

A Case Study in Indonesia: Exploring AI Readiness in Business Students Toward English Writing

Sangaji Yudhi Pratama¹, Tan Michael Chandra²

¹ Universitas Pignatelli Triputra, Surakarta, Indonesia; sangajiyudhi10@gmail.com

² Universitas Pignatelli Triputra, Surakarta, Indonesia; tanmichaelc@gmail.com

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ABSTRACT

In the digital era, AI (Artificial Intelligence) finds application in various fields, with education being prominent. In the context of English for Specific Purposes (ESP) practice, AI readiness can potentially enhance learning. The research aimed to investigate students' familiarity with AI and identify the obstacles ESP students face. Moreover, it was a case study research conducted at tertiary level in some universities in Indonesia. The participants in this study were Business English writing students and data were collected through questionnaires and interviews. The results revealed that students were unfamiliar with the use of AI in their environment for various reasons, indicating that they encountered challenges when integrating AI into their learning. Majority students showed a high willingness to use AI in their business English writing learning. Consequently, the research suggests an alternative approach to enhance learning by incorporating AI, which can help overcome the challenges faced by students when integrating AI into their learning.

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Corresponding Author:

Sangaji Yudhi Pratama

Universitas Pignatelli Triputra, Surakarta, Indonesia; sangajiyudhi10@gmail.com

1. INTRODUCTION

As English has become an essential subject in education systems worldwide (Wedell & Grassik, 2020), English has now become "the global language of business" (Neeley, 2012). A certain proficiency level in English is necessary for success in a global business career (Heckadon & Tuzlukova, 2021). Therefore, it is crucial for individuals to develop their English language skills if they want to seize opportunities for professional growth and success in today's interconnected global economy, especially in Business English Writing.

Business English Writing for students is widely regarded as a vital competence for both academic success and professional life (Hiranburana, 2017; Jitpanich, 2022; Heckadon & Tuzlukova, 2021; Wang & Fan, 2020). In the academic context, writing is the most commonly assessed skill area to evaluate students' performance (Hidayati, 2018). In most tertiary educational institutions, competence in writing clearly and effectively in English is a prominent learning outcome (Sparks, Song, Brantley, & Liu, 2014). By developing proficiency in Business English writing during their academic years, students can cultivate essential skills such as clarity, coherence, and conciseness in their written expression. These skills are vital for academic success and transferable to various professional contexts, including job applications,

internships, and workplace communication. While in business context, proficiency in Business English Writing is highly valued by employers as it ensures effective communication with clients and colleagues (Jitpanich, 2022). Effective written communication is integral to various aspects of business, including drafting emails, creating reports, composing proposals, and crafting marketing materials. Thus, proficiency in Business English writing is not only a cornerstone of academic success but also a crucial skill for professionals aiming to compete in the global workforce.

However, writing is particularly challenging for Indonesian students (Toba et al., 2019). They exhibit a low proficiency in several writing aspects, such as organizing sentences and building vocabulary (Toba et al., 2019; Nurlatifah & Yusuf, 2022). The students' challenges in writing are caused by various factors. Firstly, they have a low ability in writing and lack practice in this aspect. They also dislike writing and have low motivation for it. Additionally, they experience writing anxiety, have negative writing perceptions, and are limited by time when taking writing tests. Other reasons for their writing anxiety are the difficulties they face in linguistics, inadequate writing technique and practice, lack of knowledge of writing topics, and time pressure (Wahyuni & Umam, 2017). Such challenges resonate within language learners' writing context, where issues related to sentence organization and vocabulary growth are recurrent hurdles that hold paramount importance (Ahmadian et al., 2015).

The students may also be negatively influenced by untrained writing instructors, ineffective teaching methods, insufficient writing examination systems, limited reading and writing practice, large class sizes, low motivation, and limited ideas (Toba et al., 2019). This negative attitude toward academic writing and apprehension towards writing activities make it clear that writing is challenging to master (Setyowati & Sukmawan, 2016). Consequently, this issue will be problematic when graduates face the stakeholder's expectations. Therefore, teachers must adopt innovative approaches and modern technology to improve writing teaching and effectively overcome barriers.

A good teacher can make a big difference in a student's life by equipping them with future-focused capabilities (Renandya & Jacobs, 2021; Geertshuis, Wass, Liu, 2022). To tackle this challenge, teachers can integrate AI-powered tools such as chatbots and Generative AI, which is recently being explored and has the potential to assist students (Luckin et al., 2021; Chan, 2023; Guo et al., 2022; Su, Lin, & Lai, 2023). One example of an AI-powered tool widely used in assisting students is ChatGPT (Kohnke, Moorhouse & Zou, 2023; Chan & Hu, 2023). This tool generates human-like responses to a wide range of text-based inputs. It has been trained on diverse written texts (Chan, 2023), providing tailored feedback on students' written work (Barrot, 2023) and assisting the writing process (Yan, 2023).

Alongside advances in technology, there are numerous researchers performed researches towards the implementation of AI-powered tools such as chatbots, generative AI, or a combination of both has been widely used to support English learning and teaching (Ma & Yan, 2021; Haristiani & Rifai, 2023; Yan, 2023; Roe, Jacobs & Renandya, 2023). The reason for using AI technologies is that they can be helpful in saving time, which can then be utilized by teachers so they can focus on addressing students' learning needs (Luckin, 2022; Chan, 2023). In addition, using AI can aid teachers in evaluating students' performance. With advancements in natural language processing, AI can be utilized for tasks such as identifying plagiarism, scoring assessments, and providing automated feedback. (Chen, Chen & Lin, 2020; Goksel and Bozkurt, 2019).

In language teaching and learning, AI-powered tools have fostered learners' capabilities, engaged language learners, and helped them sustain their motivation (Kohnke, Moorhouse & Zou, 2023; Luckin, 2022). The continual research by Fryer et al. (2017; 2019; 2022) indicated that the use of chatbots is proven to be useful in language learning in terms of technological affordances, including timeliness, ease of use, and personalization. Moreover, they proposed five pedagogical uses: as interlocutors, as simulations, for transmission, as helplines, and for recommendations for education. Several challenges in using chatbots were identified: technological limitations, the novelty effect, and cognitive load. Another example of using a chatbot was conducted by Zhang, Zou, and Cheng (2023), who developed a chatbot for out-of-classroom to promote self-directed learning for the learners in argumentative writing for EFL students. The results

showed that the training on logical fallacies might improve EFL argumentative writing proficiency, although it might reduce writing self-efficacy.

Whereas chatbots have been largely studied, other types of AI, such as generative AI, can also be implemented in English learning. Hwang et al. (2023) developed a generative AI application called Ubiquitous English (English) that can generate meaningful questions and clarifications to trigger learners to write English more. The results revealed that the students' learning with the application significantly developed their learning behaviors and post-tests, and they could write more meaningful words in the assignments.

Recently, a generative AI-powered chatbot posed by ChatGPT has emerged with new challenges and opportunities (Rettberg, 2023). As Atlas (2023) emphasized, Text-to-text AI generators such as ChatGPT can assist students, especially non-native students, by enabling them to brainstorm ideas and get feedback on their writing through applications. Although the integration of Generative AI technologies like ChatGPT into education has given new opportunities for students, research on the challenges and strategies of this integration is limited (Williamson, Macgilchrist, and Potter, 2023). While some studies have explored ChatGPT's role in the proficiency enrichment of English students (Kohnke, Moorhouse & Zou, 2023; Liu & Ma, 2023; Lashari et al., 2023), its application in specialized English language acquisition, such as business students is underexplored. In order to fill this gap, the current study explores the use of ChatGPT to learn English for business students at the tertiary level.

In business settings, practitioners research acknowledge ChatGPT's capabilities to enhance productivity and suggest that it is likely to offer significant gains and enhance business activities (Atlas, 2023; Chan, 2023; Dwivedi et al, 2023; AlAfnan et al, 2023; Chen et al, 2023). Drawing on the use of Generative AI in business context, Dwivedi et al, (2023) conducted study from multidisciplinary perspectives including business. ChatGPT can offer a major boost to productivity in various tasks that require a lot of time and effort (Dwivedi et al, 2023). For example in finance, ChatGPT can help financial services providers to streamline and simplify financial service processes and provide better financial services such as providing significant help in generating high-quality manuscripts (Dwivedi et al, 2023; Lucey & Dowling, 2023).

The findings from Dwivedi et al, (2013) also believe that ChatGPT significantly facilitates and enhances employees in performing both simple and complex written tasks such as producing a written summary from a point form list of items, creating a simple report creating a simple report, writing a thank you email and responding to a sensitive argument in an email. Moreover, the studies from Atlas (2023) and Chan (2023) also suggest that ChatGPT can be used as writing assistants to help generate ideas or find inspiration (Chan, 2023). It can be used for creating automated email responders (chatbots) that can help answer common questions from students, faculty, and staff members (Atlas, 2023).

Those claims were also aligned with the empirical support from AlAfnan et al (2023) that shed light on the implementation of ChatGPT to produce business email. ChatGPT was given a real business-related scenario and was asked to write a 150 word email. The prompt requested writing a reply email to an angry customer (details were given) who did not receive his order on time. The findings show that ChatGPT provides a number of opportunities for students and instructors both in academic and business settings. The answers/responses provided by ChatGPT are precise and to the point. Although the emails provided by ChatGPT are natural and human-like generated texts, the email responses did not include personal touches. This issue became a challenge for students that they shall come up with any additional information needed to effectively write the business correspondence as per the guidelines discussed in class. Therefore, this study focuses on the students' challenges in Business English Writing and how they overcome it. This became important because the synergistic relationship between technology and humans shed lights on how both can complement each other's weaknesses and provide good job quality outcomes (Jarrahi, 2018; Green et al, 2022). In order to fill this gap, the current study focuses on an AI-assisted approach to the teaching and learning of Business English Writing. This study would specifically assess target needs and current situations from the business program, covering four primary areas of business

studies: finance, management, accounting, and economics. Thus, the research questions are formulated as follows:

1. How familiar are university students with GenAI technologies like ChatGPT?
2. What are students' challenges in Business English Writing by using ChatGPT?

2. METHODS

This study aimed to explore the integration of ChatGPT, an AI language model, in the context of English writing courses among vocational education students majoring in business English writing. Specifically, the research examined the readiness, experiences, challenges, and effective strategies of students utilizing ChatGPT for writing tasks. The participants consisted of 115 business English writing students (40 men and 75 women) enrolled in vocational education faculties across private universities in central Java, Indonesia. These students were in their first semester in the 2023/2024 academic year and were pursuing studies in finance, management, accounting, and economics.

A case study design, following the framework proposed by Cresswell (2014), was adopted for this research. This design facilitated an in-depth exploration of students' experiences with ChatGPT in English writing courses. Miles, Huberman, and Saldana's qualitative analysis framework was well-suited for interpreting the interview data and showcasing the rationale behind the methodological approach. This framework offers a systematic and comprehensive approach to analyzing qualitative data, ensuring rigor and reliability in the data interpretation process. By elucidating these aspects, the research methodology can be further bolstered, enhancing the credibility and trustworthiness of the study's findings.

Two primary research instruments utilized were an AI readiness questionnaire by Luckin et al. (2022) and a semi-structured interview guideline. The AI Readiness Questionnaire, adapted from Luckin et al. (2022), assessed students' readiness and acceptance of ChatGPT in the context of English writing. The AI readiness questionnaire was chosen to evaluate students' acceptance of ChatGPT for specific reasons. Elaborating on why this questionnaire was deemed appropriate for measuring the acceptance of this technology can strengthen the methodological foundation of the research. Similarly, the selection of semi-structured interview guidelines aimed to gather more in-depth insights from participants. Providing a more detailed explanation of how these guidelines can capture complex and diverse insights from participants can demonstrate the thoughtfulness behind the methodological choices. Additionally, a semi-structured interview guideline was developed to elicit detailed insights from participants regarding their experiences, challenges, and strategies in using ChatGPT for writing tasks. Through several steps conducted by the researchers, we aimed to contribute valuable insights into the challenges and effective strategies associated with integrating ChatGPT into writing courses, thereby enhancing our understanding of technology integration in language learning contexts.

3. FINDINGS AND DISCUSSION

3.1 *The result of a questionnaire filled out by the students*

The research was carried out in some private universities in Indonesia. Among the previous studies that concerned about the AI readiness in the perspective of educators, the present study investigated the concepts on the students point of view. This research aimed to know how well they are familiar with AI and their readiness to integrate AI in their learning in college. After the researcher analyzed the result, the 7 steps of AI readiness result is on the following table:

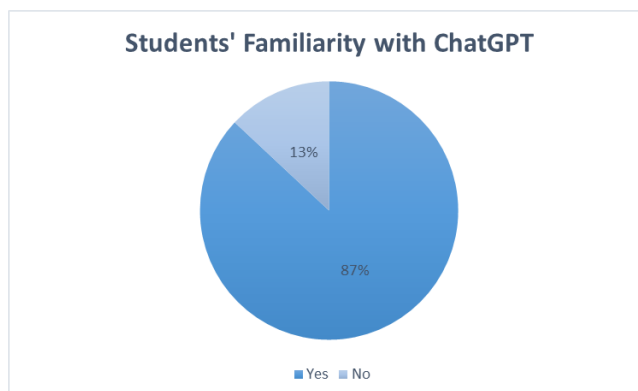


Figure 1. Students' Familiarity with AI

Based on the questionnaires distributed to the students. There are 13 % of students who said they are familiar with the use of ChatGPT. However, it revealed a high percentage of 87% of students who are not familiar with ChatGPT. With the deepened data from the interview, the researchers highlighted one possible aspect that is influential in their familiarity. It is because they are from a remote area who studied in Surakarta.

Student A said, " I am not from Surakarta, I am from Borneo sir, I just moved here when I was accepted in this university. In my senior high school, I had never heard about the term ChatGPT."

Table 1 Result of Students' Questionnaire

Step	Mean
1. Excite	3.55
2. Tailor and Hone	2.79
3. Identify	3.08
4. Collect	3.07
5. Apply	3.2
6. Learn	3.23

Based on the result, the researcher found a significant comparison on the step that was challenging for the students. Overall, students were familiar with the first step which is excite, understanding about AI and the least understood step was to identify. Generally, students had the following perspective:

Table 2 The most challenging step experienced by the students

Step 2 Tailor and Hone	Mean
1. I have a clear understanding of the specific goals to be achieved, namely being able to simplify my learning process in writing classes with the help of AI.	3.63
2. I have tried to write English with the help of AI.	2.55
3. I use simple instructions to ask AI to help me write something.	2.71
4. I can gather writing ideas by providing clear instructions with the help of AI.	2.47
5. I already know some of the problems that occur in using AI in writing classes.	2.43
	2.79

The results of our research shed light on the most challenging step that students encountered as they ventured into the world of Business English writing with the assistance of ChatGPT. Step 2, aptly named "Tailor and hone," turned out to be the most demanding phase, scoring an average of 2.79 out of 5. During this stage, students were tasked with setting specific writing goals and gaining practical

experience in composing with AI support. The lower mean score clearly indicates the complexities and hurdles that students faced as they tried to refine and customize their writing with AI. This highlights a significant obstacle in their readiness to use AI effectively in their writing assignments.

Table 3 The most understandable step experienced by the students

	Step 1 Excite	Mean
1.	I have a good understanding of the concept of Artificial Intelligence (AI).	3.24
2.	My senior high school has previously taken concrete steps to prepare itself to adopt AI technology.	2.68
3.	I feel motivated to learn more about AI and how it can make learning easier for me.	3.95
4.	I believe that by learning to develop the use of AI, I will have many benefits for my learning on campus and my future professional career.	4.08
5.	My senior high school should have been more active in encouraging students to be involved in developing competencies in preparation for the AI era.	3.82
		3.55

Interestingly, Step 1, "Excite," emerged as the least challenging phase in students' journey toward integrating ChatGPT into their Business English writing. In this initial step, which revolves around students' understanding of AI, the mean score was a solid 3.55 out of 5, signifying a relatively smooth start. It appears that students had a firm grasp of AI concepts and were notably enthusiastic about engaging with AI technology in their writing tasks. This suggests that, in the context of your research, students found the introduction and initial interaction with AI more accessible compared to the subsequent steps, indicating a positive outlook on incorporating AI into their learning experiences.

On the flip side, Step 7, labeled "Iterate," emerged as the second least challenging phase in students' interaction with ChatGPT. In this final step, students were tasked with evaluating the sustainability of their AI usage for their learning needs. With an average score of 3.37 out of 5, it's evident that students displayed a more positive attitude toward the continuous integration of AI into their educational journey. Step 7 represents a stage where students face relatively fewer difficulties, showing a growing comfort and enthusiasm for incorporating AI technology into their learning experiences.

The remaining steps, from Step 3 to Step 6, all fell within the moderate range, with average scores ranging from 3.07 to 3.23 out of 5. In Step 3, "Identify," students grappled with the challenges of AI-driven writing processes, including the sequence of steps and providing effective instructions to AI. Step 4, "Collect," focused on students' confidence in writing with AI and their understanding of paragraph construction, which also presented a moderate level of challenge. Step 5, "Apply," involved providing AI with instructions and practicing writing under its guidance, which posed moderate difficulty. Lastly, in Step 6, "Learn," students explored the art of instructing AI, with a noticeable preference for using Bahasa Indonesia in this context. These findings highlight the varied challenges students encountered throughout these steps, underscoring the importance of tailored support and training to enhance their proficiency in using AI for Business English writing in a tertiary education context.

3.2 Students from remote areas are not yet familiar with AI and ChatGPT

One influential aspect is the remote area. Based on the interview result, the students had the same experience as the challenge of using AI. In places such as Borneo, West Nusa Tenggara, and East Nusa Tenggara, students are behind the curve regarding knowing their way around Artificial Intelligence (AI) and tools like ChatGPT. One student from a remote location stated his opinion that he did not feel familiar with the terms AI. He had limited exposure to AI utilization before he went to the university in Central Java.

"I am from Borneo, and in my previous school, I have never heard about AI, sir. The internet is not too good there; mostly I study by using Google for browsing." (Student A)

It is not that they're not intelligent or interested—it's just that, living in these remote areas, they haven't had much exposure to these cutting-edge technologies. Picture this: while tech is well-used ahead in urban areas, these students are somewhat left out in the digital era. Limited access to tech resources, a shortage of programs covering the latest tech trends, and being away from the tech hubs all keep them in the dark about AI.

This aspect points to a digital gap between the tech-savvy urbanites and the students in these remote spots. Not only does this lack of AI knowledge affect their studies, but it also means they might miss out on opportunities in our tech-driven world. The key takeaway here is that we need to do something about it. We've got to set up programs that connect the tech dots between the city and these more remote areas, giving all students a fair shot at understanding and working with AI tools like ChatGPT. Recognizing the role of the remote area in all this helps us focus on creating a tech-savvy future that includes everyone, no matter where they call home.

3.2 Students are not able to brainstorm by using ChatGPT

According to the questionnaire results, students face challenges utilizing ChatGPT for brainstorming. The mean score of 2.47 out of 5 on the Likert scale suggests a moderate inclination towards the difficulty of gathering writing ideas with the assistance of AI through ChatGPT. Interestingly, students prefer traditional methods, as the feedback indicates a higher reliance on Google to find writing topics. Students' trust and familiarity with Google are evident, possibly rooted in its longstanding presence and reputation as a reliable search engine. Consequently, the overall conclusion drawn from these findings is that the surveyed students still need to fully embrace the potential of ChatGPT for brainstorming ideas, highlighting a notable gap in their experience and comfort with using this AI tool for creative thinking and writing.

3.3 Students have difficulties in writing the instructions in ChatGPT

In examining the challenges students face in articulating instructions for ChatGPT, a significant observation emerges from the data: a notable number of students, as exemplified by student B,

"I only use it by using Indonesian language; I think by typing what I need, I can get the result like Google sir. I never use English to write the instruction in ChatGPT." (Student B)

The student tends to use Bahasa Indonesia as the medium for instructing ChatGPT. This choice indicates a potential language barrier or a lack of awareness regarding the language capabilities of ChatGPT, as it is proficient in understanding and generating content in multiple languages. The reliance on Bahasa Indonesia might reflect a comfort zone for the students. Still, it also underscores a limitation in their exploration of ChatGPT's full linguistic capabilities, which could hinder their ability to extract the desired outputs.

Another noteworthy finding contributing to the difficulty in instructing ChatGPT is the misconception among students that the process is a one-way interaction, similar to using a search engine like Google. Many students approach ChatGPT, expecting it to function similarly to a search query, where they input a topic and expect relevant information to be generated automatically. It overlooks the crucial aspect of providing clear and well-structured prompts to elicit the desired response from ChatGPT. The data indicates a need for educational efforts to clarify and emphasize the interactive nature of working with ChatGPT, encouraging students to craft prompts that guide the AI in generating specific and tailored content, thereby enhancing the effectiveness of their interactions with the tool.

Discussion

The development of technologies in human history has always helped people, but only for those who know how to use them well. This research aims to examine whether students are familiar with AI technology and to identify the specific challenges they experience. The findings showed high enthusiasm (M: 3.95). Both quantitative and qualitative findings also show that students are generally willing to use ChatGPT for their studies and future work, but they need to learn how to use it properly. Thus, the instructor or the teacher can be helpful in revolutionizing traditional teaching and learning methods by offering tailored assistance and diverse learning needs, promoting efficiency, and fostering self-directed learning. The result aligned with the research from Chan & Wu (2023), in which students showed a good attitude towards using ChatGPT/OpenAI in education. Based on their study, students would like to incorporate their learning with ChatGPT because it provides personalized and immediate learning support for them when they have none to ask. Similarly, a study from Marzuki et al. (2023) mentioned that teachers saw the students' progress in using transitional elements because they were helped by the real-time prompts from ChatGPT/OpenAI.

The use of AI tools in education has not only many benefits but also many challenges. The study revealed that students' ChatGPT challenges are different from those in previous studies. This present study has three challenges. First, although the data showed that many of the students were enthusiastic about implementing AI in learning, some were not familiar with AI (87%). Second, the students never used Generative AI, such as ChatGPT, to brainstorm ideas for writing; they used it to find information by using internet browsers such as Google to find ideas (M: 2.63). Third, the students experience the inability to write the instructions and prompts in ChatGPT (M: 2.47). They applied the simple instructions as they wrote in a web browser. To optimize the utilization of ChatGPT, they need to input more specific instructions to get better outcomes. The findings from the present study are contrary to a study by Malik et al. (2023), which shows that the participants were familiar with AI. In addition, approximately 92% of the participants used AI to enhance their writing. Although research from Marzuki (2023) provided a significance of AI to prompt the students to brainstorm the idea in the present study, it did not work because students were not exposed to AI utilization. Hence, they prefer to use Google rather than AI to brainstorm ideas for writing.

The present research has an outcome that is different from the previous studies. The environment is an influential aspect that affects students' perspectives on AI. The result showed that some students are from the remote area. Indonesia is a country which consists of many islands. Based on the total number of participants, almost half of them are from other islands far from Indonesia's capital city. Thus, the internet connection is not too good and is fast to access, which makes it hard for students to get information about the latest technology in education, such as AI. Previous studies showed that students were familiar with the use of AI because the research context was in more advanced countries such as Hong Kong (Chan, 2023). The result of the research is completely contradictory to the numerous literature that has highlighted various benefits, such as Chen et al. (2020) and AlAfnan et al. (2023), which proposed that ChatGPT could serve as a replacement for traditional search engines. They believe this is because ChatGPT has the capacity to give accurate and trustworthy answers to theoretical questions for students and also generate ideas for questions related to real-world applications. The present study has a different finding, which is that students believe more in traditional search engines than ChatGPT; it might be because they use that search engine more than ChatGPT on a daily basis, which contrasts a study from Chan et al. (2023).

In brief, the research found some challenges the students experienced, such as how they are familiar with AI. Moreover, students traditionally use Google to browse for information. However, writing prompts in ChatGPT/AI need more instructions so that students can have personalized outputs based on what they instruct. A strategy that may be used to tackle this problem is by giving AI prompt writing training to the students, which aligns with a study from Özçelik & Ekşi (2024). In their research, students are asked to check their writing by writing a simple prompt to ChatGPT. Prompt engineering appears crucial in the context of the current study, which aims to investigate the influence of ChatGPT

on learning register in various writing tasks. In this study, the input prompt serves as a guide for the language model, allowing it to produce responses that aid in comprehending how ChatGPT affects the learning register.

4. CONCLUSION

This research investigated student perception and their challenges toward AI technologies. It is important to consider the students' perceptions so that educators and policymakers can better tailor AI technologies to address students' needs and concerns while promoting effective learning outcomes. By using AI tools, students can be equipped with future-focused capabilities upon graduation, enhancing their readiness for future employment and the professional sphere in the rapid development of technology. However, the study also found that implementing AI in Indonesia for education, especially in ESP, has not yet matured and requires time. In particular, students in remote areas are found to be less prepared to use AI, which calls for the need to prepare teachers across Indonesia to teach AI in a manner aligned with ethical considerations.

Although the current research offers valuable insights into students' perception of the utilization of AI writing tools within EFL classrooms, it is important to acknowledge various limitations. One limitation of this study is the small sample size, which may impact the generalizability of the results. Additionally, the study focused solely on student perceptions in Indonesia, limiting the broader applicability of the findings to other cultural contexts. Moreover, this study focuses on students' perceptions about implementing AI in Business English Writing. To address this limitation, the researchers suggest that the next researcher focus on teachers' implementation of incorporating AI into their TESOL learning so that the students can be aware of and familiar with using it in their learning. The goal is to familiarize students with AI and its benefits. Ultimately, such efforts can equip Indonesia's future workforce with the necessary capabilities to compete and excel in the national and international business world.

Conflicts of Interest: The authors declare no conflict of interest.

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