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Exploring ChatGPT Utilisation in Higher Education: A Student Perspective

[1]Khairul Ashraaf Saari[1]*, Zaleha Muda[2], Noorazean Razali[3], Benazir Tanjung Fathur Rahman[4], Nor Fatin Abdul Jabar[5]

[1]*Universiti Sultan Zainal Abidin, Kampung Gong Badak, 21300 Terengganu, Malaysia.*
[2,3,4,5]*Universiti Poly-Tech Malaysia, 56100 Cheras, Kuala Lumpur, Malaysia.*

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ABSTRACT

The rapid growth of artificial intelligence technologies has transformed many aspects of society, including higher education. Among these developments, ChatGPT has emerged as a widely recognised generative AI language model, increasingly used by students, particularly since the onset of the COVID-19 pandemic. However, research on students' perceptions and use of ChatGPT remains limited. This study aims to examine the extent of ChatGPT usage among university students, its perceived effectiveness as a learning support tool, and its impact on the academic environment at a private higher education institution in Malaysia. Data were collected through structured questionnaires distributed to 250 randomly selected undergraduate students, using a quantitative descriptive approach. The findings are presented in three domains: the level of ChatGPT usage, its perceived usefulness as a learning aid, and the challenges encountered during its use. Results indicate that students use ChatGPT at a moderate level. Their usage is influenced by concerns over response accuracy, limitations in contextual understanding, and potential risks associated with academic dishonesty. These issues prompt students to adopt a cautious stance, viewing ChatGPT more as a supplementary learning tool than a primary resource. This study offers valuable insights into the evolving role of generative AI in higher education, particularly regarding its effects on students' academic practices, engagement, and expectations.

1. INTRODUCTION

The rapid growth of digital technologies has led to new innovations, with artificial intelligence being one of the most significant. Artificial intelligence (AI) imitates human cognitive processes such as learning, reasoning, adapting, and handling complex data. Particularly in the field of education, it is becoming more and more integrated into everyday human activities. According to Salbihana Samsudin et al. (2023), AI

* Corresponding author. *E-mail address*: ashraaf_s@uptm.edu.my

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applications significantly enhance task efficiency and enable individuals to accomplish daily responsibilities with improved speed and accuracy.

Popenici and Kerr (2017) define AI as a system capable of learning autonomously, adapting to its environment, correcting errors, and synthesizing information for complex tasks traits once thought to be uniquely human. Similarly, Chandra and Prihastomo (2012) describe AI as a technological construct designed to simulate human reasoning. This ability has allowed AI to change social norms and lifestyles, especially in how people communicate, learn, and solve problems in academic environments. Meanwhile, Holmes et al. (2019) emphasizes the importance of exploring the pedagogical potential of AI technologies, including their role in facilitating learning, enhancing instructional strategies, and improving educational outcomes. This includes their role in supporting learning, improving teaching methods, and boosting educational results. The accessibility and usability of AI technologies, such as ChatGPT, can expand the variety of academic goals, from learning new things to finishing tasks.

Salbihana et al. (2023) highlight the surge in AI usage during the implementation of remote learning (PdPR) during the COVID-19 pandemic. Goh Hui Hwang (2023) supports this by noting that ChatGPT provides students with immediate responses to inquiries, thereby increasing learning efficiency and responsiveness. Based on the advantages, this study aims to investigate the frequency of undergraduate students' use of ChatGPT, evaluate its effectiveness as a learning aid, and explore its implications for academic practices in private higher education in Malaysia.

2. CHATGPT IN EDUCATION

In line with the rapid advancement of technology, ChatGPT has become one of the most widely used AI platforms among university students. As a tool that relies on natural language processing, ChatGPT generates real-time text responses based on user prompts. It provides general and specific information quickly and efficiently. According to Dwi Robiul et al. (2023), ChatGPT provides users with an accessible means of retrieving information and generating solutions, thereby easing cognitive and workload burdens, particularly in academic contexts.

Setiawan and Luthfiyani (2023) describe ChatGPT as an intelligent system that interprets and responds to human queries using NLP algorithms, thus enabling interactive and context aware exchanges in natural language. Its capabilities are not limited to answering questions but extend to generating coherent, structured, and often contextually relevant content, positioning it as a valuable academic support tool (Zhai, 2023). Moreover, Rosenzweig-Ziff (2023) contends that ChatGPT promotes critical thinking and problem solving by assisting users in generating ideas, evaluating concepts, and constructing logical arguments. It's hardly surprise that ChatGPT has become more and more popular among college students as an additional learning tool given these qualities. The growing reliance on AI tools in higher education signals a shift in academic support systems. It underscores the need for thorough research to better understand ChatGPT’s impact on education.

Additionally, research has examined the impact of ChatGPT on student comprehension and engagement. For instance, Elisnorazmaliza Abd Hamid et al. (2023) discusses improved comprehension and engagement, student involvement varied widely based on their skill in using ChatGPT. Students who were more skilled at using ChatGPT showed higher engagement in learning activities. However, their understanding levels did not differ much from those who were less skilled.

The use of various AI based tools in education, especially in teaching and learning, has also been examined by Tira Nur Fitria (2021). According to Tira Nur Fitria (2021), AI is utilized in educational platforms like virtual mentors, voice assistants, intelligent content, automated assessments, personalized learning, educational games, and Intelligent Guidance Systems. While AI can help teachers with administrative tasks and create more structured, interactive learning experiences, it cannot replace teachers. They are necessary for the development of students' human values, character, and emotional maturity (Tira Nur Fitria 2021).

https://doi.org/10.24191/gading.v28i2.618

3. METHODOLOGY

This study used a quantitative research design with descriptive statistics to examine how undergraduate students use ChatGPT. A sample of 250 students, aged 18 to 27, was randomly selected from private higher education institutions in Malaysia. Data were gathered through a digital survey using Google Forms, which ensured broad access and efficient data collection during the research period.

The structured questionnaire was based on an instrument developed by Elisnorazmaliza Abd Hamid et al. (2023) and modified to fit the specific characteristics of the study's respondents. The questionnaire had four sections: Section A collected data on demographics, including age and gender; Section B assessed the level of ChatGPT usage with six items that covered frequency, purpose, and how students accessed it (such as through a mobile app or web platform); Section C explored students' perceptions of ChatGPT as a learning tool with eight items measuring its usefulness, reliability, and impact on academic performance; Section D identified challenges in using ChatGPT with nine items that pinpoint potential barriers like misinformation, misunderstandings, and plagiarism concerns. The data were analyzed using a Likert scale technique to create a clear picture of frequency of undergraduate students' use of ChatGPT, evaluate its effectiveness as a learning aid, and explore its implications for academic practices in private higher education in Malaysia.

4. ANALYSIS AND DISCUSSION

This study involved 250 respondents from higher education institutions. Most respondents were female, making up 70% of the group, while males accounted for 30%. In terms of age, 80.8% of respondents were between 21 and 23 years old, 12.4% were between 18 and 20 years old, and the remaining 6.4% were between 24 and 26 years old. Regarding academic year, 41.2% were second-year students, 39.6% were first-year students, and 19.2% were third-year students. These demographics show that most respondents were in the middle phase of their studies, which is common for diploma or bachelor's degree students.

A reliability analysis of the research tool that examines ChatGPT use in higher education from the student perspective showed a Cronbach's alpha of 0.7. This suggests acceptable internal consistency among the questionnaire items. A Cronbach's Alpha of 0.7 suggests that the items used to measure students' perspectives on Chat GPT are sufficiently reliable for exploratory research purposes, providing a reasonable degree of confidence in the consistency of responses across the instrument (Nunnally & Bernstein, 1994). The analysis of the data reveals several key insights into students' engagement with Chat GPT as a learning support tool. Findings are organized into three major dimensions: (1) the level of Chat GPT usage among students, (2) students' perceptions of its effectiveness, and (3) the challenges associated with its use. These dimensions are further elaborated below.

4.1 Level of ChatGPT Usage among Students

This section examines how often students in higher education use ChatGPT. Students are increasingly using artificial intelligence (AI) tools, especially AI like ChatGPT, in their academic lives. This analysis aims to give an overview of how frequently undergraduate students use ChatGPT in their daily studies.

Table 1. ChatGPT Adoption Rate among Students

No.	Usage Category	Frequency	Percentage (%)
1.	Uses ChatGPT	235	94.0%
2.	Does Not Use ChatGPT	15	6.0%
	Total		**100.0%**

Table 1 shows that most (94%) students at private higher education institutions have used ChatGPT for academic purposes at least once. This high usage rate highlights how quickly AI tools are becoming part of higher education. It suggests that students are more willing to try out digital learning aids. The remaining

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6% said they have not used ChatGPT, this group will be left out of further analysis in this study. In higher education, previous studies have highlighted ChatGPT's potential in supporting students' academic writing (Nugroho et al., 2024), enhancing their understanding of complex concepts (Haindl & Weinberger, 2024), and assisting in solving complex problems (Küchemann et al., 2023).

The level of engagement with ChatGPT is further understood by examining the distribution of time spent on academic-related tasks. Table 4 presents these findings, focusing on the 235 respondents who reported using the platform.

Table 2. Duration of ChatGPT Use for Each Academic Task

No.	Duration of Use	Frequency	Percentage (%)
1.	Less than 30 minutes	83	35.31%
2.	30 minutes to 1 hour	78	33.19%
3.	1 hour to 2 hours	45	19.15%
4.	2 hours to 3 hours	10	4.26%
5.	More than 3 hours	19	8.09%
	Total	235	**100%**

Table 2 shows that most respondents (35.31%) typically use ChatGPT for less than 30 minutes on each academic assignment. This indicates that students often turn to the platform for quick reference, generating initial ideas, or clarifying brief content. A significant number (33.19%) reported using it for 30 minutes to 1 hour, which suggests a bit deeper engagement, possibly involving multiple prompts or refining tasks over time. Several scholars have emphasized that ChatGPT offers diverse functions that can support students across a wide range of learning contexts (Nugroho et al., 2023).

In contrast, a smaller group (19.15%) used ChatGPT for more than an hour per assignment, with just a few (4.26%) spending over three hours. This implies that ChatGPT is generally not used for long-term academic activities like extensive research or detailed project writing. This finding shows that students view ChatGPT as a supplementary tool rather than a main academic resource. The relatively short usage reflects a specific, efficiency focused approach, matching students' preference for on demand assistance instead of ongoing reliance.

Respondents were also asked to specify the academic purposes for which they used the platform, providing more insight into their engagement with ChatGPT. Multiple responses were allowed. Table 3 displays the results, highlighting the different ways ChatGPT contributes to the learning process. For Table 3 below, informants were given the freedom to provide more than one answer.

Table 3. Primary Academic Purposes for Using ChatGPT

Bil	Purpose of Use	Frequency	Percentage (%)
1.	Completing assignments	143	17.99%
2.	Searching for additional information	214	26.92%
3.	Understanding difficult concepts	182	22.89%
4.	Practicing exam style questions	43	5.41%
5.	Improving writing skills (grammar, vocabulary, structure)	71	8.93%
6.	Preparing for examinations	54	6.79%
7.	Accessing current information on contemporary issues	88	11.07%
	Total	**665**	**100%**

The data shows that students mainly use ChatGPT as a tool for gaining knowledge. A significant number (26.92%) use it to find extra information, while 22.89% use it to clarify difficult concepts. This aligns with previous research that highlights AI as helpful support for self-directed learning and improving understanding. In STEM fields such as mathematics, science, and physics, researchers have shown that ChatGPT can support students by explaining complex principles and concepts (Bitzenbauer, 2023).

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Additionally, many students (17.99%) report using ChatGPT to complete assignments. This points to its usefulness for generating ideas, forming arguments, and restructuring content. However, more traditional activities linked to academic preparation, like practicing exam questions (5.41%) and studying for exams (6.79%), are reported less often. This suggests that students might still prefer regular study methods for tasks focused on assessments.

Interestingly, 8.93% of students say they use ChatGPT to enhance their writing skills. They recognize its value for developing language skills, particularly in grammar, vocabulary, and academic expression. In language learning and writing courses, studies have examined ChatGPT's potential to provide personalized text revision suggestions (Polakova & Ivenz, 2024), stimulate students' writing creativity (Nugroho et al., 2024), and assist in organizing outlines for term papers (Su et al., 2023). Furthermore, 11.07% used the tool to access current insights on modern issues, showing its importance beyond standard curriculum topics. This variety in usage indicates that students see ChatGPT not just as a quick fix but as a flexible academic assistant that supports traditional learning methods.

4.2. Effectiveness of ChatGPT as a Learning Tool

The effectiveness of ChatGPT as a learning tool can be examined not only through its potential to enhance academic performance, but also by understanding the extent to which students depend on it in their learning activities. Investigating students' dependency provides insights into how AI technologies are integrated into everyday study habits, highlighting both the opportunities and limitations of such tools in supporting independent learning.

Table 4. Student Dependency on ChatGPT

No.	Response Category	Frequency	Percentage (%)
1.	Strongly Agree	28	12.04%
2.	Agree	98	41.67%
3.	Disagree	87	37.04%
4.	Strongly Disagree	22	9.25%
	Total	**235**	**100.0%**

Table 4 shows how students responded regarding their use of ChatGPT. Most respondents, 41.67%, agreed that they rely on ChatGPT for learning activities. Additionally, 12.04% strongly agreed, indicating that many students depend heavily on the application. However, a significant number of respondents had a different view. About 37.04% disagreed, and 9.25% strongly disagreed. The results show that although many students acknowledge that they rely on ChatGPT, a large group feels less dependent. This reflects a pattern of usage and a low attitude towards the use of AI during learning.

Table 5. Level of Student Dependency on ChatGPT

No.	Usage Perception	Frequency	Percentage (%)
1.	Main Learning Resource	7	2.98%
2.	Supportive Learning Resource	219	93.19%
3.	Not Sure	9	3.83%
	Total	**235**	**100.0%**

Table 5 shows findings about students' views on the role of ChatGPT in their learning. Most students (93.19%) saw ChatGPT as a helpful resource, not their main educational tool. This suggests that while they valued the convenience, access, and speed of ChatGPT, they mainly depended on traditional sources like lecturers, textbooks, academic journals, and class discussions for fundamental knowledge.

Only a small number of respondents (2.98%) regarded ChatGPT as their main learning resource, which indicates that relying completely on AI tools is still uncommon. This may be due to concerns about the

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depth of content, accuracy, and reliability of the references provided by AI. Additionally, 3.83% of students were unsure about their views, which might show that they are still figuring out how to use AI tools in their studies effectively. These results align with previous research, like Tira Nur Fitria (2021) findings. Her research suggested that AI helps support and improve the learning process, making it more practical and effective. The data indicates that students are taking a careful approach to AI, mainly using ChatGPT as an extra tool to clarify information, generate ideas, and boost productivity, rather than replacing human instruction or thorough academic research.

Table 6. Perceived Effectiveness of ChatGPT in Supporting Daily Learning

No.	Perceived Effectiveness	Frequency	Percentage (%)
1.	Very Effective	36	15.25%
2.	Effective	110	46.61%
3.	Moderate	81	34.32%
4.	Less Effective	8	3.39%
5.	Not Effective	0	0.00%
	Total	**235**	**100.00%**

Table 6 shows how students view ChatGPT's effectiveness in their daily learning activities. Out of 235 respondents, most students (46.61%) said ChatGPT is Effective. Meanwhile, 34.32% viewed it as Moderate in assisting with their academic tasks. Interestingly, 15.25% of students found it Very Effective, showing they rely on the tool for their daily studies. Only a small portion of respondents (3.39%) rated it as Less Effective, and none chose Not Effective. Deng et al. (2025) argued that ChatGPT can genuinely enhance learning performance by offering personalized learning experiences, providing immediate access to information and diverse perspectives, and enabling students to engage more deeply with the material. This suggests that students generally see ChatGPT as a helpful learning aid.

These results reveal that students in higher education have a positive attitude toward AI. Over 95% recognize at least moderate effectiveness in their learning process. This indicates that ChatGPT is not just part of their academic routines, but it is also seen as a useful tool for improving understanding, productivity, and access to information. However, the differences in responses may also mean that ChatGPT's effectiveness varies based on individual learning styles, subjects, and levels of digital skills. This indicates that the acceptance rate in Table 6 shows a positive ratio, however the application as a primary learning source is still at a low level in Table 5.

Table 7. Student Agreement on ChatGPT's Role in Enhancing Academic Performance

No.	**Level of Agreement**	**Frequency**	**Percentage (%)**
1.	Strongly Agree	46	19.57%
2.	Agree	93	39.57%
3.	Neutral	83	35.32%
4.	Disagree	13	5.53%
5.	Strongly Disagree	0	0%
	Total	**235**	**100.0%**

Table 7 shows how students feel about ChatGPT's role in improving academic performance. The data reveals that 39.57% of respondents agree that ChatGPT has a positive impact on their academic success, while 19.57% strongly agree. Together, these responses suggest that nearly 60% of students see ChatGPT as a useful tool for boosting their academic performance. Deng et al. (2025) conducted a meta-analysis of 62 studies and found that ChatGPT can enhance students' learning performance, improve emotional-motivational aspects of learning, foster higher-order thinking, boost self-efficacy, and reduce cognitive load. Their study advances the understanding of ChatGPT's impact on student learning, although some limitations remain regarding the samples included.

https://doi.org/10.24191/gading.v28i2.618

At the same time, 35.32% of students chose neutral. This indicates that they may not have noticed a significant effect, but they do not dismiss the potential benefits of using ChatGPT. Only 5.53% of respondents disagree, and none strongly disagree. This further supports the idea that most students view ChatGPT positively for academic support. This discovery reflects the high level of confidence that students have in AI based tools to support their learning processes. It signifies a shift in the way educational support is redefined through digital and AI based resources in higher education.

Table 8. Student Agreement on the Role of AI Technology in Improving the Malaysian Education System

No.	Level of Agreement	Frequency	Percentage (%)
1.	Strongly Agree	47	20.00%
2.	Agree	104	44.26%
3.	Neutral	74	31.49%
4.	Disagree	7	2.98%
5.	Strongly Disagree	3	1.28%
	Total	**235**	**100.00%**

Table 8 shows how students feel about the role of AI technology in improving the Malaysian education system. A significant majority of respondents had positive views. Specifically, 44.26% agreed and 20.00% strongly agreed that AI, including tools like ChatGPT can improve the national education system. Heung and Chiu (2025), for example, conducted a meta-analysis on the impact of ChatGPT on student engagement and found that it can significantly enhance behavioral, cognitive, and emotional engagement in learning activities, offering valuable insights into its potential role in education. This means more than 64% of students are hopeful about using AI in Malaysian education.

Additionally, 31.49% of students chose neutral, which may suggest they are unsure about the long-term effects or have had limited exposure to AI tools beyond ChatGPT. A small number of students disagreed (2.98%) or strongly disagreed (1.28%), indicating that only a minority are doubtful about AI's potential in this area. Overall, the findings indicate that students have a strong belief in the transformative capabilities of AI technology to support and renew education in Malaysia. Despite the high acceptance ratio, the use of this AI technology remains low. This shows that students are still not ready to embrace digital innovations in education in Malaysia as an important tool for future development.

4.3 Challenges in Using ChatGPT

Based on the analysis table above, it shows that the effectiveness rate demonstrated by AI technology among informants indicates a positive rate. Although this AI technology successfully provides easy access to information and assistance with various academic tasks, there are some drawbacks. By understanding the issues faced by students when using ChatGPT, we can gain useful insights into how well it functions and what needs improvement. This section provides an overview of the challenges faced by students when using ChatGPT for their academic work.

Table 9. Frequency of Technical Issues Experienced While Using ChatGPT

No.	Frequency of Technical Issues Experienced Using ChatGPT	Frequency	Percentage (%)
1.	Yes, I have experienced technical issues	211	89.79%
2.	No, I have never experienced any issues	24	10.21%
	Total	**235**	**100.00%**

Table 9 summarizes the frequency of technical issues that students faced while using ChatGPT. A large majority of respondents, 89.79%, reported experiencing some technical issues with the platform, while only 10.21% said they had no issues at all. This finding shows that even with the widespread use and perceived value of ChatGPT, technical reliability is still a concern for users.

https://doi.org/10.24191/gading.v28i2.618

These issues may include system delays, server downtime, login problems, or inconsistent responses from AI. Such challenges can disrupt the learning process and affect student satisfaction, especially for those who rely on ChatGPT for academic support. While the overall perception of ChatGPT is positive, factors such as these technical limitations further conclude why the usage rate of ChatGPT AI technology remains low. This finding emphasizes the need for technological infrastructure and user training to fully leverage AI tools in higher education.

Table 10. Student Agreement that ChatGPT Lacks the Depth of Expertise Provided by Lecturers or Specialists

No.	Level of Agreement	Frequency	Percentage (%)
1.	Strongly Agree	73	31.06%
2.	Agree	92	39.15%
3.	Neutral	54	22.98%
4.	Disagree	12	5.11%
5.	Strongly Disagree	4	1.70%
	Total	**235**	**100.00%**

Table 10 shows how students feel about the idea that ChatGPT does not match the expertise offered by lecturers or subject specialists. The data indicates that 39.15% of respondents Agree and 31.06% Strongly Agree. Ali et al. (2024) reported that ChatGPT in education still presents several shortcomings, such as producing inaccurate answers, encouraging academic plagiarism, and fostering student dependency on technology. This suggests that many students see limitations in ChatGPT's ability to provide deep, expert insights like those from academic professionals.

At the same time, 22.98% of respondents remained Neutral. This may reflect mixed experiences or uncertainty about comparing AI generated answers to human expertise. A smaller number of students Disagreed (5.11%) or Strongly Disagreed (1.70%). This indicates that only a few fully trust ChatGPT to deliver expert level understanding. This decision shows that although students find ChatGPT useful for general academic support, they still value human educators for in-depth guidance and mastery of subjects. It also highlights a significant limitation in using AI as a support tool, rather than a replacement for expert teaching in higher education.

Table 11. Student Agreement that ChatGPT Reduces Critical and Analytical Thinking Skills

No.	Level of Agreement	Frequency	Percentage (%)
1.	Strongly Agree	35	14.89%
2.	Agree	56	23.83%
3.	Neutral	116	49.36%
4.	Disagree	24	10.21%
5.	Strongly Disagree	4	1.70%
	Total	**235**	**100.00%**

Table 11 shows how students feel about the statement that ChatGPT reduces critical and analytical thinking skills. Nearly half of the respondents, 49.36%, chose Neutral. Lo et al. (2024) argued that ChatGPT can either hinder or facilitate the development of students' critical thinking, whereas Abu Khurma et al. (2024) maintained that it only undermines students' critical thinking. This indicates a lot of uncertainty or mixed feelings about ChatGPT's impact on higher-order thinking skills. Meanwhile, 23.83% Agree, and 14.89% Strongly Agree that using ChatGPT could harm students' ability to think critically and analytically.

On the other hand, only a small number of students Disagreed, at 10.21%, or Strongly Disagreed, at 1.70%, with this statement. This suggests that some learners worry about becoming too dependent on AI for cognitive tasks. These findings raise important questions about how we use AI tools in education. While many people use ChatGPT as a helpful academic resource, educators and institutions may need to

https://doi.org/10.24191/gading.v28i2.618

encourage responsible use. This way, it can support, rather than replace, critical thinking. It also highlights the need for digital literacy and teaching strategies that balance AI help with independent thinking.

Although students increasingly use ChatGPT to help with their academic tasks, there are limitations to its adoption. Table 6 lists various technical, linguistic, and ethical challenges reported by students (n=100), who could choose multiple types of difficulties.

Table 12. Challenges Faced by Students When Using ChatGPT

No.	Type of Challenge	Frequency (n = 100)
1.	Inability to understand the context of questions	10.78%
2.	Inaccurate or misleading responses	24.37%
3.	Difficulty understanding AI generated responses	15.36%
4.	Plagiarism concerns	15.81%
5.	Unverified or no credible information	10.78%
6.	Poorly structured or incoherent language	8.86%
7.	Access difficulty (platform unavailability or lag)	5.76%
8.	Delayed response time	5.61%
9.	Privacy and data security concerns	2.66%
	Total	**100%**

Table 12 lists the various challenges students face when using ChatGPT for their academic tasks. One of the most common issues is receiving inaccurate or misleading responses, reported by 24.37% of respondents. This raises concerns about the reliability of AI generated content, especially when students rely on ChatGPT for assignments, research, or understanding concepts. Factual errors can cause confusion, misinterpretation, or the spread of incorrect information if students do not verify the facts. Dempere et al. (2023), through a systematic literature review, reported that ChatGPT often performs poorly in addressing complex reasoning tasks, fails to provide emotional support, and may negatively impact learning by reducing peer interaction.

Another significant challenge is plagiarism, mentioned by 15.81% of students. This points to ethical issues around using AI generated text in schoolwork. Students may not understand proper citation practices, or the AI might unknowingly reproduce material from its training data. Lo et al. (2024) concluded that the use of ChatGPT can contribute to plagiarism and other forms of academic misconduct, may provide inaccurate information that reduces students' motivation toward learning, and can weaken independent thinking skills when students become overly reliant on the tool. Related to this is the difficulty in understanding AI generated answers, highlighted by 15.36%. Students often find the language or content from ChatGPT too complex, vague, or not suited to their comprehension level.

A number of students (10.78%) also pointed out that ChatGPT sometimes struggles to grasp the context of questions. This showcases a limitation in the AI's awareness, as it can give generic or irrelevant responses due to a lack of background knowledge or misunderstanding of the question's purpose. Additionally, the lack of verified or reliable information, also reported by 10.78%, makes the tool's academic credibility more complicated. These issues show that although ChatGPT can provide quick answers, its responses still need human evaluation and judgment. Mai et al. (2024) argued that first-time users may struggle to detect inaccurate or misleading information produced by ChatGPT, which can increase their cognitive load.

Linguistic problems, such as unstructured or unclear language, were noted by 8.86% of students. This suggests that some AI responses may be poorly organized or hard to understand. Technical issues like accessibility problems (5.76%) and slow response times (5.61%) were reported too, though less frequently. These include platform delays, server issues, or slow system performance, which can disrupt students' work or delay access to academic help. According Imran and Almusharraf (2023) noted that the tool's delayed information updates may result in harmful or outdated content, potentially misleading students and reinforcing cognitive biases.

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Lastly, privacy and data security concerns were mentioned by a small number of students (2.66%). While this issue is less common, it shows a growing awareness of digital rights and responsible AI use. Students are becoming more mindful of how their questions and data are processed, stored, and possibly reused. Together, the challenges listed in this table emphasize the need for critical engagement with AI tools and the development of digital literacy skills among students in higher education.

Based on the findings in Table 12, it is clear that while ChatGPT provides notable benefits for academic use, students still encounter several major challenges when using the platform. The most pressing issues include inaccurate or misleading responses, risks of plagiarism, and difficulties in understanding AI generated content. These problems suggest that even though students are actively using ChatGPT, they remain cautious about the quality, reliability, and ethical aspects of its outputs. Therefore, the effectiveness of ChatGPT in higher education depends not only on its technological features but also on students' ability to think critically about and use the information it offers.

5. CONCLUSION

Data from this study show that ChatGPT has made a significant impact among university students. This highlights its growing role in higher education. A remarkable 94% of students reported using ChatGPT as a tool for gaining knowledge, while only 6% did not engage with it. This usage indicates the increasing presence of generative artificial intelligence in students' academic work. However, even with its widespread adoption, ChatGPT has not become a primary learning resource. Instead, students seem to prefer using ChatGPT as a supplementary tool. This fits with broader trends of selecting AI tools based on task needs, trustworthiness, and personal learning preferences. According to Jin Wang & Wenxiang Fan (2025), many studies have claimed that ChatGPT can improve stu-dents' learning performance, learning perception, and higher-order thinking, but other studies have found that it does not significantly improve students' learning performance or learning perception and can even hinder students' learning performance, learning perception, and higher-order thinking.

Students' interactions with ChatGPT appear focused. Many respondents indicated that they use it to tackle specific academic problems, such as finding extra information, clarifying complex topics, and completing assignments. According to Jin Wang & Wenxiang Fan (2025), although many studies have explored the use of ChatGPT in education, no clear consensus has been reached on whether it effectively supports students' learning performance, learning perception, and higher-order thinking. For instance, Emran et al. (2024) found that adopting ChatGPT as an assistive tool in an undergraduate academic writing skills course significantly improved students' learning performance. This trend suggests that students see ChatGPT as a readily available support tool rather than a core part of their education.

As shown in Table 2, 33.19% of students spent less than 30 minutes per session on ChatGPT. This suggests they use it for quick information searches instead of deep learning. Despite its ease of use, several key barriers limit its wider adoption. These include inaccurate responses (24.37%), difficulty in understanding complex prompts (15.36%), problems with understanding output (10.78%), plagiarism worries (15.81%), unreliable information (10.78%), irregular language (6.8%), and privacy/security concerns (2.66%). Despite being easily accessible, several key limitations lead to cautious use. Negative views arise from:

i. the tendency of ChatGPT to generate vague, inaccurate, or contextually irrelevant content, which under-mines user confidence in the platform as a reliable academic source.

ii. its inability to process or respond accurately to complex, multi-layered academic prompts, particularly in domains that require disciplinary expertise.

iii. ethical concerns surrounding plagiarism, as students fear that overreliance on AI generated responses may compromise the integrity of their academic work.

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These issues help explain why some students are hesitant to fully use ChatGPT in their studies, even though they see its potential. This underscores the urgent need for better understanding of AI, guidance from institutions, and frameworks for critical engagement to promote responsible and informed use of AI in higher education. In conclusion, ChatGPT's role in higher education is expanding. However, it needs clear guidance and informed use. Universities should actively create AI literacy programs, establish ethical guidelines, and develop teaching strategies. This will help students benefit from AI tools while ensuring intellectual freedom, analytical thinking, and academic responsibility.

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CONFLICT OF INTEREST STATEMENT

The authors agrees that this research was conducted in the absence of any self-benefits, commercial or financial conflicts and declare the absence of conflicting interests with the funders.

AUTHORS' CONTRIBUTIONS

Khairu Ashraaf Saari carried out the analysis and discussion of the study, and wrote the methodology and introduction sections. Zaleha Muda reviewed the literature and wrote the conclusion. Noorazean Razali managed the data collection process, developed the questionnaire, and prepared the abstract. Benazir Tanjung Fathur Rahman assisted in the data collection process. Nor Fatin Abdul Jabar oversaw the formatting and language style.

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About the Authors

Khairul Ashraaf Saari is a lecturer in the field of Linguistics with teaching experience at Universiti Sultan Zainal Abidin. His teaching focuses on sociolinguistics, geolinguistics, and language education. His research interests include dialectology, sociolinguistics, corpus linguistics, and discourse studies. He is actively involved in academic research, curriculum development, and innovation in language studies. He can be reached via email at *khairulashraafsari@gmail.com* .

Zaleha Muda is a lecturer at the Centre for Islamic, General and Language Studies, Universiti Poly-Tech Malaysia (UPTM). Her teaching focuses on Malay Communication, Ethics and Morality, as well as Philosophy and Contemporary Issues. Her research interests include the socio-economic well-being of the B40 community, psychometric instrument development, Maqasid Shariah, and sociolinguistics. She is actively engaged in curriculum development, community involvement, and research grant projects. She can be reached at *zaleha@uptm.edu.my*

Noorazean Razali is a lecturer in Malay language with extensive teaching experience at University Poly-Tech Malaysia (UPTM). Her teaching focuses on General Studies (MPU) and language courses. Her research interests include sociolinguistics, theoretical linguistics, literary linguistics and digital education. She is actively involved in academic research, curriculum development, innovation in language studies and digital education. She can be reached at *noorazean@uptm.edu.my*

Benazir Tanjung Fatkur Rahman is a lecturer in the field of Linguistics with teaching experience at Universiti Poly-Tech Malaysia (UPTM). Her teaching focuses on MPU and language education. Her research interests include sociolinguistics, corpus linguistics, and discourse studies. She is actively involved in academic research, curriculum development, and innovation in language studies. She can be reached via email at *tanjung@uptm.edu.my*

Nor Fatin Abdul Jabar is a lecturer at the Faculty of Education, Social Sciences and Humanities at Universiti Poly-Tech Malaysia, Kuala Lumpur, Malaysia. Her teaching focuses on English Language and Discourse Studies. Her research interests include education, languages, Discourse and Corpus Linguistics Studies. She is actively involved in curriculum development and academic quality enhancement in tertiary education at UPTM. She can be reached via email at *norfatin@uptm.edu.my*

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