research at the University of Bahrain ethically approved this research prior to its conduct. Prior to participating in the study, students provided informed consent and a holistic overview of the research. The researcher also asked for permission before interviewing teachers to ensure privacy and confidentiality. Participants were aware of anonymity and their right to disengage from the research without providing a reason.

5. Results

5.1 Quantitative Results from the Questionnaire

Of the 50 participants, 39 were bachelor's students, 8 were master's students, and 3 were doctoral students. All 50 participants had heard of artificial intelligence, and 42 participants used AI writing assistance tools. Regarding generative AI tools, 90% of students used ChatGPT, followed by Quill Bot (30%) and Gemini (18%).

Regarding purposes for using ChatGPT (students could select multiple options): clarifying concepts (80%), summarising (64%), proofreading (54%), translation (44%), selecting resources and references (42%), editing (30%), and paraphrasing (28%). Other reported uses included code generation, letter writing, project planning, and generating ideas.

Key Likert-scale findings (percentages represent agreement: "agree" + "strongly agree"):

- ChatGPT is easy to access and use: 92%
- ChatGPT has enhanced writing abilities: 50%
- ChatGPT has enriched grammar and vocabulary: 60%
- ChatGPT has improved writing quality: 60%
- ChatGPT saves time and helps finish assignments faster: 80%
- ChatGPT assisted in understanding complex grammar: 60%
- ChatGPT helped write more cohesively: 72%
- More encouraged and motivated to write assignments: 56%
- Prefer using technology over traditional methods: 64%
- Overall positive attitude towards using ChatGPT: 68%
- AI is essential for improving academic writing: 66%
- ChatGPT generates inaccurate information: 54%
- Concerned about over-relying on ChatGPT: 64%
- Concerned that depending on ChatGPT will hinder critical thinking: 50%
- Difficulties finding resources to verify information: 52%

5.2 Qualitative Results from the Questionnaire

Open-ended responses revealed that students primarily use ChatGPT for paraphrasing, generating ideas, understanding difficult concepts, and obtaining general overviews. Positive impacts reported included vocabulary expansion, grammar improvement, enhanced cohesion and coherence, timesavings, and improved writing organisation. Negative concerns included over-reliance leading to reduced critical thinking, potential plagiarism, inaccurate information, and diminished confidence in independent writing. Many students demonstrated awareness of the need to use ChatGPT cautiously and not rely on it entirely.

5.3 Qualitative Results from Interviews with Instructors

Interviews with ten English language instructors revealed that all but one confirmed students use AI in their writing. Eight instructors identified ChatGPT as the most common AI tool used by students. Regarding positive impacts, instructors reported that ChatGPT helps students imitate academic writing structure, suggests vocabulary and sentence structure, corrects language mistakes, generates ideas, highlights mistakes, organises ideas logically, and assists with editing and paraphrasing.

Negative impacts identified by instructors included increased dependence on machines, generation of full essays with no student involvement, plagiarism, heavy reliance without proper improvement, writer's block due to always relying on AI for ideas, inability to think and write independently, and overall dependency.

Regarding recommendations, four instructors did not recommend ChatGPT usage, while six recommended it under conditions including ethical use, awareness of limits, using for editing rather than writing from scratch, and being cautious and mindful. When asked about helpful AI tools, responses varied, with several instructors indicating limited knowledge of available AI applications.

6. Discussion

6.1 Students' Usage of AI-Powered Tools

The finding that 84% of students frequently use AI-powered writing tools aligns with Almassaad et al. (2024), who reported 78.7% of participants use generative AI tools in writing. ChatGPT emerged as the most popular tool, consistent with previous research, though Quill Bot was found to be the second most frequently used, suggesting students are exploring various AI-based tools to enhance their academic work.

A significant majority (80%) agreed that ChatGPT helps complete tasks more quickly, consistent with Zohery (2023) and Alshater (2022) regarding time-saving benefits. Additionally, 58% of students reported being motivated to write assignments using ChatGPT, and 64% preferred integrating AI technology over traditional methods, aligning with Utami et al. (2023), Laili et al. (2024), Phan (2023), and Keumalasari et al. (2024).

6.2 Critical Thinking and Over-Reliance Concerns

Fifty percent of participants expressed concern that using ChatGPT would hinder their critical thinking skills, and 64% were concerned about over-reliance. Student responses demonstrated awareness of these potential drawbacks, with comments such as: "Using ChatGPT has reduced my critical thinking," "ChatGPT can weaken writing skills by making you over-reliant on it," and "My critical and creative thinking has decreased." This awareness is crucial for leveraging AI technology while avoiding its pitfalls. However, 38% believed ChatGPT had enhanced their cognitive thought, consistent with Almassaad et al. (2024) who reported 55% agreed their critical thinking had been enhanced. This suggests that appropriate use of AI may encourage critical thinking, while over-reliance impairs cognitive processes (Wang et al., 2024).

6.3 Information-Related Issues

Fifty-four percent of students agreed that ChatGPT generates inaccurate information, consistent with Almassaad et al. (2024) regarding misinformation as a primary challenge. Fifty-two percent reported difficulties finding proper resources to validate information. These findings align with Alshater (2022) and Islam and Islam (2024) regarding ChatGPT's limitations. Students demonstrated AI literacy in their responses, noting that references cannot be trusted and that the AI often provides general responses without regard for accuracy.

6.4 Extent of Student Use

Students primarily use ChatGPT to clarify concepts (80%), summarise (64%), and proofread (54%). Other uses include translation (44%), selecting resources and references (42%), editing (30%), and paraphrasing (28%). These findings align with Almassaad et al. (2024). Notably, one student reported using ChatGPT for code generation, reflecting the expanding integration of AI technologies in academic settings (Pan et al., 2024).

6.5 Student Perceptions of Impact

Fifty percent of students agreed that ChatGPT positively enhanced their writing ability, and 60% reported improved writing quality. Sixty percent agreed that vocabulary and grammar had been enriched, and 60% reported assistance in understanding complex grammar. These findings align with Islam and Islam (2024), Alshater (2022), Phan (2023), and Laili et al. (2024). Regarding cohesion, 72% reported improved cohesive writing, addressing a gap in previous literature. Overall, 68% expressed positive attitudes toward ChatGPT, and 66% agreed that AI integration in education can improve academic writing, consistent with Keumalasari et al. (2024).

6.6 Instructor Perceptions

Eight of ten instructors identified ChatGPT as the most common AI tool used by students. However, when asked about helpful AI tools for writing, four instructors indicated limited knowledge, revealing a gap in AI literacy among educators. This highlights the need for instructors to enrich their knowledge of AI applications, as emphasised by Gabriel et al. (2022) and Aldosari (2020).

Instructors identified positive impacts including sentence structure suggestion, mistake correction, language learning tool functionality, and idea generation. These align with Alshater (2022), Utami et al. (2023), Baidoo-Anu and Ansah (2023), and Islam and Islam (2024). Overdependence was the dominant concern regarding negative impacts, with instructors expressing that

students generate full essays with no involvement, suffer from writer's block, and become unable to think independently. Plagiarism was also highlighted as a serious concern, consistent with Alshater (2022), Islam and Islam (2024), Utami et al. (2023), and Laili et al. (2024).

Regarding recommendations, six instructors recommended ChatGPT usage under conditions including ethical use, awareness of limits, and using for editing rather than writing from scratch. This underscores the importance of instructor guidance and AI literacy (Chan & Tsi, 2023).

7. Conclusion

This study aimed to explore students' and instructors' views on integrating and utilising AI technology, specifically ChatGPT, in academic contexts. The research focused on language learners in higher education and their attitudes towards utilising ChatGPT as a writing assistant tool. The investigation revealed the purposes for which students use ChatGPT, the benefits and drawbacks encountered, and the perceptions of both students and instructors.

Unlike previous research emphasising students' overdependence on AI writing tools (Wang et al., 2024; Alshater, 2022; Islam & Islam, 2024; Utami et al., 2023; Laili et al., 2024), surveyed students in the current study exhibited a high level of awareness of how to properly utilise ChatGPT while considering crucial elements such as benefits and limitations, information privacy, plagiarism, and academic honesty. However, it is essential for instructors to attain an equivalent level of understanding and integration of AI tools, in addition to staying up-to-date with AI-based learning tools to optimise the advantages of such technology.

AI is now permanently engaged in education and cannot be ignored. As it plays a significant role in enhancing the learning process, particularly in language learning, the study emphasises the importance of cultivating AI literacy among learners and instructors to utilise this technology effectively. The findings revealed insights not reported in previous research by merging the perceptions of both students and instructors, thus, contributing to techniques that promote successful learning and teaching processes.

8. Limitations

Several limitations must be considered. First, the examined sample is small, potentially affecting generalisability of results. Second, the study focuses exclusively on English language students and instructors in higher education; students with other specialisations and instructors from other majors are outside the scope of this research. Third, the impact of utilising AI technology may differ for students with limited English language proficiency. Finally, the study does not account for other AI assistant writing tools that may offer additional writing-related techniques not reported here.

9. Recommendations for Future Research

Further research may examine students in other specialisations who aim to enhance their performance in the English language. Another recommendation is to investigate the role of ChatGPT in enhancing users' technical skills. From the authors' perspective, overdependence on AI assistance in writing has profound implications for language learners in particular. One of the most harmful consequences is limiting students' cognitive skills. Therefore, it is crucial to examine whether over-reliance on automated assistance leads to barriers that prevent language learners from achieving native-like fluency, namely, language fossilisation.

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