CASE STUDY ANALYSIS ON TOPIC: "AI'S INFLUENCE: CHATGPT'S IMPACT ON STUDENT LEARNING BEHAVIOURS"

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Abstract. *ChatGPT is widely adopted by students for learning and information searches, with many also finding it reliable for academic tasks such as idea generation and assignment completion. However, concerns about overreliance were noted, which may hinder independent thinking and critical evaluation skills while enhancing ethical problems like academic dishonesty, plagiarism and information security. The article explores the influence of Artificial Intelligence on student learning behaviours.*

Key words: *intelligence, learners, academic performance, self-paced study, research, critical thinking, student engagement, ethical concerns.*

АНАЛИЗ ТЕМАТИЧЕСКОГО ИССЛЕДОВАНИЯ ПО ТЕМЕ: «ВЛИЯНИЕ ИИ: ВОЗДЕЙСТВИЕ CHATGPT НА ПОВЕДЕНИЕ УЧАЩИХСЯ В ПРОЦЕССЕ ОБУЧЕНИЯ»

Аннотация. *ChatGPT широко распространено среди студентов для обучения и поиска информации, и многие также считают его надежным для выполнения академических заданий, таких как генерации идей и помощь в выполнении заданий. Однако появились опасения по поводу чрезмерной зависимости, которая может препятствовать независимому мышлению и навыкам критического мышления, одновременно усугубляя этические проблемы, такие как академическая нечестность, плагиат и информационная безопасность. Статья исследует влияние искусственного интеллекта на поведение учащихся в процессе обучения.*

Ключевые слова: *интеллект, учащиеся, академическая успеваемость, самостоятельная учеба, исследовательская работа, критическое мышление, вовлеченность учащихся, этические соображения.*

Introduction

Artificial Intelligence has become one of the most powerful tools that plays a significant role in people's lives since its creation. Particularly, AI tools have been widely used in educational field by students as well as by teachers to improve the learning atmosphere. As a matter of fact, AI chatbots like ChatGPT impact not only students' academic achievements but their learning behavior in both positive and negative ways. Although the purpose of the general intelligence in education is only to improve the opportunities and access to learning globally, it inadvertently created some issues related to data privacy, academic integrity, and ethical considerations in the

process of successful integration into the system.

In fact, constant advancements in technology and easy accessibility to it in any place made Intelligence kind of a "savior" that can solve most of students' problems in terms of academic performance. As a result, the cases of intellectual dishonesty, lack of understanding complicated material and improving critical and analytical skills are the most popular challenges these days. Taking as an example, a student in Russian university was able to successfully complete his final dissertation in just a day using ChatGPT that led to requests of limitations of technology use in some institutions (Zhadan, 2023).

Accordingly, this matter has to be examined attentively and addressed with proper evaluation of the situation (Nguyen, Lai & Nguyen, 2024). Creating better learning opportunities as well as improving some of the learners' abilities in acquiring knowledge is AI's advantage in disguise, as it is extremely difficult not to overuse it once a person started getting help from AI. Therefore, to get a better comprehension of the influence general intelligence has on students, this study aims to understand:

1. How does ChatGPT influence student learning behavior and academic performance?

2. How does general intelligence impact self-efficacy and students' learning strategies?

3. How can AI tools be integrated into the learning process with ethical considerations?

Literature Review

Understanding complex nature and power of AI in educational process was a concern for many over the last few years. Particularly, research has been done on learning satisfaction, student engagement, learning patterns, concentration and creativity, problems and issues influenced by AI. In fact, Nguyen et al. highlighted that AI may affect learners' participation and contentment positively by aiding students in generating ideas, finishing academic tasks and language learning. According to Karakose and Tülübaş (2023) ChatGPT is excellent at meeting different individual needs of students in terms of creating more personalized educational approaches.

As the practice shows, young learners are inclined to put the newest technology into use if they believe it can help them to achieve better results. Due to benefits provided by tools like ChatGPT and its user-friendliness learning satisfaction has significantly improved (Almulla, 2023). Moreover, implementation of Intelligence in a proper way might have a beneficial impact on creativity and concentration of students which was identified in the research by Rong, Lian and Tang (2022).

On the other hand, Alasadi and Biaz claim that AI in education is an ambiguous term (2023). Thus, all researchers highlight the significance of ethical concerns coming with the use of general intelligence, emphasizing the fact that educators should address these matters for they are responsible for upbringing the younger generation as responsible digital citizens. Knowing the fact
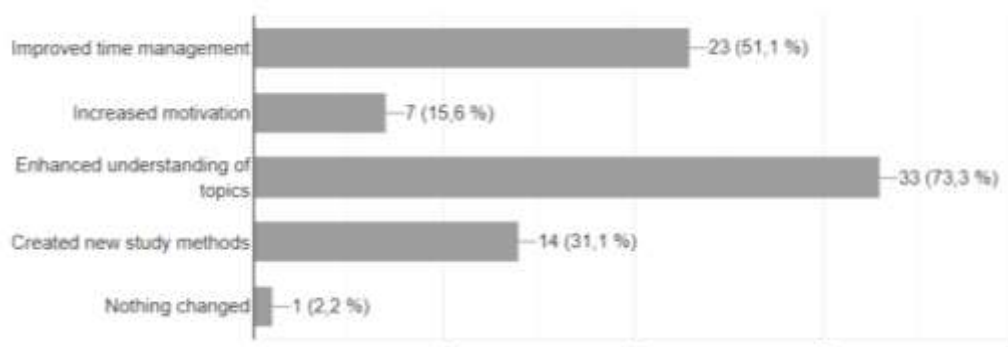
that technologies are already inseparable part of people's lives 'the golden mean' has to be found in utilizing educational digital platforms (Baran & Jonason, 2023).

Methodology

An anonymous survey has been created with the help of Google Forms and distributed randomly among undergraduate students of Gulistan State University and graduate students at Webster University in Tashkent. Overall, 45 participants shared their insights on the influence of ChatGPT on student learning behavior. Collected information and research materials on this topic were carefully analysed to find patterns in the educational system regarding the use of machine learning. The survey aims to understand how these technologies can impact educational achievements and learning experiences.
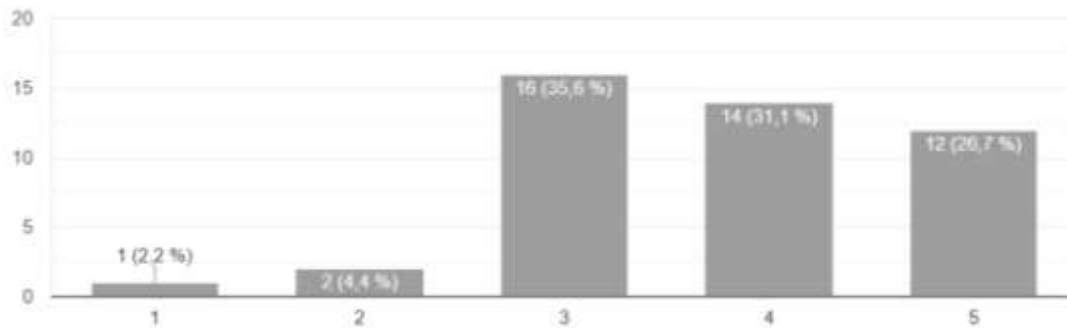
AI engagement

Participants were mostly at the age from 18 to 30, and the other 16% were over 30 years old. It was identified that almost half of them use AI either daily or weekly for academic purposes which indicates the close interconnection of technology and human life.

Figure 1. Influence of AI on learning patterns.

Due to frequent usage of ChatGPT 35% of students managed to enhance their understanding of topics whereas 29% underlined improved time management (Figure 1). Indeed, expressing complex ideas in an easy and clear way is pivotal in the studying process (Alasadi & Biaz, 2023) as well as an ability to save time to manage all the workload (Nguyen et al., 2024). On a scale of 1 to 5, the average ratings of academic performance since using ChatGPT for more than 80% of students were from 3 to 5. (Figure 2). Consequently, ChatGPT's notable impact on improvement of academic performance is obvious, as evidenced by the high percentage of students using it to understand complicated lesson content, to navigate time properly, and to acquire new study techniques.

Figure 2. Ratings of improvement of academic achievements.

Self-esteem and tactics

Additionally, it was revealed that the majority of students, being 61% to be exact, feel more confident in their learning capabilities as a result of using ChatGPT. It is clear that increased confidence can stimulate learners to engage with more challenging tasks which is beneficial in terms of sharpening the acquired skills. Furthermore, students pointed out that learning strategies such as self-paced study, collaborative learning, active learning strategies were adopted as a result of using generative chat boxes with the respective percentages of 35%, 22% and 25%. Particularly, 19 students out of 45 stated that AI develop creative strategies in learning, which is also proven by one of the participants' responses:
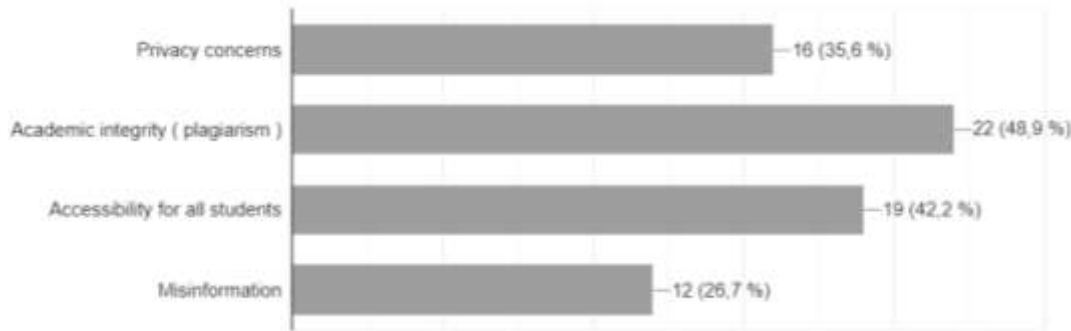
> *"AI can simulate real-world scenarios, motivating creative exploration and experimentation. As a matter of fact, various ideas, insights, and perspectives provided by ChatGPT might enhance creative thinking of students".*

Furthermore, it was also concluded from students' perspectives that generated ideas can play a vital role in creating new matters which lead learners to reach their fullest potential. Adapting technological advancements efficiently, without a doubt, may discover the student potential improving cognitive abilities that stimulate their inner creativity (Rong et al., 2022).

'Moral dilemma'

According to the survey the greatest ethical issue is related to academic integrity, also known as plagiarism, while misinformation is the least with a rate of 26.7%, which definitely shows students' conviction in the reliability of ChatGPT as an informational source (Figure 3). Besides, data privacy and accessibility have relatively the same markers at 35-40% being the averagely recognized challenge regarding the technology use. Additionally, Nguyen's research identified some issues related to the use of ChatGPT itself (2024). Survey indicated that similarity of answers and ideas provided by ChatGPT led to violation of citation and hindered students' critical thinking ability in a way. Therefore, Webster University alongside many other international educational institutions such as the Chinese University of Hong Kong integrated ethical

frameworks to prevent plagiarism and nurture a healthy relationship with AI.

Figure 3. Ethical issues regarding the AI use

Solution

Considering the current interrelationship of technologies and society and the potential of ChatGPT and other AI tools in learning, there is no way that a technological embargo in educational sphere will actually work. Therefore, an implementation of a digital-friendly atmosphere in academic establishments which promotes effective exploitation of ChatGPT including ethical practices is of extreme importance (Karakose & Tülübaş, 2023).

However, the ultimate 'panacea' to mitigate the risks could be educating the younger generation on proper uses of artificial intelligence. Although it is not defined by the system, the responsibility of teaching students how to use ChatGPT inadvertently lies on teachers' shoulders, as they play a key role in minimizing threats posed by overuse of technology.

In addition, suggestions of participants about addressing ethical concerns evolved around finding balance in using intelligence only where needed. Students also highlighted the significance of transparency, data privacy and ethical use of AI, emphasizing the need for a careful guidance through explanation, discussion and establishing policies in the classroom.

"Educators should clearly explain how AI is used, focus on enhancing human learning rather than replacing it, and ensure that AI-driven decisions are free from bias. Regular monitoring of AI systems and involving students in discussions about responsible AI use can foster ethical awareness. Additionally, institutions should prioritize student consent and data security to protect their privacy."

"Transparency addresses concerns over data collection, student privacy, and the potential for bias. Students should know what data is being collected, how it is used, and have the option to opt out if needed."

"Teachers should guide students in using AI constructively. It should be explained accordingly that AI should be used to enhance learners own creativity, without replacing it."

Conclusion

In summary, the investigation of impact of the generative intelligence on student learning patterns revealed the following:

- The use of ChatGPT made learning more dynamic and enjoyable increasing student engagement and motivation, providing learners better understanding of material. In addition, students perceive the information provided by ChatGPT as reliable and useful for completing assignments. As a result, ChatGPT is perceived as an essential tool by students to increase their educational achievements, providing quick necessary data quickly.

- AI facilitated the boost in students' confidence in their abilities, which led to enhancing learning process in general. Particularly, incorporating computer-aided learning might lead to adopting new effective learning strategies.

- Challenges the intelligence might create regarding academic dishonesty, information accuracy, and data privacy are the potential threat coming alongside the benefits. Consequently, it is necessary to develop stringent policies and guidelines to guarantee responsible use of AI tools in education. To avoid superficial learning and encourage critical thinking, a careful and in-depth guidance for students should be provided by teachers.

It should also be mentioned that the study's limited size and focus on several sub questions indicate that further and deeper research is needed to investigate the topic thoroughly. Studies of a wider format could provide better and more insights into the long-term effect of using ChatGPT on learning behaviors.

Overall, this study reveals the dual-edged nature of ChatGPT's implementation into education, outlining the importance of a balanced approach that increases its benefits while minimizing the potential risks.

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