

Exploring Higher Education EFL Students' Perception of AI Writing Tools in the 5.0 Era

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Abstract

This study explores the perceptions of English as a Foreign Language (EFL) students in higher education regarding artificial intelligence writing tools (AIWTs) in the context of Era 5.0. The research aims to understand how AIWTs influence writing quality, efficiency, and creativity among EFL students. Employing a mixed-methods approach, it examines the types of AIWTs used, students' perspectives on their benefits and drawbacks, and the overall value they bring to EFL writing. A total of twenty students from the English education study program at the State Islamic University of North Sumatra, Medan, participated in an online questionnaire aimed at investigating their perceptions on the use of AIWTs in Era 5.0. The findings highlight that EFL students perceive AIWTs as beneficial for enhancing writing quality, speeding up the writing process, and fostering creativity. However, concerns about potential limitations on creativity are also expressed. Despite this, AIWTs are generally regarded as valuable tools for EFL students in higher education. The study offers a reasonable strategy for using AIWTs to guarantee academic performance while maintaining writing creativity.

Keywords: EFL Students; Higher Education; Artificial Intelligence Writing Tools (AIWTs)

Abstrak

Penelitian ini mengeksplorasi persepsi mahasiswa Bahasa Inggris sebagai Bahasa Asing (EFL) di perguruan tinggi mengenai alat bantu menulis berbasis kecerdasan buatan (AIWTs) dalam konteks Era 5.0. Penelitian ini bertujuan untuk memahami bagaimana AIWTs mempengaruhi kualitas, efisiensi, dan kreativitas menulis di kalangan mahasiswa EFL. Dengan menggunakan pendekatan metode campuran, penelitian ini meneliti jenis-jenis AIWTs yang digunakan, perspektif siswa tentang manfaat dan kekurangannya, dan nilai keseluruhan yang mereka bawa ke dalam penulisan EFL. Sebanyak dua puluh siswa dari program studi pendidikan bahasa Inggris di Universitas Islam Negeri Sumatera Utara, Medan, berpartisipasi dalam kuesioner online yang bertujuan untuk menyelidiki persepsi mereka tentang penggunaan AIWTs di Era 5.0. Temuan menyoroti bahwa siswa EFL menganggap AIWTs bermanfaat untuk meningkatkan kualitas tulisan, mempercepat proses penulisan, dan menumbuhkan kreativitas. Namun, kekhawatiran tentang potensi keterbatasan kreativitas juga diungkapkan. Meskipun demikian, AIWTs secara umum dianggap sebagai alat yang berharga bagi siswa EFL di perguruan tinggi. Penelitian ini menawarkan strategi yang masuk akal untuk menggunakan AIWTs untuk menjamin kinerja akademik sambil mempertahankan kreativitas menulis.

Kata Kunci: Siswa EFL; Pendidikan Tinggi; Alat Penulisan Kecerdasan Buatan (AIWTs)

Introduction

Using Artificial Intelligence Writing Tools (AIWTs) in the 5.0 era has become commonplace among English as a Foreign Language (EFL) students. AIWTs include being used as grammar checks, plagiarism checks, and to create scientific papers without human intervention. With the rise of AI technologies, a new generation of writing tools has emerged to assist users in the process of writing (Marzuki, Widiati, Rusdin, Darwin, & Indrawati, 2023).

AIWTs have emerged as a cutting-edge solution that aims to transform the analysis and processing of textual materials in the fields of digital innovation and educational technology. Generally, AIWTs aim to analyze written materials, such as grammar, vocabulary, syntax, content, and sentence structure (Hosseini, Rasmussen, & Resnik, 2023; Thorp, 2023). This transformation leads to significant benefits; AI writing tools streamline the writing process, saving students and educators time and effort. Additionally, their user-friendly interfaces make them accessible to a wide audience (Chang, Li, Huang, & Whitfield, 2021).

Research on AIWTs continues to be a hot topic among researchers because, in this Era 5.0, AIWTs continue to significantly release sophisticated innovations that are very helpful in writing. Research studies were conducted to find out how applicable AIWTs are in this 5.0 era. These studies then produce different opinions. Some studies suggest that the use of AI-powered writing tools can help students improve their writing skills (Kurniati & Fithriani, 2022; Syahnaz & Fithriani, 2023; Wang, 2022; Zhao, 2023), while other studies express concerns about the side effects of such tools (Liu et al., 2022; Lund & Wang, 2023; Qadir, 2023). However, other findings suggest that while AIWTs can assist in writing, they cannot replace the need for human creativity, critical thinking, and writing skills themselves (Hz et al., 2023).

Despite the findings of previous studies, this research will focus on what types of AIWTs are used by EFL students and how EFL students perceive the use of AIWTs in Era 5.0. This research will look at how there is a lack of research exploring EFL students' perspectives on their perceptions of the use of AIWTs and their impact on EFL students' writing outcomes. While there is research on the effectiveness and impact of AIWTs on students' writing according to teachers' perceptions (Kim & Kim, 2022; Marzuki et al., 2023), there is still a lack of research that specifically focuses on the perceptions of EFL students themselves and studies that do not explicitly explore the advancements and new features of AIWTs. This study aims to fill this gap by providing insights into the impact of using AIWTs on writing from EFL students' perceptions and an exploration of the types of advancements of AIWTs in the 5.0 Era.

Therefore the research questions that guided the development of this study are as follows; what types of AIWTs used by EFL students' in the 5.0 Era? And how EFL students' apprehend the impact of AIWTs on writing?

Method

The research method used in this study is a qualitative approach with a case study. As qualitative research, case studies can provide an opportunity for researchers to explore and describe phenomena in context using data sources (Yin, 2018). Specifically, This method was chosen because it allows researchers to explore and describe students' perceptions of Artificial Intelligence Writing Tools (AIWTs) in depth, thus providing contextualized and rich insights. Data was collected through online questionnaires and face-to-face interviews, which were conducted on campus over a three-month period to collect data from students using AIWTs. This study was carried out at the English Education Study Program, North Sumatera State Islamic University, Medan, Indonesia,

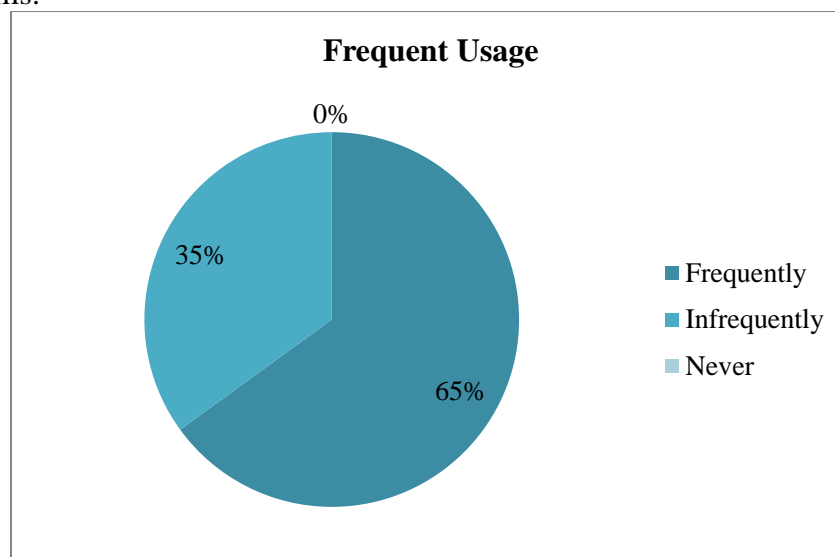
over a three-month period. The research procedure involved recruiting twenty EFL students from the English study program at Universitas Islam Negeri Sumatera Utara, Medan, who had experience using AIWTs in their writing programs. Data collection was conducted through an online questionnaire and face-to-face interviews, with participants selected based on accessibility, experience, and willingness to participate. The questionnaire evaluated the experience of using AIWTs, the frequency of using AIWTs, their perceived effectiveness, and related expectations and concerns. Next, four participants selected from the pool of questionnaire respondents were invited to participate in in-depth face-to-face interviews. The interview participant selection process focused on obtaining diverse and in-depth perspectives on students' experiences with AIWTs. Interviews were scheduled at the convenience and availability of the participants.

Result and Discussion

1. The Practice of AIWTs in 5.0 Era

a. Usage Patterns of AIWTs Among Students: An Analysis of Frequency

The findings from the questionnaire provide an interesting picture of the use of Artificial Intelligence Writing Tools (AIWTs) among English as a Foreign Language (EFL) students. A total of 65% of EFL students regularly and actively use AIWTs in the writing process, indicating a significant level of acceptance. This high frequency of use suggests that AIWTs are effective in supporting writing activities and provide benefits to EFL students in producing quality content. They consider AIWTs an important tools in improving writing quality, speeding up the writing process, helping with idea generation, error correction, and enhancing creativity in writing in the 5.0 era (Kurniati & Fithriani, 2022; Z. Liu, 2021; Syahnaz & Fithriani, 2023; Wang, 2022; Zhao, 2023). This underlined the great contribution of AIWTs in helping and improving EFL students' writing skills.



Graphic 1. Frequency of use of AIWTs among EFL students

On the other hand, approximately one-third of the respondents, or 35%, use AIWTs less frequently. However, these figures still show that EFL students accept and use this technology, although not as often as most students. There were no respondents who had never used AIWTs, indicating that this technology has become part of EFL students' overall writing lives. This also explains that technology can be used to enhance learning by providing tools and resources that can help individuals learn more effectively and efficiently, which then proves the development of artificial intelligence (AI)

technology in the context of education, where the emergence of AIWTs has provided important support for users in improving their writing ability and developing their writing skills (Coenen, Davis, Ippolito, Reif, & Yuan, 2021). Overall, these findings suggest that AIWTs have an important role in supporting EFL students' writing processes, both as an actively used tool and at a more limited level of use.

b. Comprehensive Insights into AIWTs: Types, Usage Patterns, User Experiences and Gender Dynamics

This extensive study provides a detailed examination of Artificial Intelligence Writing Tools (AIWTs) used by English as a Foreign Language (EFL) students. Researchers and educators in the field of writing have created and developed various artificial intelligence-enabled tools to improve students' writing skills. Such types of AIWTs include intelligent writing assistants, educational chatbots, and automatic automated writing evaluation systems, with the aim of improving students' writing skills (Woo, Susanto, Yeung, Guo, & ..., 2023). The results reveal various findings related to the types of AIWTs, usage patterns, user experiences, and gender dynamics. Among the EFL students surveyed, Chat GPT was the most commonly used AIWTs, chosen by 13 respondents. Perplexity was the second most popular, with 10 users, followed by Humata with 6 users. This shows the diverse preferences for AIWTs.

Table 1. Types, User Experiences and Gender Dynamics

No	Gender	Experience	Types
1	FL	1 yr	Chat GPT, Perplexity
2	FL	2 mos	Chat GPT
3	FL	1 mos	Bard
4	ML	1,5 yr	Chat GPT, Humata, Paperpal,
5	FL	4 mos	Chat GPT
6	ML	6 mos	Chat GPT, Humata
7	ML	1 yr	Chat GPT, Perplexity`
8	FL	9 mos	Chat GPT
9	ML	3 mos	Perplexity
10	FL	1 yr	Perplexity, Claude AI, Bing AI
11	FL	5 mos	Humata
12	ML	5 mos	Chat GPT
13	ML	1,3 yr	Chat GPT, Perplexity, Humata,
14	ML	6 mos	Perplexity
15	FL	4 mos	Perplexity, Bing AI
16	FL	2 yrs	Chat GPT, perpelxity, Som AI, Humata
17	FL	1 yr	Chat GPT, Perplexity, easy-peasy AI
18	FL	3 mos	Chat GPT
19	ML	6 mos	Chat GPT, Humata
20	ML	3 mos	Perplexity

EFL students had a clear pattern of usage based on the features they chose to favor. Among them, suggestive writing was the most popular choice among EFL students, favored by 13 respondents, while ideation support came in second with 8 respondents. The choice of these features highlights the importance of AIWT's functions that enhance the creative process and idea generation during the writing process that start from the idea expansion, inspiration and prompting, content generation, and creative writing assistance (Adams & Chuah, 2023). When looking at the user experience, it shows that most of the EFL students (7 people) have been using AIWTs for more than a year, indicating continuous engagement.

Significantly, those who have been using AIWTs for a longer time tend to explore a wider variety of AIWTs types. This suggests an evolving and experimental approach to these tools. The main purposes for which EFL students use AIWTs are indicated, with 14 respondents using these tools to create written content and 6 respondents using them for learning purposes. However, it is important to note that the level of user proficiency plays an important role in determining the effectiveness of AIWTs from a user experience perspective (Hz et al., 2023). Therefore, an in-depth understanding of the user experience is key to developing effective AIWTs, ensuring that these tools can be optimally used by different levels of user proficiency. Regarding gender dynamics, most of the respondents were female (11 people), while there were fewer males (9 people). Interestingly, the data shows the difficulty in finding important gender-related differences in the use of AIWTs (Marzuki et al., 2023). That is, the findings suggest that there is no significant variation between men and women in how they use or utilize AIWTs technology. This suggests that AIWTs can meet the needs of users from different gender backgrounds and demonstrate their inclusive nature. The findings are impactful, showing that these technologies can offer equal benefits without overemphasizing gender differences among users. This extensive research presents a detailed picture of the acceptance of AIWTs, demonstrating diversity, choice, and inclusiveness within the EFL student community. Due to the limited amount of data obtained, this research can only provide a preliminary trend and should not be considered a definitive conclusion.

2. Students' Perceptions of AIWTs in the 5.0 Era

This section will explore the findings from the interviews conducted by the researcher on EFL students' perspectives on AIWTs in Era 5.0.

a. The Role of AIWTs in the 5.0 Era

English as a Foreign Language (EFL) students as participants responded positively to the use of Artificial Intelligence Writing Tools (AIWTs) in this 5.0 period. For example, P1 believed that AIWTs provide great value and play an important role in providing support for writing tasks for both students and teachers. This belief arises because AIWTs are able to provide more precise content than by relying solely on their own ideas. Therefore, the existence of AIWTs is not just a tool but also has a significant impact on boosting users' confidence (Syahnaz & Fithriani, 2023), making them more confident and efficient in exploring and articulating their thoughts during the writing process.

For me, AIWTs play an important role in 5.0 Era because AIWTs are in fact needed for students like me. Its role not only limited to the context of writing. AIWTs also affect the level of confidence, by using AIWTs, I will feel that the resulting writing will be better than if I write it myself. (P1)

In addition, P2 highlighted the significant importance of AIWTs for students, focusing on various aspects, especially support at different stages of writing. According to P2, AIWTs are key in providing important assistance, especially guiding students in answering questions that are relevant and related to the topic they are writing about. In addition, P2 illustrated that the existence of AIWTs is very important in this modern era because this tool is not only a complement but also a critical element in determining the success of scientific work. AIWTs can assist students in structuring their writing by providing suggestions for better organization and coherence (Song & Song, 2023), to clarify and define the content of research and significantly guide students more effectively in the process of research, analysis, and writing. Therefore, the importance of AIWTs lies not only in their ease of use but also in their general impact on shaping the quality of academic writing in the current Era 5.0.

Today, AIWTs are extremely important. They assist students like me by responding to questions about writing themes and providing broad direction while composing scientific papers. In Era 5.0, they are very essential. (P2)

P3 expanded knowledge by explaining the role of AIWTs in idea generation, paraphrasing, typo correction, and punctuation correction, in line with P2's emphasis on the important role of AIWTs in various aspects of writing. P3 also emphasized the ability of AIWTs to enhance writers' creativity, detail arguments, and structure logical thoughts. In addition, AIWTs have the advantage of translating and producing effective scholarly works, which adds value in a globalized world. According to P3, AIWTs are not just writing aids; they are multifunctional assistants that help writers become more productive, save time, and overall improve the quality of writing by creating an environment where efficiency and creativity complement each other.

AIWTs in this era can help develop writing ideas. AIWTs also can analyze spelling mistakes, punctuation, sentence structure and able to produce scientific writing, this shows how important the role of AIWTs is in this era where something instant is very popular. (P3)

AIWTs are considered essential for improving and accelerating the writing process in the 5.0 era. AIWTs facilitate rapid and high-quality content creation, utilizing cutting-edge technology that aligns with the advancement of Era 5.0. In line with what P4 believes in his interview, AIWTs are currently considered important to streamline and accelerate the writing process in the 5.0 era. This is important because it enables fast and high-quality content creation using cutting-edge technology, in line with the development of the Web 5.0 era.

As a student i would say AIWTs are essential since they help with theme understanding, writing scientific papers, and gaining a broad perspective. In Era 5.0, their significance is increased because they provide priceless support for a range of academic assignments. (P4)

In conclusion, EFL students recognized the positive and significant contribution of Artificial Intelligence Writing Tools (AIWTs) in Era 5.0. They recognized the positive and significant contribution of AIWTs to assistance in the writing process. The findings showed that AIWTs can provide personalized feedback and relevant suggestions, while also boosting EFL students' confidence in academic writing (Syahnaz & Fithriani, 2023; Zhao, 2023). Thus, the use of AIWTs not only helps improve EFL students' writing skills but also boosts their self-confidence. With the support of AIWTs, EFL students can learn more effectively and efficiently, achieving better results in their writing abilities.

b. EFL Students' Response to the Use of AIWTs

One of the important things about the presence of AIWTs among EFL students is whether they accept AIWTs as a tool that helps them to write. The results show that most students have a favorable reaction to the involvement of AIWTs in the writing process. They viewed AIWTs as a partner that could improve the efficiency and quality of writing, in addition to being a supplementary tool. P1 expressed her happiness with the use of AIWTs and how the tool managed to cover up flaws in her writing. This encouraging statement implies that AIWTs played a big role in helping this EFL student overcome personal writing barriers.

I am very happy because the use of AIWTs covered my shortcomings in writing. (P1)

In contrast to P1, who accepted and expressed her excitement about how AIWTs helped her writing activities, P2 accepted AIWTs to help her writing but emphasized caution and avoiding total dependence when using AIWTs to trigger ideas and gain broader perspectives for replies in academic writing. The practical implication of these

findings is the need for a balanced approach to the use of AIWTs in higher education that utilizes the benefits of technology without sacrificing creativity and originality in writing (Hz et al., 2023). Therefore, instead of solely relying on the information generated by AIWTs, it is important to strategically use AIWTs as a tool to gain inspiration and a broader understanding in order to understand the value of research and the purpose of writing (Hz et al., 2023).

I try to make the best use of it, but I don't rely entirely on the AIWTs. Maybe the simple use of AIWTs is more to stimulate or see the big picture for the answer to a question or in the context of writing scientific papers. So I don't just use the results of using the AIWTs. (P2)

Just as P1 responded positively to the role of AIWTs in writing, P3 also acknowledged that AI writing tools have made the writing process easier. P3 pointed out the main advantage, which is the increased speed of completing writing tasks. With AIWTs, EFL students can learn to write at their own pace and needs, creating a more flexible and customized learning environment, making this approach preferable to conventional writing instruction (Zhao, 2023). This shows that AIWTs not only enrich participants' writing experience but also improve their efficiency in completing writing tasks. As a result, AIWTs not only help the quality of writing but also help participants optimize the use of their time in the creative writing process. This creates an environment that supports efficiency and productivity in the modern era.

AIWTs greatly help me as an EFL student in college. AIWTs make it easier for me to write. The main thing I feel after AIWTs is that my writing assignments are completed faster. (P3)

Then, finally, there is P4, who shows a positive response and supports the implementation of AIWTs in Era 5.0. P4 believes that these resources increase his writing productivity and improve the quality of his writing. Although there may be differences of opinion among the participants, most people recognize and acknowledge the advantages of AIWTs, especially in terms of generating creative ideas and providing the necessary language support. P4 emphasized that by applying AIWTs, writers can more effectively expand the scope of their thinking and overcome language challenges. Therefore, AIWTs exist not only as a tool but also as a useful partner in improving writing skills. P4 explains that AIWTs have enabled deeper understanding of ideas and better language skills, making them essential tools to meet the increasingly complex demands of Era 5.0.

As an EFL student in college, I and most of my peers respond positively to the use of AIWTs in Era 5.0.... (P4)

The results of the implementation of AIWTs showed acceptance and positive responses among EFL students. Furthermore, These findings support previous research that shows that digital writing tools can improve the quality of writing in English (Nobles & Paganucci, 2015), This shows how important it is to use technology in language learning, especially in distance learning, which is increasingly popular in Era 5.0. Students viewed AIWTs as helpful collaborators who could improve writing productivity and quality. They see them as an additional resource that helps overcome individual writing barriers. The interview results showed that students understood the importance of using AIWTs strategically to spark ideas and achieve common understanding, despite differences in viewpoints, such as P2's suggestion not to rely solely on AIWTs. It was clear from P1's happy response and P3's increased writing productivity that AIWTs were beneficial to EFL students' writing processes. Overall, these results suggest that, in the context of higher education in Era 5.0, AIWTs play an important role in encouraging idea generation, accelerating writing, and improving writing quality.

c. EFL Students' Perceived Use of AIWTs in the Writing Aspect

The responses from the four students (P1, P2, P3, and P4) contained various opinions regarding the exact impact of using AIWTs in Era 5.0 on the writing produced. P1, for example, highlighted the beneficial impact of AIWTs, specifically in increasing lexical diversity. According to P1, AIWTs provide a wide variety of language alternatives that can be used in writing, so that writing has diverse language equivalents and structured content. AIWTs also help EFL students increase their familiarity with the language itself.

AIWTs significantly influence my writing by expanding vocabulary with a variety of word choices, improving lexical diversity... hence greatly enhancing writing productivity. (P1)

P2 further revealed that she realized AIWTs have various benefits for helping her write. According to her, AIWTs helped bring many benefits to her writing. The resulting sentences flow better, and the relationship between ideas is clearly established so that it shows cohesion in the writing. P1 and P2 expressed similar opinions regarding AIWTs that offer a range of language suggestions for writing. However, there is a difference of opinion between the two. P1 argues that AIWTs are easy to understand in context so as to provide appropriate writing suggestions, unlike P2, who argues that AIWTs sometimes do not fit the context of the writing and make it confusing. This shows that there is a significant difference of opinion between the two.

AIWTs enhance vocabulary and expand writing, ensuring consistent continuity between paragraphs. However, certain sentences may not fit the context; I need to double-check the results and then correct them manually to make my writing more better. (P2)

In the third interview result, P3 mentioned that AIWTs had a good impact by helping to organize the writing of ideas through the use of effective transition words and phrases. In addition, AIWTs offered immediate assessment, which helped P3 incorporate explicit transitional features, thus improving the structure and clarity of her writing. P3 also emphasized the advantages of AIWTs in speeding up and improving the efficiency of the task-writing process. In general, P3 saw the positive impact of AIWTs on improving aspects of quality and efficiency.

As an EFL student, AIWTs had a good impact on my writing. AIWTs helped me to connect my writing ideas logically by using good transition words and phrases. AIWTs make it easier for me to organize my assignments more quickly and efficiently. (P3)

In his closing remarks, P4 provided insight into the positive and negative impacts of using AIWTs. P4 emphasized the positive aspects of AIWTs, noting that AIWTs can improve the content of her writing through their ability to understand the context of the theme and provide relevant text suggestions. However, P4 also expressed concern about the possibility that reliance on AIWTs could reduce the level of creativity in writing. P4 emphasized that since freedom of creative thinking is still essential to producing quality writing, P4 faces the challenge of making optimal use of this technology without compromising the creative aspect and originality of the writing process.

AIWTs have a beneficial effect on my writing by suggesting contextually fitting sentences. However, the dependence on AIWTs gives rise to apprehension regarding diminished creativity, even when they aid in comprehending issues and offering diverse alternatives. (P4)

The findings of the interviews with the EFL students (P1, P2, P3, and P4) revealed diverse perspectives on the effect of utilizing AIWTs in Era 5.0 on their writing. P1 experienced an increase in the variety of spoken words and the level of familiarity with the language. P2 agreed with the advantages but pointed out the inappropriateness of

AIWTs in providing writing content appropriate to the writing context. P3 highlighted the increased efficiency of organization and writing with the use of AIWTs. P4 experienced improvements in textual material but also had concerns about factors that could limit innovation. The research findings highlight the importance of AIWTs in improving the quality and efficiency of EFL students' writing in higher education. This is in line with previous findings showing that the use of AI technology can provide significant support for learning and developing writing skills (Kurniati & Fithriani, 2022; Syahnaz & Fithriani, 2023; Wang, 2022; Zhao, 2023). However, some previous studies have raised concerns about the reliance on AIWTs, suggesting that it may reduce creativity in writing (Y. Liu et al., 2022; Lund & Wang, 2023; Qadir, 2023). Overall, AIWTs had a beneficial impact on the quality of writing, despite certain considerations and concerns regarding their use.

Conclusion

The results of this study highlight on how English as a Foreign Language (EFL) apprehend the impact of artificial intelligence writing tools (AIWTs) in improving their writing quality and efficiency in higher education institutions. With the help of AIWTs, most EFL students were able to use tools that helped them in various aspects of writing, such as enhancing their creativity and correcting their mistakes. This is in line with the results of previous studies, which show that the use of artificial intelligence technology makes a significant contribution to writing skill development and learning. However, it is important to keep in mind that relying on AIWTs can also diminish creativity in writing. Therefore, to ensure that originality in writing is not compromised, a balanced approach to the use of AIWTs in universities is essential. Therefore, these results have practical consequences; there needs to be a balanced approach to using AIWTs. This will help EFL students improve their writing skills and increase their confidence in academic writing. The use of AIWTs can enrich EFL students' learning experience in higher education, enabling them to achieve better results in the development of EFL students' writing skills because AIWTs not only allow them to learn independently and actively but also provide feedback that is relevant and tailored to each student's writing needs.

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