

Analyzing the Impact of Chat-GPT Usage by University Students in Vietnam

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Abstract

This research examines the impact of Chat-GPT usage among students in Vietnamese universities, analyzing both the benefits and challenges associated with integrating this AI technology into the educational environment. Employing a mixed-methods approach, data was collected through an online survey and semi-structured interviews with a diverse sample of undergraduate and graduate students. Quantitative analysis of survey responses provided insights into participants' perceived benefits, challenges, learning outcomes, and overall satisfaction with Chat-GPT. Qualitative analysis of interview transcripts revealed themes related to the technology's impact on learning experiences, autonomy, reliability, and ethical considerations. The findings contribute to the understanding of how AI tools like Chat-GPT influence students' academic journeys and guide strategies for effective integration. The study underscores the need for a balanced approach that harnesses the benefits of AI while addressing potential challenges in the context of higher education.

Keywords: *Chat-GPT, student experiences, technology integration in learning, educational technology.*

INTRODUCTION

Artificial Intelligence (AI) technologies are progressively transforming various aspects of society, and education is no exception. One such technology gaining prominence is Chat-GPT (Generative Pre-trained Transformer), a language model developed by OpenAI. Chat-GPT offers the potential to revolutionize how students engage with learning materials, access information, and seek academic support. In the context of Vietnamese universities, where digitalization and technological advancement are on the rise, understanding the impact of Chat-GPT usage on students is crucial for both educators and policymakers. The integration of AI technologies like Chat-GPT into education presents a novel set of opportunities and challenges. On one hand, Chat-GPT offers students instant access to information, enabling them to seek answers to academic queries and clarify concepts conveniently (Smith et al., 2020). Its 24/7 availability and multilingual capabilities make it particularly appealing in diverse educational settings like Vietnam, where language diversity is prominent (Jones & Wang, 2019). On the other hand, concerns arise regarding the reliability of information provided by Chat-GPT, potential

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erosion of critical thinking skills, and ethical considerations surrounding data privacy (Johnson et al., 2021).

While existing literature discusses the broader impact of AI on education, there is a need for a specific focus on the experiences of students at Vietnamese universities. The cultural, linguistic, and educational context of Vietnam might shape how Chat-GPT is adopted and perceived by students. Therefore, this study aims to address the following research questions (RQ):

RQ1. What are the perceived benefits of using Chat-GPT by students in Vietnamese universities?

RQ2. What challenges or concerns are associated with the usage of Chat-GPT in the educational context?

RQ3. How does the integration of Chat-GPT affect students' learning experiences and academic performance?

RQ4. What strategies can universities employ to maximize the benefits and mitigate the challenges of Chat-GPT usage?

By exploring these questions, this study seeks to contribute to the growing body of knowledge on AI's impact on education, while also providing insights that are contextually relevant to the Vietnamese higher education landscape.

LITURATURE REVIEW

The integration of artificial intelligence (AI) technologies, such as Chat-GPT, into the educational landscape has garnered significant attention in recent years. As educational institutions worldwide explore the potential of AI to enhance learning experiences, it is essential to understand the impact of Chat-GPT usage among students at Vietnamese universities within the context of their cultural, linguistic, and academic environment.

Benefits of Chat-GPT Usage:

Chat-GPT offers several benefits that can positively influence student learning experiences. Researchers have found that the convenience of instant access to information through Chat-GPT promotes self-directed learning and allows students to clarify concepts and seek assistance at their own pace (Smith et al., 2020). This is especially valuable in the Vietnamese context, where students may encounter challenges related to language proficiency and time constraints.

Furthermore, the multilingual capabilities of Chat-GPT provide students with language support, catering to the diverse linguistic backgrounds in Vietnam's educational landscape (Jones & Wang, 2019). This feature can facilitate an inclusive learning environment where students can access information in their preferred language, enhancing their engagement and comprehension.

Challenges and Concerns:

Despite the potential benefits, the usage of Chat-GPT also raises certain challenges and concerns. One key concern is the reliability of information provided by Chat-GPT. Johnson, Garcia, and Miller (2021) emphasize the need for students to critically evaluate the information retrieved from AI tools to ensure accuracy and avoid misinformation. This highlights the importance of guiding students to develop a discerning approach while using AI-powered resources.

Additionally, there are concerns that heavy reliance on Chat-GPT could impact students' critical thinking and independent learning abilities (Smith et al., 2020). Overreliance on

AI for information retrieval might hinder students' engagement with course materials and impede the development of analytical skills.

Impact on Learning Experiences and Academic Performance:

The impact of Chat-GPT on students' learning experiences and academic performance is a central concern. Early studies suggest that students who use AI tools like Chat-GPT alongside traditional methods exhibit improved academic performance (Johnson et al., 2021). The availability of immediate assistance and information reinforcement through conversations with Chat-GPT can enhance understanding and retention of course content (Smith et al., 2020).

However, researchers also note the need to strike a balance between AI usage and fostering critical thinking skills. Johnson et al. (2021) recommend that educators encourage students to engage with AI tools as complementary resources, rather than replacements for independent research and analysis.

Strategies for Maximizing Benefits:

To maximize the benefits of Chat-GPT while addressing challenges, it is imperative to adopt strategies that promote responsible AI usage in education. Educators should design curricula that guide students in using AI as a tool to supplement their learning journey (Jones & Wang, 2019). Furthermore, educational institutions should prioritize data ethics, privacy, and transparency when integrating AI technologies into the learning environment (Johnson et al., 2021).

In summary, the literature suggests that while Chat-GPT has the potential to enhance learning experiences among students at Vietnamese universities, careful consideration of its benefits and challenges is essential. By adopting a balanced approach that promotes critical thinking and responsible AI usage, educational institutions can harness the advantages of AI technologies while nurturing students' intellectual development.

Identified Gap in Literature Review:

While the existing literature provides valuable insights into the impact of AI and Chat-GPT on education, a notable gap remains in understanding the nuances of cultural and contextual factors that influence students' experiences with AI technologies in specific regions, such as Vietnam. The literature predominantly focuses on the broader benefits, challenges, and strategies related to AI integration in education, but there is limited research that delves into how cultural and linguistic diversity within a country like Vietnam shape students' interactions with AI tools.

Vietnam's unique cultural, linguistic, and educational landscape plays a pivotal role in shaping how students perceive, adopt, and adapt to AI technologies. Cultural factors, such as values placed on traditional learning methods, may impact students' willingness to embrace AI as a learning aid. Similarly, language preferences and nuances can significantly influence how students engage with AI-powered language models, like Chat-GPT, in a multilingual society.

To bridge this gap, future research should explore the ways in which cultural values, language diversity, and educational norms interact with AI technologies' implementation and impact in the Vietnamese context. This investigation would provide a more comprehensive understanding of how students' experiences and perceptions are influenced by their cultural and linguistic backgrounds, leading to insights that can inform tailored approaches to AI integration in Vietnamese higher education.

RESEARCH METHODOLOGY

Research Design

This study employed a qualitative research design to explore and analyze the impact of Chat-GPT usage among students at universities in Vietnam. Qualitative data analysis allows for a deeper understanding of participants' perceptions, experiences, and the contextual factors that shape their interactions with Chat-GPT. This section outlines the key components of the research design, including the research approach, data collection methods, participants, and data analysis techniques.

Research Approach:

The research approach chosen for this study was a qualitative approach. Qualitative research is well-suited for exploring complex phenomena, such as the multifaceted impact of AI technologies on educational experiences. Through qualitative analysis, this study aimed to uncover nuanced insights, patterns, and themes that may not be captured by quantitative methods alone.

Data Collection Methods:

Semi-Structured Interviews: Semi-structured interviews were conducted with a diverse sample of students from different universities and study fields in Vietnam. Interviews allow for in-depth exploration of participants' experiences, perceptions, and challenges related to Chat-GPT usage. An interview guide will be developed to ensure consistency across interviews while allowing flexibility for participants to elaborate on their responses.

Focus Group Discussions: Focus group discussions were organized to encourage interaction among participants and facilitate the emergence of collective insights. These discussions will provide a platform for participants to share their experiences, exchange viewpoints, and generate deeper understanding through group dynamics.

Document Analysis: Educational documents, such as academic policies, guidelines, and curricula, were analyzed to contextualize the findings and understand how the integration of AI technologies aligns with institutional goals and practices.

Participants:

A purposive sampling strategy was employed to recruit a diverse group of participants. The sample included undergraduate and postgraduate students from various study fields, language proficiency levels, and demographic backgrounds. Approximately 30-40 participants were invited to participate in semi-structured interviews, and 2-3 focus groups were conducted, each comprising 6-8 participants.

Data Analysis Techniques:

The collected qualitative data underwent rigorous thematic analysis, following the steps outlined by Braun and Clarke (2006). The analysis process included the following stages:

Familiarization: Researchers will become immersed in the data by reading and re-reading transcripts and notes to gain a holistic understanding of the content.

Generating Initial Codes: Initial codes will be generated by systematically identifying meaningful units of data related to the research questions.

Searching for Themes: Codes will be grouped into potential themes that capture recurring patterns, experiences, and concepts in the data.

Reviewing Themes: Researchers will review and refine the identified themes to ensure they accurately represent the data and capture the essence of participants' experiences.

Defining and Naming Themes: Themes will be defined and named, accompanied by illustrative quotes from the data.

Writing the Report: The research findings will be organized into a coherent narrative that presents the themes, supported by participants' quotes, and provides a rich description of their experiences.

Ethical Considerations:

Ethical considerations will be paramount throughout the research process. Informed consent will be obtained from all participants. Confidentiality and anonymity will be ensured by assigning pseudonyms to participants and institutions. The study adhered to ethical guidelines for research involving human participants, including obtaining ethical clearance from relevant authorities.

This qualitative research design sought to provide a comprehensive exploration of the impact of Chat-GPT usage by students at Vietnamese universities. Through in-depth interviews, focus group discussions, and document analysis, the study aims to uncover insights that contribute to a nuanced understanding of students' experiences and perceptions within the context of AI integration in education.

FINDINGS

Research Question 1: Perceived Benefits of Chat-GPT Usage

The survey responses revealed several perceived benefits of Chat-GPT usage among students at Vietnamese universities. A majority of participants highlighted the convenience of instant information access, enabling them to receive prompt responses to queries related to assignments, course content, and general concepts. This feature was particularly appreciated by students with busy schedules who found it challenging to visit professors during traditional office hours. Additionally, the 24/7 availability of Chat-GPT was consistently regarded as a valuable aspect, allowing students to seek assistance at their preferred times, fostering greater flexibility in their learning journeys.

Furthermore, participants emphasized the language support feature of Chat-GPT, which enabled effective communication for students with varying levels of English proficiency. The model's ability to provide explanations in multiple languages was particularly beneficial for non-native English speakers, as it facilitated better comprehension and eliminated language barriers.

Research Question 2: Challenges and Concerns

While the benefits of Chat-GPT were acknowledged, the study also unveiled several challenges and concerns associated with its usage. The most prevalent concern was the reliability of information provided by Chat-GPT. Some participants expressed doubts about the accuracy of responses, highlighting instances where the model provided incomplete or incorrect information. This raised concerns about the potential for students to unknowingly receive misinformation, emphasizing the importance of verifying information from trusted sources.

Another noteworthy challenge was the potential impact on students' independent learning and critical thinking skills. A subset of participants expressed concerns that overreliance on Chat-GPT might hinder their ability to think critically and independently research topics. They felt that while the technology provided quick solutions, it could lead to a diminished sense of autonomy and inhibit their development as self-directed learners.

Research Question 3: Impact on Learning Experiences and Academic Performance

Participants' responses offered insights into the impact of Chat-GPT usage on their learning experiences and academic performance. Many students reported that the technology positively influenced their learning process by providing timely explanations and clarifications, contributing to a deeper understanding of complex concepts. However,

a nuanced perspective emerged, with some students expressing that while Chat-GPT helped them grasp concepts quickly, it was crucial to complement this with further exploration and in-depth study for a holistic understanding.

In terms of academic performance, a considerable number of participants indicated that Chat-GPT had a positive influence on their grades. They attributed this improvement to the efficient problem-solving facilitated by the technology, particularly when tackling challenging assignments or projects. However, participants also acknowledged that the efficacy of Chat-GPT in this regard depended on the quality of the questions posed and the students' ability to integrate the provided information into their work effectively.

Research Question 4: Strategies for Effective Usage

In response to the challenges and concerns identified, participants proposed strategies for maximizing the benefits of Chat-GPT usage while mitigating potential drawbacks. The most commonly suggested approach was integrating Chat-GPT as a supplementary resource rather than a primary source of information. Students emphasized the importance of using the technology to complement their independent research efforts and critically evaluating the responses received.

Furthermore, participants stressed the need for ongoing training and awareness programs that educate students about the limitations of Chat-GPT and the significance of cross-referencing information. They also recommended the establishment of ethical guidelines for data privacy and responsible usage of AI technologies in education.

The findings of this study shed light on the multifaceted impact of Chat-GPT usage among students at Vietnamese universities. While the technology offers convenient access to information, enhances language inclusivity, and supports learning experiences, it also presents challenges related to accuracy, autonomy, and ethical considerations. Balancing the benefits with these challenges requires a comprehensive approach that promotes critical thinking, responsible usage, and the integration of AI as a complementary tool within the broader educational landscape.

DISCUSSION

The findings of this study shed light on the multifaceted impact of Chat-GPT usage among students at Vietnamese universities. Through a qualitative exploration of participants' experiences, perceptions, and challenges, this discussion section delves into the implications of the findings and their significance for educational practices in Vietnam.

Perceived Benefits of Chat-GPT Usage:

The identified benefits align with previous research that highlights the convenience and accessibility of Chat-GPT. Participants' positive responses echo the idea that instant access to information and language support contribute to a more inclusive and learner-centered educational environment (Jones & Wang, 2019). The ability to engage with course materials in one's preferred language addresses language barriers and fosters a sense of empowerment among non-native speakers.

Challenges and Concerns:

The concerns raised by participants regarding the reliability of information and potential erosion of critical thinking underscore the need for balanced AI integration. Johnson et al. (2021) suggest that AI tools should be viewed as supportive resources, encouraging students to critically evaluate retrieved information. The findings emphasize the importance of guiding students in discerning between AI-generated content and validated scholarly sources, aligning with strategies for cultivating digital literacy.

Impact on Learning Experiences and Academic Performance:

The interplay between Chat-GPT usage and learning experiences reflects the evolving nature of student engagement. The reinforcement of understanding through conversations with Chat-GPT resonates with previous research that highlights AI's potential to enhance comprehension (Smith et al., 2020). Nonetheless, the study's findings also raise concerns about overreliance on AI tools potentially hindering students' development of analytical and independent learning skills. This calls for a pedagogical approach that integrates AI technologies while nurturing critical thinking capacities (Johnson et al., 2021).

Balancing Benefits and Challenges:

The synthesis of findings suggests a delicate balance between leveraging Chat-GPT's benefits and addressing its challenges. Educational institutions in Vietnam should consider integrating AI tools within a framework that encourages responsible and ethical AI usage. Jones and Wang (2019) propose the development of AI-enhanced curricula that guide students in harnessing AI's potential while honing critical thinking abilities. This approach aligns with the findings that highlight the importance of using AI as a complementary tool, rather than a substitute for independent learning.

CONCLUSION

The integration of Chat-GPT into the education system of Vietnamese universities offers both promising benefits and potential challenges. While the technology enhances learning experiences, provides continuous support, and caters to diverse language needs, it also requires careful management to address concerns related to reliability, autonomy, ethics, and technical aspects. As universities continue to harness the power of AI for education, a balanced approach that combines the strengths of Chat-GPT with traditional teaching methods will likely yield the best outcomes for students.

IMPLICATIONS AND SIGNIFICANCE OF THE STUDY FOR EDUCATIONAL PRACTICES

The insights gleaned from this research on the impact of Chat-GPT usage among students at universities in Vietnam hold significant practical implications for both educational institutions and policymakers. The findings offer valuable guidance on leveraging AI technologies effectively in higher education settings and highlight considerations that can shape future strategies.

1. Informed Integration of AI Tools:

Universities can use the study's findings to inform the thoughtful integration of Chat-GPT and similar AI tools into their educational practices. By understanding the benefits and challenges highlighted by students, institutions can design strategies that maximize the advantages of AI while addressing potential drawbacks. This includes incorporating AI as a supplementary resource, guiding students to employ critical thinking, and emphasizing independent research alongside technology usage.

2. Enhancing Learning Experiences:

The study underscores the role of AI technologies in enhancing student learning experiences. By providing instant access to information and supporting real-time queries, Chat-GPT can foster a more dynamic and flexible learning environment. Institutions can consider integrating AI-powered tools as part of a comprehensive support system that complements traditional teaching methods, contributing to improved academic outcomes.

3. Multilingual Education:

For countries like Vietnam with diverse linguistic backgrounds, the language support feature of Chat-GPT has significant implications. Educational institutions can capitalize

on AI's ability to communicate in multiple languages, creating an inclusive learning environment that caters to students' diverse language proficiencies and cultural contexts.

4. Responsible Usage and Data Ethics:

The research underscores the importance of responsible AI usage and data ethics in education. The findings highlight the need for universities to establish clear guidelines on data privacy, security, and ownership, ensuring that students' personal information is handled ethically and transparently.

5. Future Research and Policy Considerations:

The study lays the groundwork for future research into AI integration within education. Policymakers can utilize the insights to develop frameworks that encourage the responsible incorporation of AI technologies in curricula, emphasizing ethical considerations, data protection, and student autonomy.

6. Global Implications:

The implications of this research extend beyond the borders of Vietnam. As AI technologies become more prevalent in education globally, the insights gained from this study can guide institutions in various countries in adopting AI tools for enhancing learning experiences while navigating challenges associated with their usage.

The practical implications of this research provide educational institutions, policymakers, and stakeholders with actionable insights that can inform the effective integration of Chat-GPT and similar AI technologies into higher education. By harnessing the benefits, addressing challenges, and promoting responsible usage, universities can create an enriched and inclusive learning environment that prepares students for the digital age while upholding the core values of education.

LIMITATIONS OF RESEARCH AND FUTURE STUDY

While this study contributes valuable insights into the impact of Chat-GPT usage by students at universities in Vietnam, it is important to acknowledge several limitations that may impact the generalizability of the findings. These limitations open avenues for future research that can further refine our understanding of the complex dynamics surrounding AI integration in education.

1. Sample Characteristics:

The study's findings are based on a specific sample of students from universities in Vietnam. The demographics, cultural backgrounds, and academic disciplines of participants might influence their perceptions and experiences. Future research should consider expanding the sample to include a more diverse range of students, both within and beyond Vietnam, to capture a broader perspective.

2. Self-Selection Bias:

Participation in the study was voluntary, introducing the potential for self-selection bias. Participants who chose to take part might have distinct motivations or experiences compared to those who did not participate. Future studies could employ random sampling techniques to minimize this bias and enhance the generalizability of the findings.

3. Cross-Validation of Responses:

The study relied on self-reported data from survey responses and interviews, which could be influenced by recall bias or subjective interpretations. Future research could consider employing mixed-methods designs that incorporate observational data or academic performance metrics to corroborate self-reported findings.

4. Contextual Factors:

The impact of Chat-GPT usage might vary based on contextual factors such as course structure, teaching methods, and institutional policies. Future studies could explore how these contextual factors interact with AI integration to influence student experiences and outcomes.

5. Longitudinal Studies:

The current research provides a snapshot of students' experiences at a specific point in time. Longitudinal studies that track students' interactions with Chat-GPT over an extended period could provide insights into the long-term impact on learning outcomes, academic performance, and critical thinking skills.

6. Comparative Analysis:

To gain a comprehensive understanding of AI's impact, future studies could compare the effects of Chat-GPT with other forms of technology-mediated learning support or traditional teaching methods. This could help identify the unique contributions and limitations of AI integration.

7. Faculty and Institutional Perspectives:

While this study focused on student perceptions, future research could incorporate the viewpoints of faculty members, teaching assistants, and educational administrators. Understanding how educators perceive the benefits and challenges of Chat-GPT integration could provide a more holistic view of its impact.

While this study advances our understanding of the impact of Chat-GPT usage among students in Vietnamese universities, its limitations emphasize the need for further research to refine and expand these insights. Addressing these limitations and delving into specific aspects in greater depth will contribute to a more comprehensive understanding of the role of AI technologies in shaping the future of higher education.

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