

ANALYZING CHATGPT INTEGRATION IN HIGHER EDUCATION: USAGE TRENDS, STUDENT INSIGHTS, AND ETHICAL CONSIDERATIONS

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Abstract. *This study investigates the adoption of ChatGPT in higher education, focusing on student usage patterns, perceived benefits, and ethical concerns. With the increasing integration of Artificial Intelligence (AI) tools in academia, understanding their role in enhancing or potentially hindering learning is critical. The primary issue addressed is the ethical dilemma posed by AI tools, including risks of academic dishonesty and over-reliance on automated systems. A mixed-methods approach comprised a survey of over 100 university students and follow-up interviews with selected participants. The results indicate that ChatGPT is widely used for research assistance, writing assignments, and exam preparation, with students reporting high satisfaction levels. However, concerns regarding plagiarism and data privacy remain prevalent. The study concludes that while ChatGPT offers significant educational benefits, clear guidelines and responsible usage policies are essential to mitigate associated risks. Future research should explore long-term impacts and develop best practices for ethical AI integration in education.*

Keywords: *Academic Integrity, Artificial Intelligence, ChatGPT, Ethical Concerns, Higher Education, Personalized Learning.*

1. INTRODUCTION

The rapid advancement of artificial intelligence (AI) technologies has significantly impacted various fields, with education being one of the most affected. AI tools, particularly natural language processing, have become integral to digital learning environments. Among these tools, ChatGPT, developed by OpenAI, stands out for its ability to generate human-like responses, providing instant information and personalised student support. Several studies have examined the role of AI in education, with Espartinez (2024) highlighting its potential to enhance independent learning. Similarly, Klimova and De Campos (2024) argue that AI tools facilitate better engagement with academic content, making complex subjects more accessible.

Despite its numerous benefits, integrating AI tools like ChatGPT raises critical ethical questions. Adel et al. (2024) emphasise the potential risks of over-reliance on AI, which could undermine students' ability to think critically and independently. Moreover, the literature has widely discussed concerns about data privacy and academic dishonesty (Bin-Nashwan et al., 2023; Montenegro-Rueda et al., 2023). These studies underscore the need for a balanced approach to AI adoption in education, ensuring its advantages are leveraged without compromising academic integrity.

While ChatGPT offers significant benefits in accessibility, instant feedback, and personalised learning, its rapid adoption in higher education has also led to several challenges. Key among these is the risk of academic dishonesty, with students potentially using AI-generated content without proper attribution. Additionally, the lack of clear guidelines on responsible AI usage has created uncertainty among students and

educators. This study seeks to address these issues by exploring the patterns of ChatGPT usage among university students, their perceptions of its benefits and drawbacks, and the ethical concerns associated with its adoption. Understanding these dynamics is crucial for developing effective policies and practices that promote responsible AI use in academic settings.

The primary objectives of this research are as follows:

- To investigate the patterns of ChatGPT usage among university students.
- To examine students' perceptions of the benefits and limitations of ChatGPT as a learning tool.
- To explore the ethical concerns related to ChatGPT usage, including plagiarism and data privacy issues.
- To provide recommendations for educators and policymakers on responsibly integrating AI tools into higher education.

This research holds significant value for multiple stakeholders in the education sector. For educators, it offers insights into how students use AI tools and the potential benefits and risks associated with their adoption. By understanding these factors, educators can develop strategies to promote ethical AI usage and enhance learning outcomes. Policymakers can use the findings to establish guidelines and regulations that ensure the responsible integration of AI in education. Furthermore, this study contributes to the growing literature on AI in education, comprehensively analyzing ChatGPT's impact on higher education.

The findings of this research could have practical implications beyond academia. For instance, understanding how students use AI tools may inform the development of more effective digital learning platforms and resources. Additionally, by addressing the ethical concerns associated with AI usage, this study aims to foster a culture of integrity and responsibility in digital learning environments.

2. LITERATURE REVIEW

Numerous studies have explored the role of AI in transforming educational practices, mainly focusing on how AI tools like ChatGPT facilitate learning. Espartinez (2024) conducted a Q-methodology study that revealed high student engagement when using AI-driven educational tools. The study highlighted that students perceived AI as a valuable resource for improving their comprehension of complex subjects. Similarly, Klimova and De Campos (2024) investigated undergraduates' perceptions of ChatGPT and found that the tool significantly enhanced their ability to complete assignments and prepare for exams.

Gill et al. (2024) comprehensively analysed the transformative effects of AI chatbots on modern education. Their findings suggest that tools like ChatGPT can democratise access to quality education by providing instant information and tailored feedback. Meanwhile, Bin-Nashwan et al. (2023) raised concerns about the ethical implications of widespread AI usage in academia, particularly emphasising the potential for plagiarism and misuse.

Montenegro-Rueda et al. (2023) systematically reviewed studies on AI implementation in education. They identified key benefits such as improved student engagement, personalised learning, and enhanced accessibility. However, they also noted significant challenges, including the need for clear guidelines on ethical AI use and the risk of over-reliance on AI tools.

Acosta-Enriquez et al. (2024) examined the perceptions of Generation Z university students regarding the ethical implications of ChatGPT usage. They found that while students valued the convenience and instant feedback provided by ChatGPT, concerns about privacy and data security were prevalent.

Shabbir et al. (2024) investigated how ChatGPT could bridge educational gaps in underdeveloped regions. Their study highlighted AI's potential to democratise education and pointed out infrastructure challenges that limit its adoption in certain areas.

Rajabi et al. (2024) explored the impact of ChatGPT on creativity in academic writing. Their findings suggest that while ChatGPT can assist in generating ideas, over-reliance on AI may hinder students' development of original thought and critical thinking skills.

Marzuki et al. (2023) analysed the perspectives of English as a Foreign Language (EFL) teachers on the impact of AI writing tools. They reported mixed feelings, noting that while AI tools could improve students' writing fluency, they could also reduce linguistic creativity.

Dwivedi et al. (2023) provided a multidisciplinary perspective on the opportunities and challenges posed by generative AI tools. Their paper emphasised the importance of regulatory frameworks in addressing ethical concerns and ensuring the responsible use of AI in academia.

Kamalov et al. (2023) discussed the psychological effects of ChatGPT on students, noting that while it can reduce academic stress by providing instant support, it may also lead to dependency and diminished problem-solving skills.

While existing studies provide valuable insights into the benefits and challenges of AI in education, several gaps remain unaddressed. First, most research focuses on the general use of AI tools without delving into specific patterns of ChatGPT usage among different student demographics. This study aims to fill that gap by analysing usage patterns across various academic disciplines and levels of study.

Second, although ethical concerns such as plagiarism and data privacy have been widely discussed, limited research exists on students' perceptions of these issues and their suggestions for mitigating risks. By exploring students' viewpoints, this research seeks to provide practical recommendations for promoting ethical AI usage in academic settings.

Lastly, while many studies highlight AI's potential to replace traditional learning methods, few have examined AI tools' complementary role in enhancing conventional education. This research addresses that gap by investigating how ChatGPT can be used alongside traditional teaching methods to improve learning outcomes.

3. RESEARCH METHODS

This study adopted a mixed-methods research design, combining quantitative and qualitative approaches to ensure a comprehensive understanding of ChatGPT usage among university students. The approach was chosen to capture both statistical trends and in-depth personal insights. The primary research design involved conducting surveys and follow-up interviews with selected participants. According to Creswell (2014), mixed-methods research is particularly effective in studies that explore complex phenomena from multiple perspectives, making it well-suited for this investigation.

The quantitative component of the research involved a structured survey distributed to over 100 university students. This survey was designed to gather data on the frequency of ChatGPT usage, students' perceptions of its benefits, and their concerns regarding ethical issues. Meanwhile, the qualitative component involved semi-structured interviews with 15 participants, which allowed for a deeper exploration of individual experiences and viewpoints.

Data collection was carried out in two phases. In the first phase, an online survey was disseminated through university mailing lists and social media platforms. The survey consisted of 20 multiple-choice and open-ended questions designed to capture a broad range of information about ChatGPT usage patterns, satisfaction levels, and ethical concerns. Participants were selected using convenience sampling, targeting students from various academic disciplines to ensure diversity.

In the second phase, semi-structured interviews were conducted with a subset of survey respondents who expressed interest in participating in follow-up discussions. The interviews focused on understanding students' motivations for using ChatGPT, the specific ways in which they used the tool, and their perspectives on the ethical implications of its adoption. Each interview lasted approximately 30 minutes and was

recorded for transcription and analysis.

The data collected from the survey were analyzed using descriptive and inferential statistical techniques. Statistical analysis was performed using SPSS (Statistical Package for the Social Sciences) software. Descriptive statistics, including frequency distributions and percentages, were used to summarize the data. Inferential statistics, such as chi-square tests, were employed to identify significant relationships between variables, such as the frequency of ChatGPT usage and students' academic performance.

For the qualitative data obtained from the interviews, thematic analysis was conducted following the six-phase approach outlined by Braun and Clarke (2006). This involved familiarizing oneself with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report. The thematic analysis allowed for identifying recurring patterns and insights related to students' experiences and ethical concerns.

By combining quantitative and qualitative analysis, this study provides a well-rounded understanding of ChatGPT usage in higher education, offering valuable insights into its potential benefits and challenges.

4. RESULTS AND DISCUSSION

The survey revealed several key findings regarding the usage of ChatGPT among university students. Approximately 38.8% of respondents reported using ChatGPT daily, while 39.8% used it weekly. The most common purposes for using ChatGPT included research assistance (62%), writing assignments (44.7%), and exam preparation (37.5%). These findings indicate that ChatGPT has become a central tool in students' academic routines, with a significant proportion relying on it for various academic tasks.

Regarding perceived benefits, over 53% of respondents expressed high satisfaction with ChatGPT, particularly appreciating its ability to provide instant feedback and simplify complex concepts. The qualitative data further underscored these findings, with several interviewees highlighting ChatGPT's role in enhancing their learning experience by offering tailored support based on their individual needs.

Table 1. Frequency of ChatGPT Usage.

Frequency	Percentage (%)
Daily	38.8
Weekly	39.8
Monthly	15.6
Never	5.8

(Source: Created by the authors)

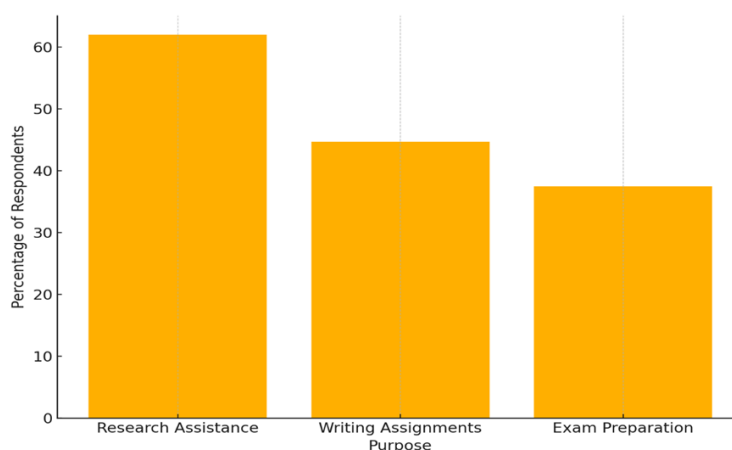


Figure 1. Common Purposes for Using ChatGPT.

Figure 1 visually represents the main purposes for which students utilize ChatGPT. The data shows that the highest percentage of students (62%) use ChatGPT primarily for research assistance, making it a critical tool in academic research processes. This is followed by 44.7% of respondents who reported using the tool for writing assignments, reflecting its usefulness in generating content and aiding in academic writing. Additionally, 37.5% of students indicated that they rely on ChatGPT for exam preparation, highlighting its role in providing explanations and clarifications on complex topics.

The results suggest that ChatGPT plays a significant role in supporting students' academic endeavours. Its widespread use for research, assignments, and exam preparation highlights its value as a versatile educational tool. The high levels of satisfaction reported by respondents indicate that ChatGPT meets many students' expectations in terms of usability and effectiveness.

When compared with previous studies, this research's findings align with those of Espartinez (2024) and Klimova & De Campos (2024), who reported high levels of student engagement and perceived benefits associated with AI tools. However, this study adds to the existing literature by providing a more detailed analysis of usage patterns across different academic disciplines. Unlike Gill et al. (2024), who focused primarily on the potential risks of AI, this research emphasizes both the positive aspects and ethical concerns raised by students.

Despite its contributions, this study has several limitations. First, using a convenience sampling method may limit the generalizability of the findings. Second, the reliance on self-reported data could introduce bias, as participants may have over- or under-reported their usage of ChatGPT. Finally, while the mixed-methods approach provided valuable insights, future research could benefit from a larger sample size and a more diverse participant pool to enhance the robustness of the findings.

CONCLUSION

This study explored the usage patterns, perceived benefits, and ethical concerns related to ChatGPT adoption among university students. The findings revealed that ChatGPT is widely used for various academic purposes, including research assistance, writing assignments, and exam preparation. Students reported high satisfaction with the tool, particularly appreciating its ability to provide instant feedback and personalized learning support. However, ethical concerns such as plagiarism and data privacy were prominent, highlighting the need for clear guidelines and policies on responsible AI usage in academic settings. By addressing these issues, this study contributes valuable insights into how AI tools can be integrated into higher education to enhance learning outcomes while preserving academic integrity. The findings emphasize the importance of adopting a balanced approach to AI adoption, where its benefits are maximized and its risks are mitigated.

Future research could build on this study's findings by exploring the long-term impact of AI tools like ChatGPT on students' academic performance and learning outcomes. Additionally, further studies could investigate the effectiveness of different instructional strategies for promoting ethical AI usage in educational contexts. Expanding the research to include a more diverse participant pool and various academic levels (e.g., high school or professional education) could provide a more comprehensive understanding of ChatGPT's role in education. Moreover, future work could focus on developing and testing specific guidelines and interventions to foster responsible AI usage among students. Research could contribute to creating best practices for integrating AI tools into education to enhance learning while safeguarding academic integrity.

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