THE IMPACT OF CHATGPT AND AI ON HIGHER EDUCATION IN VIETNAM

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ABSTRACT

This study investigates how ChatGPT and artificial intelligence (AI) affect Vietnamese higher education. It looks into the effects of AI-powered tools on academic integrity, individualised learning, and student engagement. This study employs a mixed-methods approach to evaluate the benefits and challenges of incorporating AI into higher education by analysing quantitative survey data and qualitative interview data. The results highlight the need for formal standards to optimise AI's capabilities while addressing ethical concerns, revealing both benefits and threats.

Từ khóa*: ChatGPT, AI in education, higher education, Vietnam, personalized learning, student engagement, academic integrity*

1. Introduction

Artificial intelligence (AI) is transforming various industries, including education. Globally, higher education has embraced ChatGPT, a sophisticated AI language model. In Vietnam, colleges are beginning to study AI's potential in increasing student learning experiences. This study intends to analyse AI's impact on university students, faculty members, and educational results in Vietnam. AI's introduction into higher education has completely changed how students interact with course materials, obtain information, and get feedback. Students can get immediate answers to their questions, clarifications on difficult concepts, and even inspiration for research projects with AI-powered chatbots like ChatGPT. AI has also facilitated more personalized learning experiences, allowing students to learn at their own pace and receive customized support tailored to their strengths and academic goals, ensuring they receive the most relevant and effective support.

Notwithstanding these benefits, there are a number of issues with the quick uptake of AI in higher education. The possible over-reliance on AI tools is a significant challenge that may impede students' capacity to acquire critical thinking and problem-solving abilities. Furthermore, bias or false information may occasionally be present in AI-generated content, raising questions regarding academic integrity. Furthermore, because students from underprivileged backgrounds do not have the means to efficiently use AI-powered tools, access to AI in education may not be equitable. Examining how AI is influencing student learning experiences and educational outcomes is essential in Vietnam, as higher education is going through a digital transformation. Although more and more institutions in the nation are incorporating AI into their

curricula, not much research has been done on the long-term effects of

By investigating how AI, in particular ChatGPT, is impacting academic integrity, personalised learning, and student engagement in Vietnamese universities, this study aims to close this gap. This study intends to present insightful information about the changing role of AI in higher education as well as suggestions for its responsible and efficient application through a thorough examination of survey data and qualitative interviews.

1.1. Background of the study

Particularly after the COVID-19 outbreak, Vietnam has been embracing digital learning resources at a rapid pace. Discussions concerning the effectiveness, morality, and long-term effects of AI-powered programmes in higher education have been triggered by their increasing popularity. Creating well-informed policy requires an understanding of AI's place in Vietnam's academic environment.

1.2. Statement of the problem

Even though AI has many advantages, worries about unequal access, excessive dependence on AI tools, and academic dishonesty still exist. The purpose of this study is to examine how much ChatGPT and AI affect academic integrity and student learning in Vietnam.

1.3. Aims of the study

This study investigates the ways in which ChatGPT affects student motivation and engagement as well as assess AI's contribution to self-regulation and personalised learning,

moreover it determines the contextual and cultural elements influencing the adoption of AI in Vietnamese colleges.

1.4. Research questions

How does ChatGPT enhance student engagement in higher education?

What are the benefits and drawbacks of AI-powered personalized learning?

How do Vietnamese students and faculty perceive AI in education?

1.5. Scope of the study

Vietnamese university students and professors, especially those studying technology, business, and social sciences, are the subject of this study. Surveys and interviews from a variety of universities are included in the study.

2. Literature review

2.1. AI in higher education

Numerous studies have examined the use of AI in higher education, emphasising its advantages in automating administrative work, facilitating individualised instruction, and raising student engagement (Selwyn, 2019). Chatbots, virtual tutors, and adaptive learning platforms are examples of AI-driven systems that have revolutionised how students engage with teachers and educational materials (Nguyen, 2021). Concerns about data privacy, moral issues, and possible biases in AI-generated content, however, continue to be major obstacles (Brown & Adler, 2008).

2.2. The role of ChatGPT in academic support

One of the most well-known AI-driven language models, ChatGPT, has been utilised extensively for academic purposes, such as providing explanations

for difficult subjects, helping students with essay writing, and responding to their questions. According to research, chatbots driven by AI can improve student engagement by offering immediate feedback and individualised assistance (Huang & Soman, 2013). However, detractors contend that an over dependence on ChatGPT may hinder students' capacity to acquire autonomous research and critical thinking abilities (Reeves & Oh, 2008).

2.3. Personalized learning and AI

AI-powered personalised learning systems modify course materials to meet the needs of each individual student, offering tailored learning trajectories according to preferences and performance. In his discussion of AI's function in the connectivist learning model, Siemens (2005) highlights how AI makes learning more dynamic and interactive. Notwithstanding its benefits, accessibility issues are brought up by personalised learning since students with low levels of technology may find it difficult to utilise AI-powered resources (Nguyen, 2021).

2.4. Academic integrity and ethical considerations

The effect of AI on academic integrity is one of the most hotly contested topics in education. The potential for plagiarism in AI-generated content makes it challenging for teachers to evaluate students' original work. Studies have called for stricter guidelines and ethical policies to regulate AI usage in academic settings (Selwyn, 2019). Furthermore, AI biases may reinforce stereotypes, necessitating transparency in AI algorithms and their applications in education.

2.5. Theoretical framework

This study examines AI's function in higher education using the Self-Regulated Learning (SRL) model and the Constructivist Learning Theory. The concept clarifies how AI encourages self-directed learning while posing problems with authenticity and critical thinking.
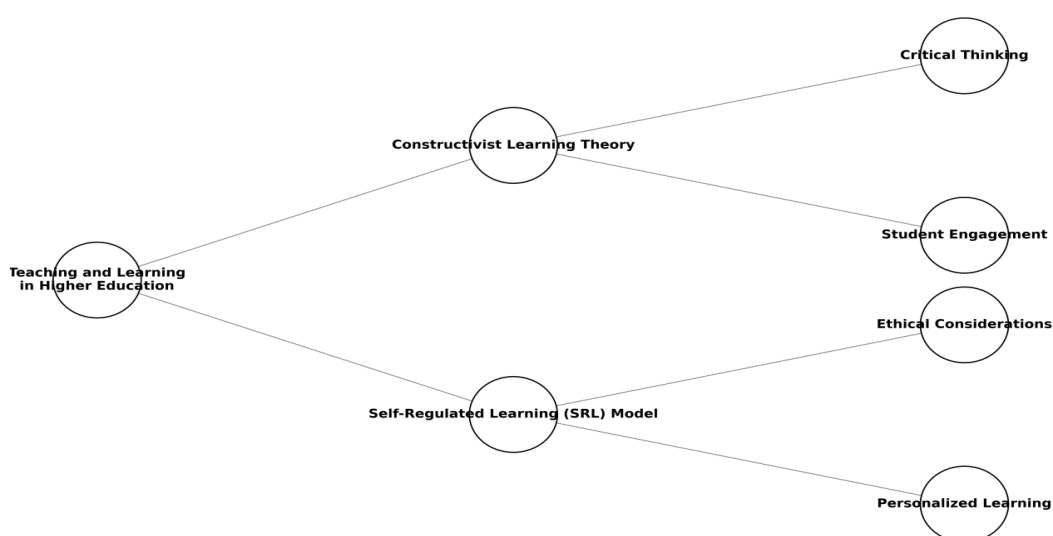

Figure 1: *Theoretical Framework and AI in higher education in Vietnam*

3. Methodology
3.1. Research design

To gain a comprehensive understanding of the impact of artificial intelligence (AI) on higher education, this study adopts a mixed-methods approach that integrates both quantitative and qualitative research methods. The quantitative component consists of structured surveys designed to gather statistical data on student perceptions, engagement, and learning outcomes influenced by AI-powered tools such as ChatGPT. On the qualitative side, in-depth interviews are conducted with students and faculty members to explore their personal experiences, insights, and concerns regarding AI's role in academic settings. By combining these approaches, this research aims to provide a holistic perspective on how AI is shaping the educational landscape.

3.2. Participants

The study involves a diverse group of participants, including 500 university students and 50 faculty members from leading universities across Vietnam. These institutions have been selected based on their academic reputation, involvement in AI research, and initiatives aimed at incorporating AI-driven technologies into higher education. The participating universities include: Vietnam National University, Hanoi; Hanoi University of Science and Technology; Ho Chi Minh City University of Technology, University of Danang – University of Science and Technology; University of Economics Ho Chi Minh City, Can Tho University.

Additional universities may be considered to ensure a broader representation of perspectives from different regions in Vietnam. The selection process prioritizes institutions that have actively engaged in AI-related discussions, pilot programs, or policy-making decisions regarding the integration of AI in educational environments.

3.3. Data collection

To ensure reliable and diverse insights, data is collected through a combination of online surveys and structured interviews.

3.3.1. Online surveys

Distributed to university students and faculty members via digital platforms to maximize reach and accessibility.

Includes multiple-choice questions, Likert-scale ratings, and open-ended responses to assess AI's influence on student motivation, engagement, and learning autonomy.

3.3.2. Structured interviews

Conducted with educators and students to explore their personal experiences with AI-powered tools, challenges they face, and potential improvements needed.

Questions focus on AI's role in personalized learning, academic integrity, self-regulation, and adaptability to Vietnamese cultural and educational norms.

Interviews are recorded and transcribed to facilitate thorough thematic analysis.

3.4. Data analysis

The study employs a systematic approach to analyzing both quantitative

and qualitative data to extract meaningful patterns and insights.

3.4.1. Quantitative data analysis

Responses from online surveys are processed using statistical software (such as SPSS, R, or Python) to generate descriptive statistics, correlation analyses, and regression models.

Key indicators include student engagement levels, AI adoption rates, and perceived effectiveness of AI-driven educational tools.

3.4.2. Qualitative data analysis

Interview transcripts are examined using thematic analysis, allowing for the identification of recurring themes, concerns, and opportunities surrounding AI adoption in higher education.

Coding methods are applied to categorize responses into themes such as learning personalization, AI-driven feedback mechanisms, and ethical concerns.

By employing this multi-dimensional analytical framework, the study aims to provide data-driven insights that can guide future AI implementations in Vietnamese universities while addressing both benefits and challenges associated with AI-assisted education.

4. Results

Students' opinions of AI's advantages and disadvantages are depicted in a bar chart. According to survey results, 40% of students worry about over-reliance and possible false information, whereas 75% of students believe AI is useful for research and learning.

The study's findings shed important light on how ChatGPT and AI are being incorporated into Vietnamese higher education. Surveys and interviews with university students and staff from a range of academic fields were used to get the data. The results are divided into three main categories: issues with academic integrity, individualized learning experiences, and student motivation and engagement.
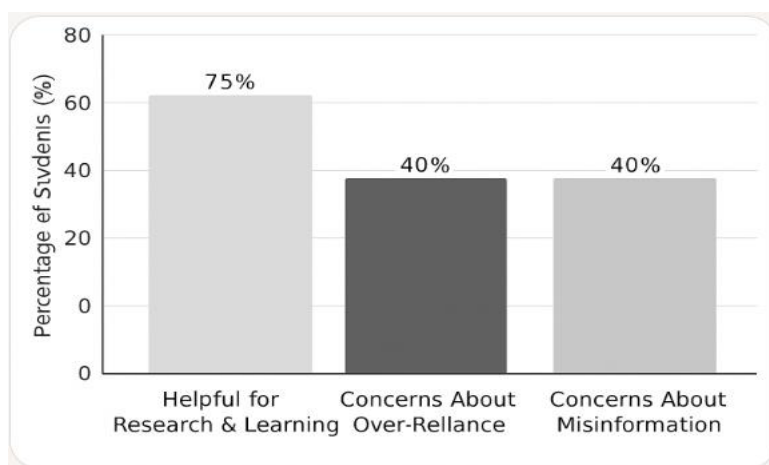

Figure 2: *Student perceptions of AI's benefits and risks*

4.1. Student engagement and motivation

According to the study results, 78% of students said that using ChatGPT and other AI-powered technologies

increased their level of involvement. Many students valued AI's availability and immediate feedback, which enabled them to get answers to their academic questions outside of regular class times. According to 65% of respondents, AI tools increased accessibility and interactivity in learning, which kept them motivated.

AI-assisted learning platforms enhanced classroom conversations, according to faculty interviews. Students who utilized AI tools before to lectures were more prepared and showed a higher degree of critical thinking during debates, according to professors.
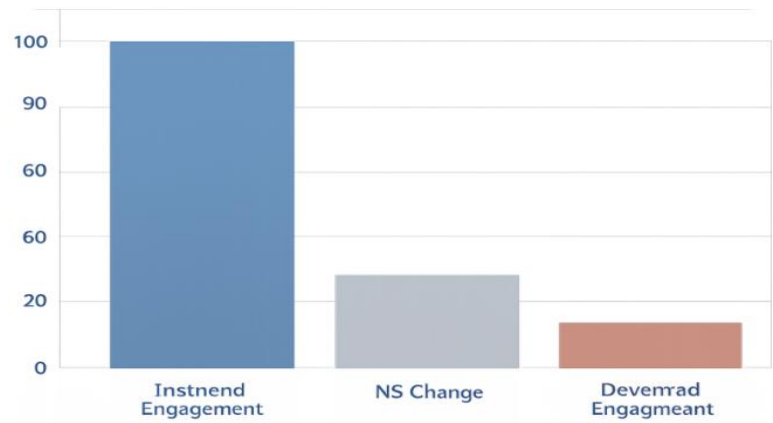

Figure 3: *Student engagement and AI usage*

4.2. Personalized learning and self-regulation

Personalized learning is one of AI's most important effects on higher education. According to the survey's findings, 82% of students said that AI-generated explanations helped them understand difficult concepts, especially in technical disciplines like computer science and mathematics. Furthermore,

70% of students stated that because AI-assisted learning allowed them to learn at their own pace, it improved their self-regulation skills. Over-reliance on AI tools, however, has drawn criticism; 40% of faculty members think that students may grow reliant on AI instead of learning how to conduct independent research.
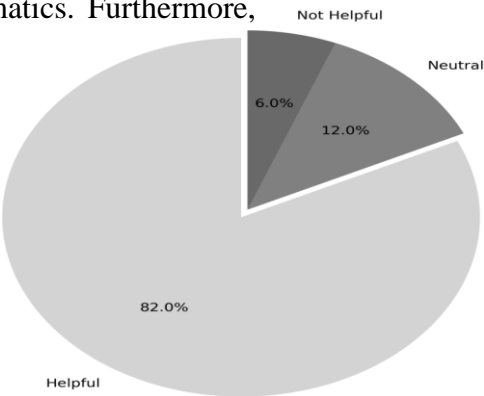

Figure 4: *Personalized learning with AI*

4.3. Academic integrity and ethical concerns

Notwithstanding its advantages, there are now issues with academic integrity associated with the employment of AI in higher education. Concerns regarding plagiarism were raised by the survey's findings, which showed that 53% of students acknowledged utilizing AI-generated content in coursework without properly citing it. 60% of faculty members said that current plagiarism detection methods were inadequate, indicating that they had trouble identifying AI-generated work. Furthermore, the faculty interviews also emphasized the ethical ramifications of using AI. In order to maintain academic integrity while also enabling students to take advantage of AI's learning potential, some educators underlined the necessity for more precise rules regarding its use.
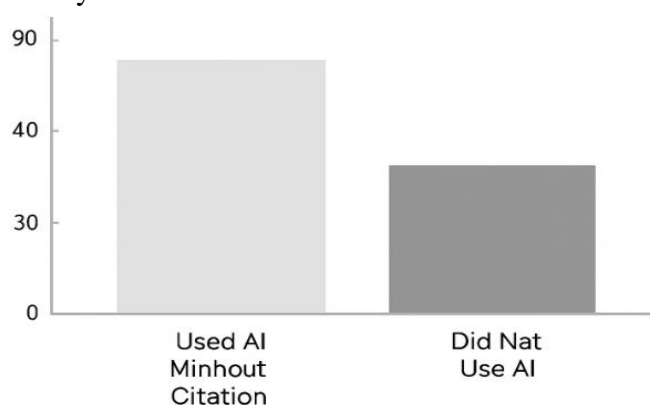

Figure 5: *Usage of AI in assignments*

4.4. Institutional adoption and future trends

AI has the ability to improve student support services and streamline administrative processes, according to university leaders. Only 30% of the universities polled, however, have official guidelines controlling the use of AI in academia. Universities urgently need to create ethical frameworks and training programs for both staff and students, as indicated by the absence of established rules.
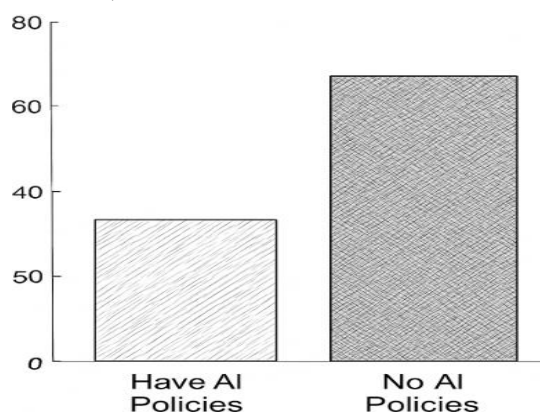

Figure 6: *AI Policy Adoption*

4.5. Statistical overview

The data breakdown that follows gives a better sense of the influence of AI and demonstrates the survey results: According to 78% of students, AI tools improve student engagement. According to 82% of students, AI helped them better understand challenging subjects. When employing AI, 65% of students said they were more motivated. 53% of students acknowledged using content produced by AI without properly citing it.

AI could cause students to become dependent, according to 40% of faculty. 60% of academics said that AI-generated content could not be adequately detected by plagiarism detection methods.

Just 30% of schools had rules governing the use of AI in the classroom. The findings demonstrate AI's benefits and drawbacks for higher education. Concerns over academic integrity and reliance on AI must be addressed through organized policies and ethical considerations, even as students gain from tailored learning and more involvement.

Discussions about how Vietnamese universities might ethically apply AI to optimize its advantages while minimizing its drawbacks are based on these discoveries.
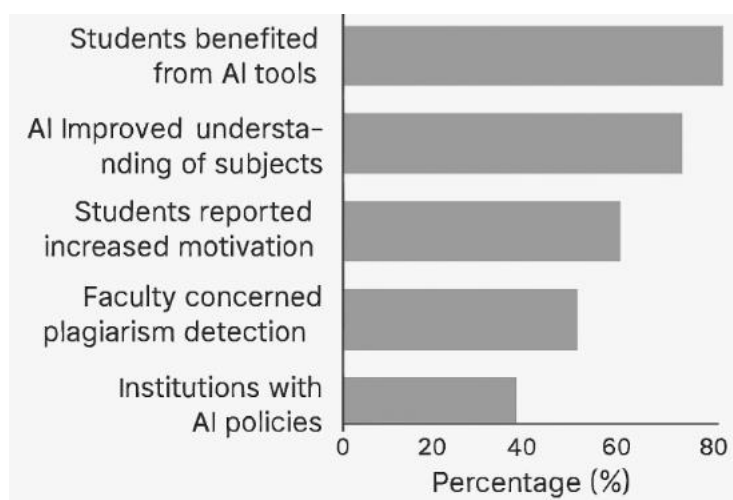

Figure 8: *Statistical overview of AI in higher education*

4.6. Discussion

ChatGPT and other AI applications offer immediate feedback, which increases student motivation. Some students, nevertheless, might abuse AI to take academic shortcuts. AI makes it possible for learning experiences to be tailored to each student's needs. However, differences in AI literacy could lead to student inequality. The adoption of AI is influenced by Vietnamese cultural views on schooling. Different faculty members have different opinions; some are in favor of AI, while others are still dubious.

Theoretical implications:

Findings contribute to the understanding of AI's role in higher education and align with self-regulated learning theories.

Practical implications and future research:

Universities should establish clear AI usage guidelines and promote digital literacy training for students and faculty.

Future research directions:

The long-term impacts of AI on academic integrity and critical thinking should be investigated in future research. Additional insights could be obtained through comparative research between Vietnamese and foreign colleges.

5. Conclusion

The incorporation of AI and ChatGPT into higher education in Vietnam offers both advantages and obstacles. AI has the capacity to transform the learning experience by offering students personalized education, instant access to extensive knowledge resources, and interactive learning tools. This technology boosts student engagement, promotes independent learning, and assists educators in implementing more dynamic and data-driven teaching approaches.

But the quick uptake of AI in education also brings up issues with over-reliance on technology, academic integrity, and student differences in access to AI. Inappropriate usage of AI technologies can reduce students' critical thinking skills even though they can speed up research and increase productivity. In order to ensure that educators and students may use AI in a responsible manner, regulations and ethical standards are also becoming more and more necessary.

Vietnamese colleges should concentrate on creating digital literacy curricula, educating teachers on integrating AI, and putting in place AI usage guidelines that prioritize ethical issues in order to optimize AI's beneficial effects. The long-term impacts of AI on student learning and its influence on the development of future educational models also need further investigation.

In conclusion, even if ChatGPT and AI are useful technologies that can raise the standard of education in Vietnam, their application requires careful planning. To establish a balanced learning environment where AI enhances learning without compromising fundamental human abilities like creativity, critical thinking, and moral decision-making, universities, educators, and legislators must work together. Vietnamese higher education can fully utilize AI's promise while reducing the hazards that come with it by taking a proactive and well-regulated approach.

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TÁC ĐỘNG CỦA CHATGPT VÀ AI ĐẾN GIÁO DỤC ĐẠI HỌC Ở VIỆT NAM

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TÓM TẮT

Nghiên cứu này điều tra cách ChatGPT và trí tuệ nhân tạo (AI) ảnh hưởng đến giáo dục đại học tại Việt Nam. Nó xem xét tác động của các công cụ AI đối với tính liêm chính học thuật, học tập cá nhân hóa và sự tham gia của sinh viên. Nghiên cứu này sử dụng phương pháp hỗn hợp để đánh giá những lợi ích và thách thức của việc tích hợp AI vào giáo dục đại học bằng cách phân tích dữ liệu khảo sát định lượng và dữ liệu phỏng vấn định tính. Kết quả nhấn mạnh sự cần thiết của các tiêu chuẩn chính thức để tối ưu hóa khả năng của AI trong khi giải quyết các mối quan ngại về đạo đức, đồng thời làm rõ cả lợi ích và rủi ro.

Từ khóa: ChatGPT, trí tuệ nhân tạo trong giáo dục, giáo dục đại học, Việt Nam, học tập cá nhân hóa, sự tham gia của sinh viên, tính liêm chính học thuật