

Are They Literate on ChatGPT? University Language Students' Perceptions, Benefits and Challenges in Higher Education Learning

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Abstract

Despite the promising potential of artificial intelligence (AI) tools like ChatGPT for enhancing the learning experience, its integration as an educational tool in higher education poses disruptions that could affect students. This study explored university language students' usage, awareness, readiness, concerns, and perceived benefits and challenges of using ChatGPT in higher education learning. The study used an explanatory sequential mixed-method design, combining online surveys and semi-structured interviews. A total of 355 language students from five private higher education institutions in Indonesia were recruited using purposive sampling. These participants were asked to complete the closed-ended questionnaire, and nine participants were selected for interview sessions. The data was analyzed using descriptive analysis and thematic analysis. The findings reveal that a majority of students had been using ChatGPT for their learning purposes, especially for writing assignments. The findings also highlight that university language students had a high awareness, readiness, and concerns about using ChatGPT for their academic activities. Additionally, university language students acknowledged the potential benefits of ChatGPT in terms of writing support, personalized learning, increased productivity, brainstorming for generating ideas, and additional resources. However, they also identified the challenges of using ChatGPT, including inaccuracy, lack of critical thinking, plagiarism and AI detection, and technical problems. These findings provide a nuanced understanding of how university language students use and perceive ChatGPT for learning purposes, highlighting the need for support and guidance from higher education providers in the responsible use of AI in academic settings.

Keywords: ChatGPT, university students, learning, benefits and challenges, higher education

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Introduction

The global expansion towards digitalization by adopting AI tools like ChatGPT has had profound impacts on various industries globally, including higher education (Kayali et al., 2023; Rasul et al., 2023; Vargas-Murillo et al., 2023). These innovations offer a range of potential benefits, including increased personalization of the learning experience and more efficient academic support for students. However, despite these promising benefits, the adoption of this technology has not been accompanied by understanding and wise use among students, particularly in Indonesian higher education, resulting in over-reliance on this tool to assist with assignment completion (Hartanto & Rohmah, 2024; Maulana & Dermawan, 2023; Suryono et al., 2023). Relying heavily on ChatGPT often leads to a superficial understanding of the subject matter, as students tend to prioritize this assistance over engaging in personal deep learning. Zhai (2024) confirmed that this reliance could stifle the development of critical academic skills, as students may bypass the rigorous cognitive processes essential for deep learning and comprehension. Consequently, this reliance has resulted in laziness in learning, diminished critical thinking and problem-solving, and decreased motivation for independent study (Acosta-Enriquez et al., 2024; Aruleba et al., 2023; Abbas et al., 2024; Obenza et al., 2024; Zhang et al., 2024). Additionally, the ability of ChatGPT to generate human-like text has raised concerns about academic integrity, with fears that students might use AI to produce work that is not their own, thus compromising the authenticity of academic submissions and the integrity of educational assessments (Huallpa, 2023; Vargas-Murillo et al., 2023).

As the use of AI tools like ChatGPT becomes more prevalent among students in Indonesia higher education as a learning tool, it is imperative to investigate the experiences of university language students' perceived usage of ChatGPT and the potential benefits and challenges of ChatGPT. Previous studies (e.g., Assad, 2024; Das & Madhusudan, 2024; Kayali et al., 2023; Michel-Villarreal et al., 2024; Obenza et al., 2024; Singh et al., 2023) have emphasized the utility and impact of AI tools like ChatGPT in education institutions. However, these studies have mainly focused on the general effectiveness and usability associated with AI tools, providing a general overview of their advantages and challenges, leaving gaps in in-depth exploration and understanding of the full implications of using ChatGPT, especially from the perspective of language students in Indonesian higher education. Specifically, the learning styles and contextual challenges faced by these students remain underexplored, necessitating further investigation to understand how ChatGPT can be tailored to support their academic development and language acquisition. These gaps hinder our understanding of how language students view and effectively integrate AI tools like ChatGPT in their academic context. To address this gap, the present study aims to assess language students' perceived usage of ChatGPT in higher education learning, identify language students' level of awareness, readiness, and concern with the use of ChatGPT in higher education learning, and identify the benefits and challenges language students perceive using ChatGPT in higher education learning. To achieve this aim, the following research questions were formulated:

1. To what extent do language students perceive the usage of ChatGPT in higher education learning?
2. How do language students perceive their awareness, readiness, and concerns with using ChatGPT in higher education learning?
3. What are the benefits and challenges language students perceive using ChatGPT in higher education learning?

By responding to these questions, these findings offer a detailed understanding of how university language students use and perceive ChatGPT for learning, underscoring the need for support and guidance from higher education providers in effectively and ethically integrating AI into their curriculum. Additionally, the insights from this study can inform the development of training programs to assist students and educators in incorporating AI tools like ChatGPT into their teaching and learning. Ultimately, the research supports the advancement of educational technology policies and practices that are better aligned with the actual needs and experiences of students, fostering a more effective and responsible use of AI in higher education.

Literature Review

ChatGPT in Higher Education

In the field of educational technology (Edtech), AI tools, like ChatGPT, have had a significant impact on teaching and learning in higher education. Studies by Iku-Silan et al. (2023) and van Dis et al. (2023) have shown the potential of ChatGPT in enhancing various aspects of education, including programming, statistical analysis, essay and presentation generation, literature summarization, and development of educational materials. ChatGPT also aids students in writing tasks, providing advice, generating ideas, and successfully answering exam questions. This emphasizes the significant role of ChatGPT in supporting academics, researchers, and students in higher education. Additionally, recent studies (e.g., Elbanna & Armstrong, 2024; Nikolopoulou, 2024) have highlighted how ChatGPT can transform smart digital teaching and learning practices in higher education. By leveraging ChatGPT's ability to process large amounts of data, teaching methodologies can be enhanced to support personalized learning experiences. However, integrating ChatGPT in classrooms raises concerns about its benefits, drawbacks, and students' perceptions, particularly in diverse global settings with varying levels of technological literacy and educational customs. Educators must also consider the ethical implications of using ChatGPT, including concerns about data privacy, potential bias in AI algorithms, and transparency in AI-driven decision-making processes. As a result, the integration of ChatGPT in teaching and learning environments requires careful planning, consideration of curriculum design, teacher and student training, and technology infrastructure. Chan (2023) emphasized the importance of collaboration among policymakers in higher education to integrate ChatGPT-supported instruction with traditional teaching methods effectively. Addressing these challenges can help higher education institutions leverage AI technologies such as ChatGPT to create more dynamic, inclusive, and effective learning environments, potentially revolutionizing the education landscape for future generations.

Students' Awareness, Readiness, and Concerns with ChatGPT

The impact of AI-powered language models like ChatGPT on education has been the focus of recent research studies. Scholars (e.g., Chan & Hu, 2023; Obenza et al., 2023; Rogers et al., 2024) have explored students' perceptions of ChatGPT and found that many are familiar with it and use it as a learning tool. Johnston et al. (2024) and Assad (2024) further discovered that many students are familiar with ChatGPT, with half using it primarily for academic purposes, particularly in assignments and multimedia projects. On the contrary, Singh et al. (2023) found that despite being familiar with ChatGPT, many computer science

students need more skills and understanding to use it for academic purposes effectively. Kelly et al. (2023) emphasized students' lack of proficiency in using ChatGPT due to their unfamiliarity with it. In terms of readiness, a study by Chan & Hu (2023) found high-level students' readiness to incorporate ChatGPT in learning, while Güven et al. (2024) found moderate readiness among medical students, influenced by self-assessed technology skills and practical AI use perceptions. Despite the existing interest, these findings indicated a need for enhanced understanding and skills related to AI technology to optimize its application. However, the use of ChatGPT in education raises concerns about misuse, plagiarism, security, and ethical implications (Chan & Hu, 2023; Singh et al., 2023; Xu et al., 2024), potentially hindering critical abilities and reducing independence and critical-thinking skills (Obenza et al., 2023).

While there has been extensive research on university students' perceptions of ChatGPT, there is a need for more studies exploring how university students assess their awareness, readiness, and concerns about this technology. With the rising interest in ChatGPT as a learning tool among university students, it is necessary to investigate their experiences regarding its usage in an educational context. By understanding university students' attitudes and experiences with ChatGPT, we can gather valuable insights to enhance its use and ensure its effective integration into their learning experience.

Benefits and Challenges of ChatGPT in Higher Education Learning

ChatGPT is revolutionizing higher education by transforming the learning process. Researchers have explored the potential benefits and challenges of integrating ChatGPT in higher education settings. Recent studies (e.g., Chan & Hu, 2023; Fuchs, 2023; Lin et al., 2024; Michel-Villarreal et al., 2023; Younis, 2024; Zhou et al., 2024) have highlighted ChatGPT's ability to provide personalized learning support to students. It adjusts to their pace and style, offering customized explanations and immediate responses to queries. In addition, Rasul et al. (2023) emphasized ChatGPT's potential in writing assistance, stating that it can correct sentence structure and grammar, and perform editing (Graf & Benardi, 2023). Moreover, according to Chan & Lee (2023), ChatGPT significantly boosts students' productivity by automating tasks like email drafts, information searches, and grammar corrections, allowing them to concentrate on more complex academic tasks (Zhou et al., 2024). A study conducted by Zhang et al. (2023) revealed that ChatGPT is helpful for students in overcoming obstacles, sparking ideas, and brainstorming new concepts, highlighting its effectiveness as a creative ally.

Despite its benefits, the integration of ChatGPT into the educational setting presents notable obstacles. Researchers (e.g., Assad, 2024; Chan & Hu, 2023; Sallam et al., 2023; Swindel et al., 2024) highlighted the issue of inaccurate content in ChatGPT, emphasizing that the system's precision largely relies on the quality of training data and student input (Fuchs, 2023). Moreover, Das & Madhusudan (2024) emphasized that the ease of use and user-friendly nature of ChatGPT may result in students needing more time to rely on it, consequently impeding their capacity for critical thinking. This perspective is supported by Aruleba et al. (2023), who contend that college students who excessively rely on ChatGPT for feedback could witness a decline in their critical thinking and problem-solving skills. This overdependence could also hamper their ability to delve into and cultivate their ideas. Furthermore, concerns have been raised about the capability of ChatGPT to produce essays and aid students in fulfilling assignments, particularly in terms of plagiarism detection

(Anderson et al., 2023). This issue is particularly troubling for students as there is a risk of misusing the model for content plagiarism (Michel-Villarreal et al., 2023).

Although previous researchers have explored the potential benefits and challenges of ChatGPT in higher education, more research needs to be done explicitly focusing on its use in learning within the context of higher education. Existing studies have primarily examined teaching and learning in higher education in general, leaving gaps in our understanding of how university language students perceive and use ChatGPT in their learning process. These research limitations include a lack of knowledge regarding the extent to which university students use ChatGPT for learning purposes and its effectiveness in enhancing their understanding of the subject matter. Thus, it is crucial to investigate how university students perceive the use of ChatGPT in their learning, as this will allow us to identify the benefits and challenges associated with implementing this technology in higher education settings.

Methods

Design of the Study

This study used an explanatory sequential mixed-method design, combining quantitative and qualitative approaches to comprehensively understand of a phenomenon by employing multiple data collection tools (Creswell & Clark, 2017). The benefit of an explanatory sequential using mixed methods is that it allows one method to take the lead in the analysis, while the other method provides important supplementary information (Creswell, 2014). This design was initially conducted with a quantitative phase using a descriptive approach through an online questionnaire for university language students, followed by qualitative phase employing a phenomenological approach to gain deeper insights into the participants' experiences and understanding of the impact of ChatGPT in higher education learning. Thus, qualitative findings were used to provide context to the quantitative data, enabling a more comprehensive assessment of the participants' experiences.

Participants

The participants were university language students from five private universities in Indonesia. Out of 560 university students who were given the survey, only 355 students responded. Among the participants, 106 were males (29.9%) and 249 were females (70.1%). The age range of the participants varied from 17 to above 29 years old, with the majority (55.8%) falling in the 17–20 age group, followed by 22.2% in the 21–24 age group, 12.4% in the 25–28 age group, and 9.6% were above 29. The participants were enrolled in various disciplines, including Indonesian and Literature Education (54.6%), English Education (26.8%), and Javanese Education (18.6%). Among the participants, 78.6% were undergraduate and 21.4% were postgraduate students. The demographic information of the respondents is presented in Table 1.

Table 1

Demographic Information of the Participants (N = 355)

Characteristic	N	%
Sex		
Male	106	29.9
Female	249	70.1
Age		
17–20 years old	198	55.8
21–24 years old	79	22.2
25–28 years old	44	12.4
Above 29 years old	34	9.6
Disciplines		
Indonesian Language and Literature Education	194	54.6
English Education	95	26.8
Javanese Education	66	18.6
Academic Level		
Undergraduate	279	78.6
Postgraduate	76	21.4
Universities		
Private university 1	94	26.5
Private university 2	83	23.4
Private university 3	66	18.6
Private university 4	55	15.5
Private university 5	57	16

The semi-structured interview participants were selected from an online survey using purposive sampling. This technique allowed the researchers to select individuals based on specific criteria relevant to the study's objectives. The selection criteria required participants to have experience with ChatGPT in an educational context and to be either an undergraduate or postgraduate student in a language-related field. The researchers identified suitable candidates through their networks and selected nine university language students from 355 survey participants. Table 2 provides details on these participants. The participants consisted of four males and five females with the backgrounds in undergraduate and postgraduate degrees in fields such as English education, Indonesian language and literature education, and Javanese education. They varied in their frequencies of ChatGPT usage for learning, providing diverse perspectives and experiences with ChatGPT in higher education. The decision to interview nine participants was based on data saturation. We determined that data saturation had been achieved (Lowe et al., 2018; Saldaña, 2015) by coding the ninth interview, as it did not introduce any new codes that had not already been discussed in interviews. As a result, we did not seek out additional interview participants. To ensure privacy, all participants' names have been replaced with pseudonyms.

Table 2

Demographic Information of Semi-structured Interviews Participants

Participants	Gender	Disciplines	Academic Level	Usage Level
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Student 1	Female	English education	Postgraduate	Medium
Student 2	Female	English education	Postgraduate	High
Student 3	Female	Javanese education	Undergraduate	Medium
Student 4	Male	Indonesian language and literature education	Undergraduate	Medium
Student 5	Male	Indonesian language and literature education	Postgraduate	Medium
Student 6	Female	Javanese education	Undergraduate	Medium
Student 7	Female	English education	Undergraduate	High
Student 8	Male	English education	Undergraduate	Medium
Student 9	Male	Indonesian language and literature education	Postgraduate	High

Instrument

This study survey consisted of 22 closed-ended questions. In designing the survey, we adapted some questions from the work of Chan & Hu (2023) and constructed other questions based on research by Das & Madhusudan (2024). Our survey consisted of five sections. The first section gathered demographic information, including the participants' sex, age, discipline, and academic level. The second section focused on university students' perception of using ChatGPT in higher education learning. This section included questions about the participants' usage of ChatGPT (e.g., "Have you ever used ChatGPT?" 1 = Yes, 2 = No), familiarity with ChatGPT for learning (e.g., "How familiar are you with ChatGPT for learning?" 1 = Very familiar, 2 = Moderately familiar, 3 = Slightly familiar, 4 = Not familiar), frequency of ChatGPT usage (e.g., "How often do you use ChatGPT for learning?" 1 = Very often, 2 = Often, 3 = Sometimes, 4 = Not rarely, 5 = Never), and reasons for using ChatGPT (e.g., "What is your reason for using ChatGPT?" 1 = Assignment help, 2 = Self-learning, 3 = General chat, 4 = Language assistance, 5 = Writing generation). The third section assessed students' awareness level of ChatGPT (six items). The fourth section examined the readiness level to use ChatGPT (eight items). The final section addressed concerns about using ChatGPT (four items). The Likert scale was used for the third, fourth, and fifth sections, ranging from strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, to strongly agree = 5.

We ensure the questionnaire's validity by conducting the Pearson Correlation Test. All items were found to be valid, with a correlation coefficient value (r) higher than the critical value of 0.104, which was determined based on a sample size of 355 respondents. Additionally, we assessed the reliability of the questionnaire using Cronbach's Alpha. The calculated Cronbach's Alpha value exceeded 0.60, indicating that the research instrument is reliable.

Data Collection

The online survey was distributed to university students in Indonesia using Google Forms. This approach aimed to represent the needs and values of all participants accurately. Respondents were selected using a convenience sampling method, considering their availability and willingness to participate. Participants were recruited via an online platform and provided an informed consent form before taking the survey. Each participant took

approximately five minutes to complete the questionnaire. Participation was entirely voluntary, and the responses remained anonymous.

On the other hand, we gathered qualitative data by conducting face-to-face semi-structured interviews with university language students. To recruit participants, we sent WhatsApp invitations to students enrolled in private university language programs. The invitations briefly described the study's purpose, emphasized voluntary participation, and guaranteed confidentiality and anonymity. Students interested in participating responded to the invitations via WhatsApp to schedule interviews. A total of nine participants responded and agreed to take part in the study. Each interview lasted 10 to 15 minutes and was recorded with both video and audio. For the interview sections of this study, we designed four questions to explore the impact of ChatGPT on higher education learning from the perspectives and experiences of university language students. These questions were: "Have you ever used ChatGPT?" "How is your usage level of ChatGPT?" "What benefits do you perceive from using ChatGPT in higher education learning?" and "What challenges do you perceive when using ChatGPT in higher education learning?" These questions were collaboratively developed, initially based on the literature review (Chan & Hu, 2023; Das & Madhusudan, 2024) and study objectives. Two experts in educational technology and language learning reviewed and refined these questions to ensure clarity, relevance, and the ability to provide the qualitative data needed for our study. The final set of questions was verified by these experts. After the interviews, the recordings were manually transcribed verbatim. These transcriptions were then returned to the participants for member checking (Merriam & Tisdell, 2015), allowing them to review, confirm, amend, or clarify important points in the transcripts. This process was crucial for validating the accuracy of the data and ensuring that participants' perspectives were accurately represented.

Data Analysis

The data from the questionnaire was analyzed using Microsoft Excel. Descriptive analysis was used to show the frequency distribution of the responses. The analysis followed rating intervals proposed by Pallant (2016), where the average of each item was correlated with the level of agreement. The interval scale was calculated by subtracting the lowest score from the highest score and dividing by five, resulting in an interval of 0.80. This interval was used to categorize the responses as follows: a rating interval of 1.00 to 1.80 indicated strong disagreement; 1.81 to 2.60 suggested disagreement; 2.61 to 3.40 indicated moderate agreement; 3.41 to 4.20 denoted high agreement; and 4.21 to 5.00 showed strong agreement.

The responses from the semi-structured interviews were analyzed using a thematic analysis approach (Braun & Clarke, 2006). The analysis was conducted inductively, with two coding cycles performed. Two researchers independently read and coded the responses to each question, and then met to compare their codes. The codes were combined in NVivo and similar codes were categorized. The researchers then discussed all the categories and codes, grouping them into themes based on the frequency of specific topics mentioned during the interviews. The major themes that emerged from the data were identified as the key findings of the study.

Results

Students' Usage of ChatGPT in Higher Education Learning

We investigated the students' perceptions of using ChatGPT in higher education learning. A large majority (89.2%) confirmed that they had used ChatGPT, while 10.8% reported having no experience with it (Figure 1). Among those who had used ChatGPT, approximately half of the students (52.4%) had a moderate familiarity with using ChatGPT for learning purposes, while 27.3% reported being very familiar. Only 7% indicated no familiarity, whereas 13.3% reported being slightly familiar (see Figure 2).

Figure 1

Use of ChatGPT

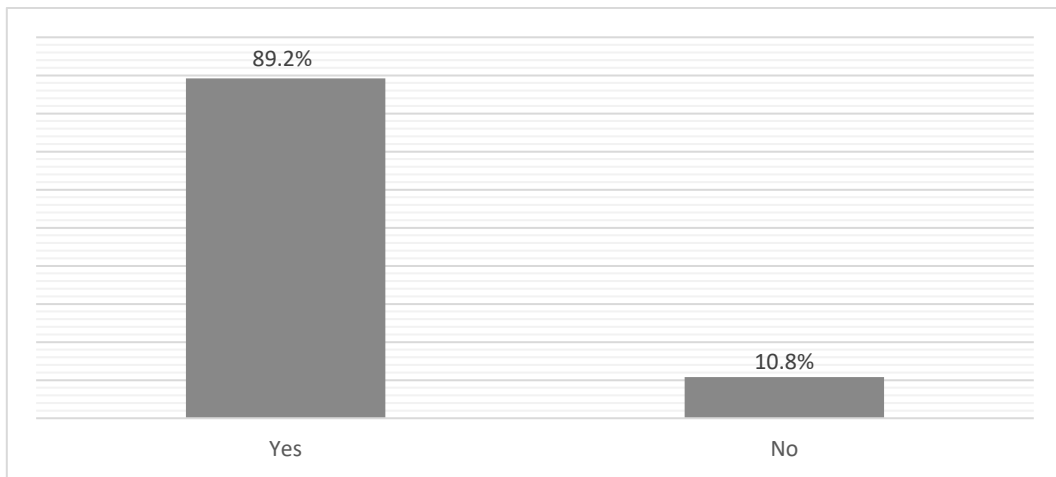
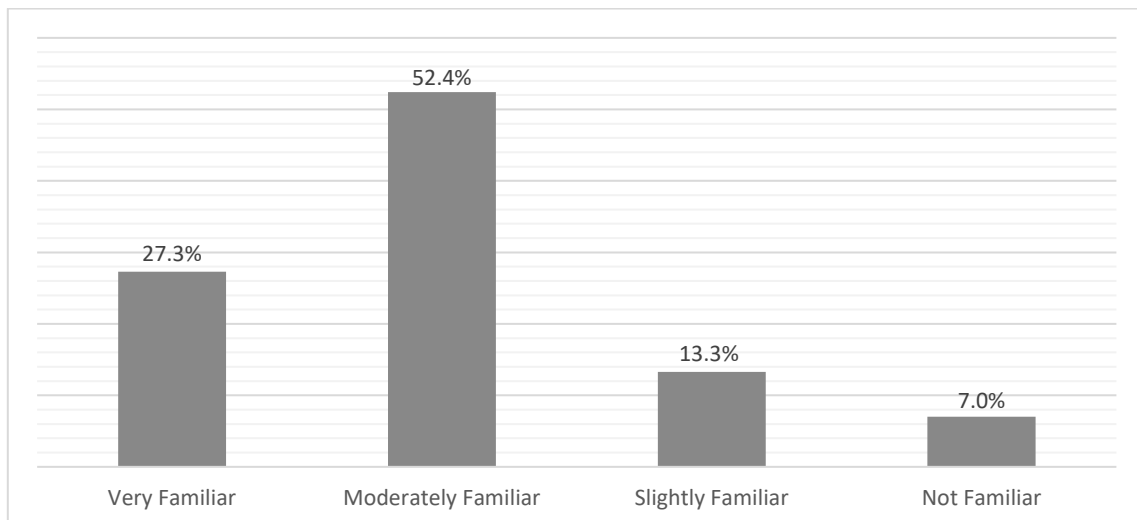


Figure 2

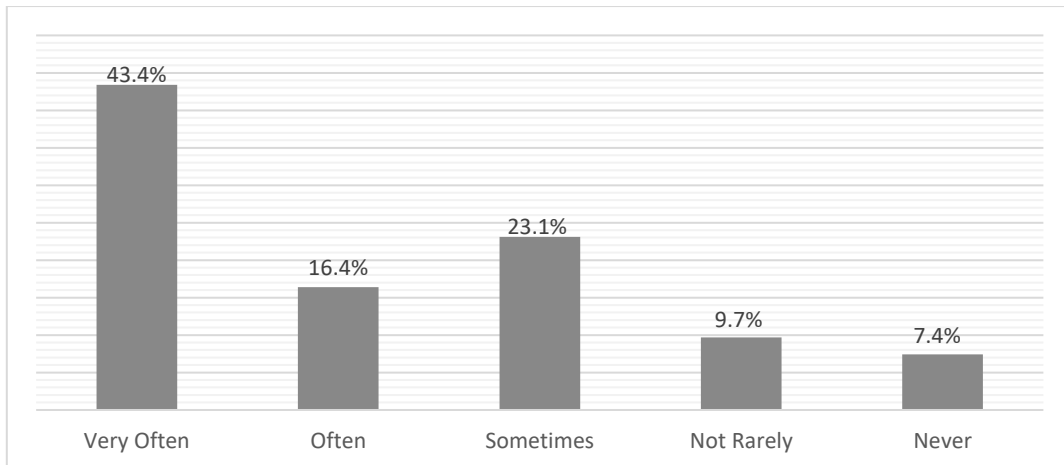
Familiarity with ChatGPT



Our survey further explored the frequency of ChatGPT usage (Figure 3). The survey results revealed that many students frequently use ChatGPT, with 43.4% reporting regular usage and 23.1% indicating occasional use. Additionally, the data showed that 16.4% of students use ChatGPT frequently, 9.7% use it quite often, and 7.4% reported never using it.

Figure 3

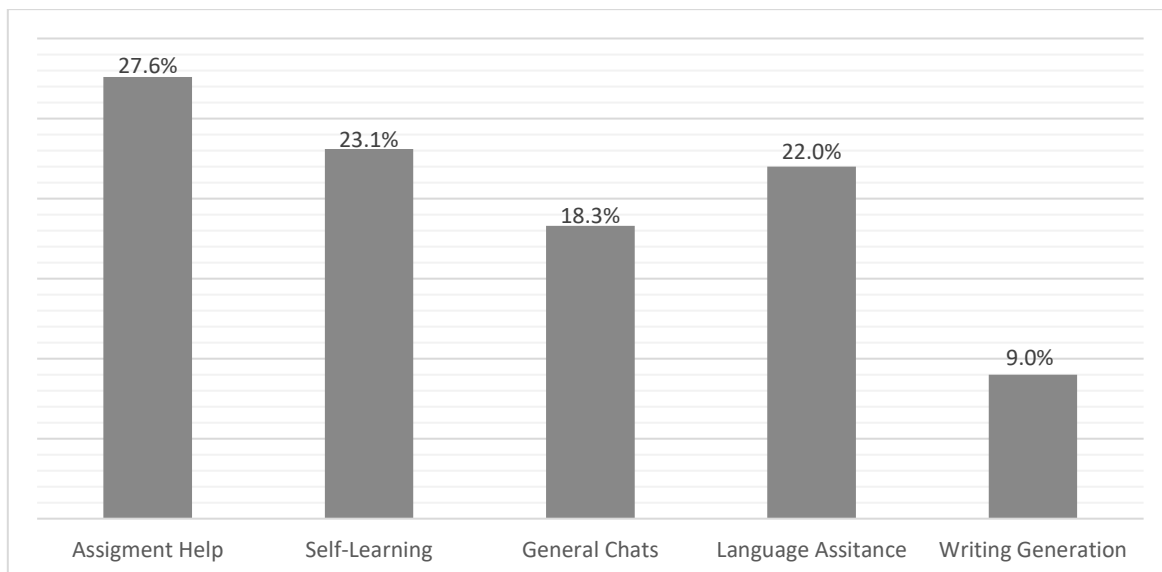
Frequency of Using ChatGPT



In terms of reason, the use of ChatGPT in higher education learning serves various purposes (Figure 4). The main reason for using ChatGPT is to provide assignment assistance, with 27.2% of students. Moreover, 23.1% of students use ChatGPT for self-learning, while 22% use it for language assistance. In addition, 18.3% acknowledged using the ChatGPT tool for general chats, and 9% used it for generating writing.

Figure 4

Reasons for Using ChatGPT



Students' Perceptions of Awareness, Readiness, and Concerns with the Use of ChatGPT

We extended our analysis to comprehensively understand the students' awareness, readiness, and concern levels with ChatGPT in learning practice. Table 3 reveals the students' responses. Most students (Mean = 4.11 ± 0.72) agree that ChatGPT cannot fully handle complex assignments. They also believe this tool may overly rely on statistics, limiting their usefulness in specific contexts (Mean = 3.89 ± 0.70). Furthermore, they express concerns about the limited ability of ChatGPT to understand emotions and show empathy, which can lead to potentially inappropriate responses (Mean = 3.78 ± 0.81). The participants also believe that ChatGPT has the potential to generate inappropriate or out-of-context content (Mean = 3.77 ± 0.76) and may produce output with factual inaccuracies (Mean = 3.72 ± 0.81). On the other hand, several participants remain neutral about whether ChatGPT can provide unfair and biased results (Mean = 3.68 ± 0.78).

Table 3

Students' Awareness of ChatGPT Capabilities

S/N	Items	Mean	Std. Dev
1	I am aware that ChatGPT is not fully capable of handling complex assignments.	4.11	0.72
2	I am aware that ChatGPT has the potential to generate output that contains factual inaccuracies.	3.72	0.81
3	I am aware that ChatGPT can generate inappropriate or out-of-context content.	3.77	0.76
4	I am aware that ChatGPT can provide unfair and biased results.	3.68	0.78
5	I am aware that ChatGPT may overly rely on statistics, which can restrict their usefulness in certain contexts.	3.89	0.70
6	I am aware that ChatGPT has a limited ability to understand emotions and show empathy, which can generate insensitive or inappropriate responses.	3.78	0.81

Furthermore, the students' readiness level with ChatGPT was assessed through a survey (Table 4). A significant number of the students agreed with various aspects of using ChatGPT, including the importance of being proficient in ChatGPT (Mean = 3.86 ± 0.83), offering time-saving (Mean = 3.83 ± 0.70), providing 24/7 availability (Mean = 3.76 ± 0.81), provide with unique insights and perspectives (Mean = 3.72 ± 0.74), as well as facilitate to enhance digital competence and knowledge (Mean = 3.69 ± 0.81). In contrast, a notable number of participants adopted a neutral stance regarding the assertion that incorporating generative AI into their future learning practices (Mean = 3.44 ± 0.83), delivering personalized and immediate feedback and suggestions for assignments (Mean = 3.70 ± 0.78), and possessing ChatGPT is a great tool for student support services due to their anonymity (Mean = 3.57 ± 0.85).

Table 4

Students' Readiness to Use ChatGPT

S/N	Items	Mean	Std. Dev
1	In the future, I envision incorporating ChatGPT into my learning practices.	3.44	0.83
2	To enhance my career, it is essential for me to acquire proficiency in using ChatGPT.	3.86	0.83
3	I believe ChatGPT have the potential to enhance my digital competence and knowledge.	3.69	0.81
4	I believe ChatGPT can help me save time	3.83	0.70
5	I believe ChatGPT can provide me with unique insights and perspectives that I may not have thought of myself	3.72	0.74
6	I think ChatGPT can provide me with personalized and immediate feedback and suggestions for my assignments	3.70	0.78
7	I think ChatGPT is a great tool as it is available 24/7	3.76	0.81
8	I think ChatGPT is a great tool for student support services due to anonymity	3.57	0.85

Despite the favorable perceptions of the awareness and readiness to use ChatGPT in learning practice within higher education, students also expressed noteworthy concerns about these tools (see Table 5). A majority of students concurred that using ChatGPT on their educational and personal development (Mean = 3.73 ± 0.85) and using ChatGPT for completing assignments undermines the significance of university education (Mean = 3.66 ± 0.85). Moreover, concern was also raised regarding over-reliance on the ChatGPT tool (Mean = 3.60 ± 0.96) as well as the recognition of the potential impact on their social interactions, fearing that using ChatGPT for coursework could limit their opportunities for interaction and collaboration with peers. (Mean = 3.56 ± 0.94).

Table 5

Students' Concerns of Using ChatGPT

S/N	Items	Mean	Std. Dev
1	The use of ChatGPT for completing assignments undermines the significance of university education.	3.66	0.85
2	Using ChatGPT may restrict my chances to interact and socialize with others while working on coursework.	3.56	0.94
3	ChatGPT could hinder the development of essential skills like teamwork, problem-solving, and leadership abilities.	3.73	0.85
4	I risk relying too much on ChatGPT.	3.60	0.96

Benefits and Challenges of Using ChatGPT in Higher Education

The semi-structured interview given to university students gathered information on the benefits and challenges of using ChatGPT in higher education learning. We identified five overarching themes regarding the benefits of ChatGPT in higher education learning: (1)

writing support, (2) personalized learning, (2) increased productivity, (4) brainstorming for generating ideas, and (5) additional resources.

Writing Support

The main theme plays a role in providing support in writing. For students who struggle with generating ideas and organizing their thoughts, ChatGPT serves as a valuable virtual assistant by offering suggestions to start writing, as stated by the student 1:

I sometimes find it difficult to construct sentences for my essay assignments, ChatGPT is very helpful in providing the relevant suggestions that I need. (Student 1)

Another participant, student 3, highlighted how ChatGPT's abilities benefits beginners unfamiliar with writing skills.

ChatGPT greatly helped my first experience of being asked to create an article. I had yet to learn how to create one, but with ChatGPT, I could generate the article structure I needed. I received assistance with the title, introduction, methods, and results. This helped me better understand how to organize a good and correct article. (Student 3)

Additionally, participants student 6, 8, and 9 had similar experiences receiving language assistance, including translation, paraphrasing, and reviewing using ChatGPT.

I have used ChatGPT to translate Indonesian to English, as it is a better translation machine than Google Translate. (Student 6)

I rely on ChatGPT to rephrase sentences I intend to quote from the articles I come across. I struggle with paraphrasing independently and lack the know-how to do it effectively. ChatGPT provides valuable assistance in this regard. (Student 8)

When my lecturer asked me to write a book review, ChatGPT supported me by allowing me to submit the file and provide a prompt-based review without reading the entire book. (Student 9)

Personalized Learning

The second theme is personalized learning, which focuses on meeting individual needs and enhancing the learning experience. A particular aspect that received high praise was the time flexibility provided by ChatGPT, as emphasized by student 3:

The flexibility offered by ChatGPT in terms of study time is highly valued. I can ask questions or seek clarification any time, even outside of class hours. (Student 3)

A similar view was expressed by student 1, emphasizing that ChatGPT allows flexible access to learning support.

ChatGPT can provide the additional explanation I need when I don't understand the lecture material. (Student 1)

In addition, student 5 highlighted the role of ChatGPT as a discussion buddy. He emphasized that ChatGPT serves not only as a source of knowledge but also as a learning partner that supports social interaction and academic discussion.

ChatGPT also helps me when I need a friend to discuss lecture material with. (Student 5)

Student 6 mentioned that ChatGPT can present information efficiently, helping students understand the material better in a short time.

It provides explanations, overviews, and other perspectives quickly and concisely as I need them. (Student 6)

Increased Productivity

We identified the third main theme as increased productivity. This theme is exemplified by efficiency, allowing for accomplishing assignment in less time. Student 2 strongly indicated that saving time to complete assignments was a common benefit, as one respondent said:

Using ChatGPT saves me time, especially when running up against a deadline. (Student 2)

Similarly, student 4 also mentioned:

ChatGPT speeds up task time. I really appreciate how fast it can respond. (Student 4)

Student 5 further highlights that ChatGPT is easy for students to use.

ChatGPT makes it easier to find answers to questions that are difficult to understand. (Student 5)

Additionally, ChatGPT is incredibly helpful in times of difficulty or when facing a mental block. It helps find solutions to questions that cannot be answered by Google or book. As the following participant said:

I use ChatGPT when I am stuck answering difficult questions, and it helps me a lot to get answers I cannot easily find on Google or in a book. (Student 7)

Brainstorming for Generating Ideas

The fourth theme we identified was brainstorming for generating ideas. ChatGPT is an invaluable aid in the thought process and idea development. By engaging with ChatGPT, students can explore fresh perspectives and ideas she may not have considered. Student 3's experience reflects this:

ChatGPT helped me provide unique insights and perspectives I might never have considered. (Student 3)

Additionally, student 4 used ChatGPT to stimulate new ideas for his writing, highlighting the platform's role in fostering creativity and expanding ideas.

I use ChatGPT to generate new ideas for essays or articles I write. (Student 4)

With its ability to offer distinct insights and viewpoints, student 6 expressed the belief that ChatGPT has become an essential point of reference for students.

I believe that ChatGPT has emerged as a crucial reference point for many people seeking new ideas or perspectives. (Student 6)

Additional Resources

The fifth theme we identified was the availability of additional resources. Participant student 2 showed that ChatGPT has made a positive contribution to facilitating students' access to relevant information.

ChatGPT has made it easier for me to find study and reference materials on the topics I am studying. (Student 2)

Furthermore, student 9 demonstrated a significant evolution in ChatGPT's ability to provide users with more specific and helpful information, especially those in academic research. However, it also highlighted that despite the progress made, there are still challenges in providing broader and easier access for users.

Recently, I discovered ChatGPT's new expertise. It can now provide real content and references that are directly linked to journal articles. Unfortunately, this access is limited. (Student 9)

Despite those benefits, the challenges experienced by university language students in using ChatGPT are identified into four themes: (1) inaccuracies, (2) lack of critical thinking, (3) plagiarism and AI detection, and (4) technical problems.

Inaccuracies

The consequences of using ChatGPT to generate content can result in inaccuracies, which is a major theme challenge for students. Students often encounter inaccurate or misleading information from this tool. Student 3 points this out:

A challenge I experienced while using ChatGPT was that the answers or information provided sometimes out-of topic or context, which meant I had to spend extra time checking the accuracy and relevance of the answer. (Student 3)

Student 2 expressed a similar sentiment, emphasizing her concerns regarding fake sources.

When I asked to generate content with citations, the reference given by ChatGPT could not be found in Google Scholar. (Student 2)

A participant further elaborated that the quality of responses from ChatGPT depends on the instruction given by saying:

I believe that ChatGPT always responds to all my questions, but sometimes the responses are different from the answers I want and are out of context if I give detailed instructions to ask. (Student 8)

In addition, student 9 expressed a struggle to comprehend ChatGPT's responses. He states that the sentences and phrases provided by ChatGPT are quite sophisticated and complex to understand.

I feel that the responses provided by ChatGPT are difficult to understand. (Student 9)

Lack of Critical Thinking

This theme responded to the negative consequences of using ChatGPT. Students acknowledged that using ChatGPT for academic work could promote laziness, as it provides instant responses and answers to all questions without requiring analysis. Despite this, student 1 still used it, as expressed:

I became too lazy to think when I found out that ChatGPT could help me complete my coursework. (Student 1)

Student 5 also noted that over-reliance on ChatGPT for automatic feedback might hinder the development of critical thinking skills and decrease students' motivation to understand the material. This student stated:

Nowadays, I would rather get instant answers to my assignments than have to take the time to think about the answers, which can be draining. (Student 5)

Moreover, student 7 admitted that the reliance on instant solutions from ChatGPT diminished independence in learning, problem-solving, and critical thinking. This had a negative impact on respondents' long-term academic skills:

The reliance on instant answers from ChatGPT made me less practiced in developing arguments and weakened my thinking power. As a result, I did not try to find my own solutions and relied entirely on ChatGPT. (Student 7)

Plagiarism and AI Detection

This theme explores the academic integrity of using ChatGPT for plagiarism and AI detection. Participant student 3 expressed the ethical implications of using ChatGPT-generated content without clear attribution. She believes that using ChatGPT without proper citation raises the issue of plagiarism, as stated:

As a student, I often face challenges when using ChatGPT because the generated text does not always include clear sources. This makes it difficult for me to identify and give credit to original sources, increasing the risk of plagiarism in my academic work. (Student 3)

Another opinion comes from student 4 who disputed the potential ethical concerns, such as plagiarism and reduced originality. He emphasized that ChatGPT is useful, but it can lead to dependence due to its convenience and efficiency:

I am concerned with the potential of ChatGPT unintentionally encouraging plagiarism among students. While the tool is undoubtedly helpful in content creation and idea formulation, there is a concern that some people may become too reliant on it, leading to a lack of originality in their work. (Student 4)

In addition to the risk of plagiarism, the use of ChatGPT may also lead to works being identified as AI-generated by detection tools such as Turnitin, as student 6 experienced.

For example, I was stuck on an idea and I asked ChatGPT to continue my content. After I checked Turnitin, AI detected the writing I copied to ChatGPT as written. I often experience this, and it makes me tired because I have to reduce the amount of plagiarism in the essays or articles I write. (Student 6)

Technical Problems

The fifth theme delves into the challenge of using or accessing ChatGPT-related technical problems. Student 4 has noted that they struggle using ChatGPT because it is unresponsive or certain features do not work properly, which hinders their ability to use it effectively.

I often have trouble accessing ChatGPT because the website has errors on my laptop. For example, the website can be opened, but I cannot do anything. (Student 4)

In addition, student 6 mentions that the sudden interruptions caused by ChatGPT disrupt their workflow, resulting in frustration and potential loss of productivity.

I have experienced while using ChatGPT is that it is sometimes inaccessible due to errors. When performing a task, it suddenly stops and does not continue or even get resolved. (Student 6)

Discussion

The study aimed to investigate the usage, awareness, readiness, concerns, and potential benefits and challenges of using ChatGPT in higher education learning among university language students in Indonesia. The results indicated that most university language students reported using ChatGPT in higher education learning. The high usage of ChatGPT can be attributed to its familiarity and frequent use, particularly for assignment assistance, self-study, and language support. This suggests that ChatGPT has become a tool student often rely on in their daily learning activities. This finding aligns with previous research (e.g., Johnston et al., 2024; Assad, 2024), which emphasizes the various uses of ChatGPT in academic settings, such as assignments, data analysis, and language translation. However, these findings contrast with Fuchs & Aguilos (2023), who reported that students primarily used ChatGPT for idea generation and feedback, highlighting that language students might use this tool more widely, using its capabilities for various purposes in their learning process.

The results also highlight that university language students were highly aware of ChatGPT's capabilities regarding the limitations and potential problems in using ChatGPT in higher education learning. This shows that students have a critical understanding of AI technology, particularly ChatGPT, and are aware of not only its benefits but also its risks and limitations. This is consistent with the findings of Obenza et al. (2023), who observed that university students show a high awareness of using ChatGPT. Chan and Hu (2022) further support this by explaining that university students had a high level of awareness due to their familiarity with AI tools like ChatGPT in their learning process. In a similar vein, Rogers et al. (2024) conducted studies which revealed that university students possess a significant level of awareness regarding ChatGPT. Their findings indicated that students frequently use ChatGPT as a study tool, rather than solely depending on it to complete assignments. Conversely, Kelly et al. (2023) found that most students, particularly those not exposed to ChatGPT in an academic context, have low awareness of the tool. This suggests that Indonesian language students, who interact with ChatGPT more frequently, tend to be more actively engaged compared to students from other contexts. Regular interaction with ChatGPT provides these students with personalized and immediate feedback, thereby enhancing their learning experience and fostering active participation in their academic endeavors.

In terms of readiness, students displayed a high level of readiness in using ChatGPT. This readiness can be attributed to the potential benefits of ChatGPT in improving career prospects and saving time, similar to the findings in Chan & Hu's study (2023). This highlights university language students' enthusiasm and strong desire to integrate this technology into their learning process. On the contrary, Güven et al. (2023) and Labrague et al. (2023) suggest that students' readiness is moderate, due to limitations in technological literacy and AI understanding. This suggests a discrepancy between high motivation and practical readiness. Thus, although students are highly motivated to adopt ChatGPT, technical skills and knowledge constraints may hinder their ability to use it optimally. Despite students' high awareness and readiness in using ChatGPT, they also expressed a high concern about its usage. These concerns mainly revolve around the potential negative impact on developing essential skills such as teamwork, problem-solving, and leadership abilities. In contrast, Obenza et al. (2023) found that university students had a moderate level of concern about using ChatGPT, which could inhibit personal growth and hinder the development of critical skills, such as teamwork and problem-solving. This suggests that although ChatGPT may affect critical skills, language students at the university may feel the impact or have a stronger perception of the potential negative impact of ChatGPT compared to students from other disciplines.

Our findings shed further light on the benefits of using ChatGPT for learning experienced by university language students in higher education. These benefits include writing support, personalized learning, increased productivity, idea generation through brainstorming, and additional resources. Our findings are consistent with current studies (e.g., Chan & Hu, 2023; Michel-Villarreal et al., 2023; Zhou et al., 2024), which also emphasize the positive effects of ChatGPT on the learning process. In terms of writing support, university language students have availed themselves of ChatGPT to seek guidance for assignments, enhance their writing proficiency, and procure language assistance such as translation, paraphrasing, and review. This resource has notably proven beneficial, particularly to those new to academic writing. Beyond its role as a writing assistant, ChatGPT has also significantly boosted students' productivity by saving time, providing immediate

feedback, and facilitating quick access to information (Zhou et al., 2023). Regarding personalized learning, students greatly appreciate the ability to access information and receive virtual assistance that can enhance their learning experience. This aligns with what ChatGPT offers, as it can adjust to the pace and style of each student (Chan & Hu, 2023), enhancing their engagement and promoting self-directed learning (Michel-Villarreal et al., 2023).

Furthermore, ChatGPT serves as a valuable brainstorming tool, fostering creativity, and generating innovative ideas. Research by Zhang et al. (2023) supports the idea that ChatGPT assists students in developing new concepts and expanding existing ones. By generating innovative perspectives and ideas, ChatGPT encourages a more comprehensive and innovative exploration of thoughts. This not only aids in completing assignments, but also enriches the thinking process and broadens users' horizons. Thus, ChatGPT is not solely a tool for answering complex questions and composing texts; it is also an invaluable resource for students seeking to explore ideas and deepen their understanding. Additionally, ChatGPT provides additional references, streamlining the process for students to access the material they need. Its ability to supply authentic content and references, including direct links to journal articles, significantly enhances the student learning experience. These findings highlight the immense potential for ChatGPT to revolutionize the learning experience by providing personalized assistance, catering to diverse learning needs, enhancing efficiency, and promoting self-directed learning.

Despite the positive outlook, the study also revealed challenges experienced by university language students associated with ChatGPT, including inaccuracies, lack of critical thinking, plagiarism and AI detection, and technical problems, similar to the findings (Chan & Hu, 2023; Kayali et al., 2023; Zhou et al., 2023). Inaccuracies were a primary challenge for students, as ChatGPT provides out-of-context, fake references and is difficult to understand, as well as the quality of ChatGPT's accuracy depends on the user's prompt (Assad, 2024). Additionally, using ChatGPT to complete assignments or any academic task can lead to overreliance hindering critical-thinking skills, reducing student motivation, and hindering independent learning and problem-solving abilities. Obenza et al. (2023) agree and suggest that ChatGPT has the potential to inhibit the development of crucial skills, such as teamwork and problem-solving while also reducing independence. Moreover, they also raise challenge about potential misconduct, such as plagiarism and AI detection, that may arise when using ChatGPT (Anderson et al., 2023; Fuchs & Aguilos, 2023; Michel-Villarreal et al., 2023). In addition, students using ChatGPT encounter technical problems, such as errors originating from the website itself. These errors can potentially disrupt the user's experience and impact their ability to engage with the platform effectively.

Implications

The findings of this study suggest several implications for educators and institutions aiming to integrate AI tools like ChatGPT into higher education learning. Firstly, since many students are already familiar with and use ChatGPT for task assistance and language support, educators need to provide structured guidance on its effective use in an academic setting. This includes teaching students how to leverage ChatGPT for academic purposes, critically assess information, avoid plagiarism, and integrate it responsibly into their learning processes. Additionally, this suggests that institutions should recognize AI as a valuable asset

in learning environments and consider rethinking and redesigning curricula to incorporate AI tools as a standard part of educational practices, including integrating AI tools into classroom activities, assignments, and assessments to enhance the learning experience and provide students with modern educational resources. Secondly, institutions should prioritize promoting students' awareness and readiness regarding the ethical use of AI tools. They can organize workshops and training sessions to educate students on using ChatGPT responsibly, emphasizing the importance of originality and critical thinking in their academic work. These initiatives will help students understand the ethical implications of using AI tools, foster a culture of academic integrity, and equip them with the skills to use AI resources effectively and ethically. Thirdly, the positive impacts of ChatGPT, such as writing support, personalized learning, and increased productivity, suggest that when integrated effectively, AI can significantly enhance students' academic performance and learning experiences. Therefore, continuous improvement and adaptation of educational strategies are essential to maximize the potential of AI tools, ensuring that they contribute positively to students' skills and knowledge development. Finally, the challenges of using ChatGPT underscore the need for educational institutions to guide the ethical and practical use of AI, implying higher education institutions may need to develop policies and guidelines that outline the ethical use of AI in education. By proactively establishing comprehensive AI policies and guidelines, educational institutions can create a safe and supportive learning environment that leverages the advantages of AI technologies while safeguarding against potential challenges.

Conclusion

This study investigated university language students' perceptions of using ChatGPT in higher education learning. Our results revealed that the majority of the university language students in Indonesia had already widely used ChatGPT, with those with prior experience reporting moderate familiarity due to frequent usage. The primary reason for using ChatGPT was to seek assignment help, facilitate self-learning, and get language assistance. In addition, students exhibit a high level of awareness, readiness, and concern regarding incorporating ChatGPT for educational purposes. The results also highlight notable benefits of integrating ChatGPT into higher education learning, including writing support, personalized learning, increased productivity, brainstorming to generate ideas, and additional resources, suggesting a significant positive impact on their academic performance and learning experiences. However, there were challenges associated with its use, including inaccuracy, lack of critical thinking, plagiarism and AI detection, and technical issues. We conclude that while ChatGPT presents promising opportunities for enhancing learning and academic support, addressing the associated challenges is crucial to maximising its effectiveness and ensuring academic integrity. Based on these results, we suggest further improving the user experience to prevent negative experiences such as over-reliance on the tool and spreading misinformation. These improvements may allow ChatGPT to be used more effectively and efficiently in education.

Limitation and Future Research

While this study offers value in enhancing our comprehension of the use of ChatGPT in higher educational learning, it also paves the way for further examination. This study has

certain limitations that need to be addressed for future research. Firstly, the findings of this study may not be generalizable due to the sample size not representing the entire population, unequal gender distribution, and participants from various disciplines and educational backgrounds. This may result in bias and undermine the reliability of the findings. To address these issues, it is recommended that future studies involve larger and more representative sample sizes, and consider a more balanced distribution of gender and disciplinary backgrounds. Additionally, the use of a basic descriptive approach without exploring potential correlation between other variables may limit a deeper understanding of the phenomenon under study. Therefore, it is recommended that future research expands its scope by using more complex research designs and larger analysis samples, including integrating statistical analysis techniques, such as regression analysis, that allow researchers to identify and evaluate potential correlation between variables, thus enhancing the depth of understanding.

Disclosure Statement

No potential conflict of interest was reported by the authors.

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