

# The Influence of AI Chat GPT Technology on the Mindset of Educational Technology Students at Ibn Khaldun University, Bogor

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## Abstract

This research aims to increase understanding of the influence of AI Chat GPT technology on the mindset of students in the Educational Technology Study Program at Ibn Khaldun University, Bogor. This research was conducted using quantitative research methods with data collection techniques through questionnaires. This research involved respondents consisting of Educational Technology students in semesters 1, 3, 5 and 7 at Ibn Khaldun University, Bogor. The results of this research show that AI Chat GPT technology can influence the mindset of students in the Educational Technology Study Program at Ibn Khaldun University, Bogor. This is evident from students' statements during the questionnaire that AI Chat GPT technology can influence students' mindsets. This research concludes that AI Chat GPT technology greatly influences the mindset of students in the Educational Technology Study Program at Ibn Khaldun University, Bogor. Therefore, it is hoped that students will pay more attention to using AI Chat GPT Technology in lectures.

## A. Introduction

The interaction between technology and education is on an increasingly rapid wave of transformation. The combination of the two can change the paradigm and way of human learning. This is seen in the interaction of technology with education, such as the use of more sophisticated applications in lecturers' teaching and research (Hualpa et al., 2023; Stepanenko & Stupak, 2023; Suharmawan, 2023). The Internet of Things (IoT) describes how technology impacts the world of education and learning. As a result, a wide variety of applications, even AI, have emerged to influence learning and publication processes in the academic field (Al-Emran et al., 2020; Kassab et al., 2020; Saputra et al., 2023).

When we look at the dimensions of education, the aspect of education itself is stated in Law Number 20 of 2003 in article 4 Number 1, that education is carried out through democratic and fair activities (Rahim et al., 2024; Sumiati, 2023). Next, in article 4 Number 4, it is explained that teaching and education increase the desire, willingness to develop at the level of innovation and creativity of students. This explains that education aims to increase students' innovation and creative abilities according to their talents and capacities. The goal is for students to become individuals who are able to create, work and produce something throughout their lives.

The increasingly developing era of globalization is marked by increasingly rapid technological progress. This condition affects human life, especially in terms of education. One of the technological tools that is currently widely used in the world of education is the presence of ChatGPT. ChatGPT (Generative Pre-Trained Transformer) is a chatbot robot or chatbot that is able to interact and help humans in completing various tasks (Maulana et al., 2023; Roumeliotis & Tselikas, 2023; Tuan et al., 2024).

To increase awareness about technology, students must understand the benefits of the technology. They should not fall victim to technologies like Chat GPT, which have negative effects despite their benefits too. Facts show that GPT Chat has been used by  $\pm 100$  million users worldwide in January 2023, including academics, practitioners and other professions. As a result, many students found a decline in their fighting power and ability to complete coursework.

Based on the description above, researchers conducted research aimed at increasing understanding of the influence of AI Chat GPT technology on the mindset of Educational Technology students at Ibn Khaldun University, Bogor.

## B. Research Methods

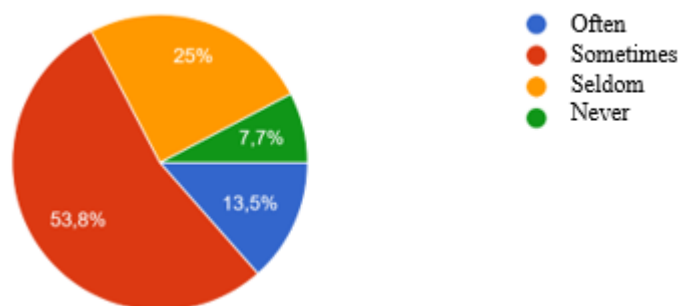
The research method used is quantitative research, as an effort to determine the influence of AI ChatGPT Technology on the Mindset of Educational Technology Students at Ibn Khaldun University, Bogor. The data in this research was collected through a questionnaire conducted via Google Form containing 12 questions and given to Educational Technology Students at Ibn Khaldun University, Bogor from semester 1 to semester 7 to gain a perspective on the influence of AI ChatGPT Technology on the mindset of Educational Technology students at Ibn Khaldun University, Bogor. This research involved 52 respondents consisting of 1st, 3rd, 5th and 7th semester students in the Educational Technology study program at Ibn Khaldun University, Bogor, who were selected based on predetermined criteria. The collected data will be analyzed descriptively and with data diagrams to determine the influence of ChatGPT AI Technology that emerges from the research results.

This research collects data relating to various aspects in the educational, technological and psychological context in the Educational Technology study program at Ibn Khaldun University, Bogor. One of the main focuses of the research is the Influence of AI Chat GPT Technology on Student Thinking Patterns.

## C. Results and Discussion

From research data analysis through a questionnaire regarding the use of Chat GPT. The following are the results of the respondents' answers:

*Question: Do you use Chatgpt?*

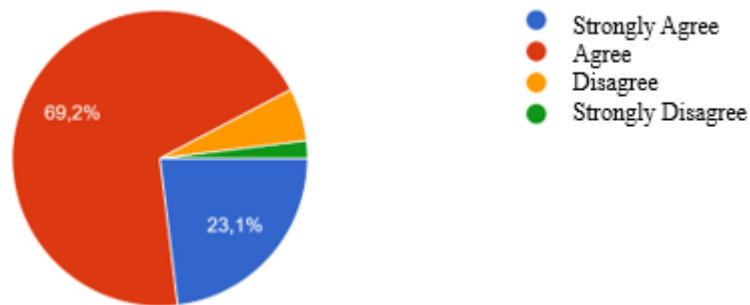


*Question: how do you use ChatGPT in lectures?*

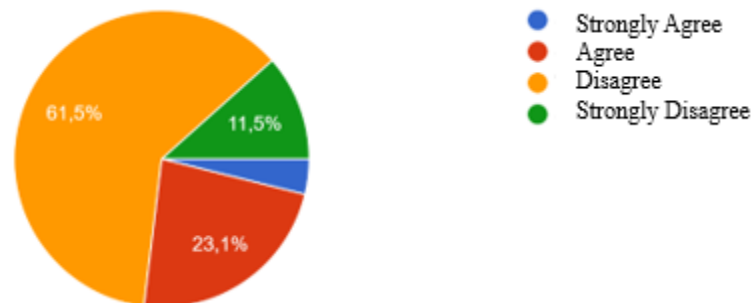
The following are the answers from respondents: I use ChatGPT to look for answers when the answer from Google can't be understood, I use ChatGPT to predict a question, I use ChatGPT if I'm looking for something that I really want to know briefly. I use ChatGPT to find answers to existing questions to use as references, I use ChatGPT to broaden my knowledge and find material that I will use in lectures, I use ChatGPT to understand the material and streamline the time I use, I use ChatGPT by sorting the information obtained, not immediately taking it raw, I use ChatGPT just by chatting or typing in the keyword, I use ChatGPT for helpful and easy of course, even if you don't use it that often, I use ChatGPT when you need a friend to chat to discuss subjects in lectures, I use ChatGPT to find sources for answers and strengthen answers sourced from books and other websites, I use ChatGPT to find out what was previously unknown, I use ChatGPT when times are tight without having to look at the journal, I use ChatGPT when there is material that is difficult to understand, I use ChatGPT to look for material points, articles and so on for further reading and understanding, I use ChatGPT for the purpose of paraphrasing sentences to be used as material for

writing online articles for the Bogor Insider media, as well as taking an outline of the lecture material so that you don't read a lot in detail and are time efficient.

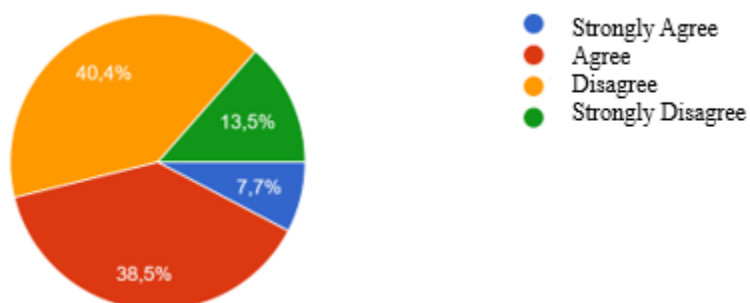
*Statement: ChatGPT makes lectures easier for me*



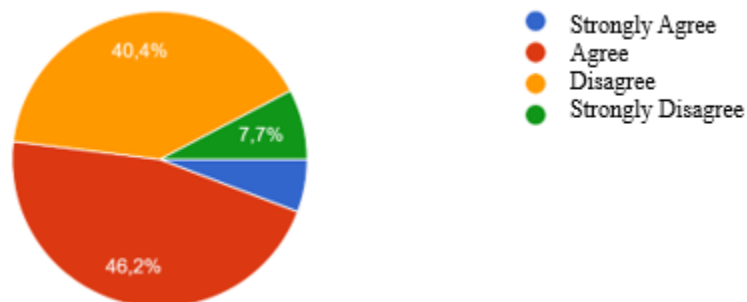
*Statement: I prefer using ChatGPT rather than looking for journals or other learning resources*



*Statement: ChatGPT makes me lazy to think and lazy to find out the truth of information*



*Statement: ChatGPT changes your mindset*



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*Question: From whom did you learn about ChatGPT?*

Following are the answers from respondents: Friend, Internet, Social media, From Google, From classmates, Tiktok, From teachers, Searching for yourself on Google, cousins, From seniors, Lecturers, From Youtube about the use of Rianto Astono's AI Channel, Other students, Websites and articles.

*Question: Who taught you about using ChatGPT?*

Following are the answers from respondents: Friends, Autodidacts, Social media, Vocational School Teachers, Internet, Tiktok, Websites, Students presenting AI as a research aid, and YouTube video tutorials.

*Question: Why did you choose to use ChatGPT?*

Following are the answers from respondents: Easy, Because to get writing ideas, Shorten the time in finding answers, The explanations are more point to point, so I can paraphrase the sentences and the language and sentences are more frequently encountered, More practical and detailed, Look for more accurate information and collaborate with journal sources and other articles that are more information dense, The answer is instant even though there are many shortcomings, Can save time, Because ChatGPT is an AI which is a sophisticated system, To answer questions with good answers in field conditions, Because it can quickly provide information that is not known in detail, Because the answer keywords come out easily and quickly, Because the features are simple and there is no need to search a lot for the titles of other information sources, chatgpt automatically creates a big picture from various sources regarding the topic you are looking for, because it can make it easier to find answers to questions when time is urgent..

*Question: Since when have you used chatgpt for lectures?*

Following are the answers from respondents: Semester 3, Recently, During semester 2, Since semester 4, When entering college, Around October 2023, since school, Mid semester, Since doing the first assignment in lectures, since September 2023, Since group work, Semester 1, Last month, Around 3 months at the start of college, since the final semester, since 2022, since 2023.

*Question: On which platforms or websites do you frequently interact with ChatGPT?*

Following are the answers from respondents: Google, Chrome, Microsoft Edge, chatgpt App, Website, Humata, perplexity, Chat.openai.com

ChatGPT (Generative Pretained Transformer) is an AI artificial intelligence system that has the function of connecting or interacting in text-based conversations. How to use it is quite easy, you can start by inputting one or several questions and then the AI will share the relevant answers. ChatGPT makes the things we want to look for in ChatGPT (Suharmawan, 2023).

ChatGPT is one of the most sophisticated chatbots in the world that can create collections of sentences containing answers to users' questions in a short time, even a matter of seconds (Alafnan & Mohdzuki, 2023; Aydın & Karaarslan, 2023; Manurung et al., 2023). ChatGPT is a state-of-the-art Generative Pretained Transformer (GPT) language model designed to create text that is indistinguishable from human-written text (Mubarak & Diantoro, 2021). ChatGPT has recently become popular because of its capabilities. Even now, many people are waiting for the release of GPT-4 from OpenAI, which is an updated version of the current GPT-3.5 technology. AI experts from Silicon Valley say that GPT-4 will be the biggest advancement in the world of technology industry.

Based on the 12 questions asked, the following is a discussion of the results obtained;

1. In the first question in the questionnaire regarding the use of GPT chat, the results show that 13.5% of respondents often use GPT chat, 58.8% sometimes, 25% rarely, and 7.7% never, this shows Most of the students in the Educational Technology study program at Ibn Khaldun University, Bogor, use chatGPT, while a small number never or do not use chatGPT. Nearly a third of college students (30%) have used free artificial intelligence (AI) tool chatGPT for schoolwork in the last school year, according to a survey conducted by Intelligent.com and SurveyMonkey. As the popularity of AI has recently increased – from art to technology – Intelligent.com surveyed 1,223 undergraduate and graduate students – aged 18-30 on their views on one of the most well-known tools, chatGPT, which was launched in November 2022.

2. In the second question in the questionnaire regarding how respondents use chatGPT, from this question shows that results. Students use chatGPT appropriately in lectures, such as for the purpose of finding answers to lecture material, understanding lecture material that is difficult to understand, looking for material when there is a deadline. The survey found that, of the 30% who used ChatGPT over the past year for schoolwork, nearly half said they used it frequently for homework.
3. In the third question in the questionnaire regarding the benefits of chatGPT, whether it makes it easier for respondents or not, the results of this question show that 23.1% of student and female respondents strongly agree that ChatGPT makes the lecture process easier, 69.2% of respondents agree that GPT chat makes learning easier, 5.8% disagree that ChatGPT makes the lecture process easier, and 1.9 % responded that they strongly disagreed that chatgpt made lectures easier. This shows that the use of chatGPT makes the process of educational technology students at Ibn Khaldun University Bogor easier in the lecture process. Currently the ChatGPT chatbot system is popular, because this system is said to make work related to software easier. Including students and university students, quite a few of them use it to complete their assignments. One of them is Rifai, a Broadcast Communication Science student from a state university in Bandung, West Java. He said that when he found out about the ChatGPT system, it made it easier to complete his college assignments.  
*"ChatGPT can help create college assignments by providing accurate information and answers," he said when contacted by MNC Portal, Monday (13/02/2023).*
4. In the fourth question, the results obtained showed that 3.8% agreed that they preferred using chatgpt rather than using journals and other learning resources, 23.1% of respondents agreed, 61.5% disagreed, and 11.5% strongly disagreed. From these results it can be concluded that Educational Technology students at Ibn Khaldun University, Bogor, still use journals or other learning sources and do not use Chatgpt as the main source. Because even though it is considered relevant and detailed, it turns out that GPT Chat can also provide incorrect information to its users due to inaccurate information. ChatGPT is also not good at understanding discussions that are too complicated, so it often confuses users in learning media.
5. In the fifth question in the questionnaire regarding the negative impact of using chatGPT whether it makes respondents lazy to think or not, the results of the question show that 7.7% of respondents strongly agree, 38.5% agree, 40.4% disagree, and 13.5% % strongly disagree, these results show that chatGPT makes some students lazy to think. ChatGPT makes it easy to find answers to solve a problem quickly. However, if this is done too often, it can reduce the ability to think deeply, creatively and logically to solve a problem. On the other hand, there are still many students who still have the curiosity to find the truth of information, and chatGPT does not influence them and make them lazy thinkers.
6. In the sixth question, the results of the questions obtained showed that 5.8% strongly agreed that ChatGPT changed the mindset of students and college students, 46.2% agreed, 40.4% disagreed, the respondents above showed that ChatGPT could influence students' thinking patterns. . ChatGPT makes it easy for students to get answers instantly so that their critical thinking patterns can change. ChatGPT has a significant influence on students' level of laziness in thinking when they do assignments. In other words, researchers will look for evidence to show that ChatGPT can influence the way students carry out their assignments by being lazier or more diligent. Chatgpt can be used to make it easier to understand material, but on the other hand it is also susceptible to being used for plagiarism, depending on the user. It is very important to use technology wisely. There needs to be awareness and responsibility in utilizing increasingly sophisticated technology, one of which is ChatGPT. In its use, a student needs to consider ethics, fairness, privacy, and other human values. Wise users are able to maximize the benefits of this application and minimize the risks and negative impacts. Good and wise use of ChatGPT will certainly have a positive impact on a student's academic journey.
7. In the seventh question in the questionnaire regarding who is the person who provides information and recommendations regarding chatGPT, from The results of the respondents' answers are known to be the average. You can get a lot of information related to chatgpt from friends and social media such as Youtube, Tiktok and others. Some respondents learned about chatGPT from family and lecturers. This shows that most students know about chatGPT from the media or other people.

8. In the eighth question, the results of the question are: It is known that most of the respondents learned and found out how to use ChatGPT self-taught with the help of tutorials on social media and others were taught by their friends. This shows that using chatGPT is very easy. Because its feature is a chat platform which has become commonplace among the public.
9. In the ninth question about the reasons why respondents chose to use chatGPT, the average answer from respondents was because chatGPT was easy and fast. This is proven because using ChatGPT does not require long stages and you can directly ask questions on the platform and produce reliable answers for those who need the answers. In accordance with previous research, ChatGPT can provide answers according to keywords entered by users, which can positively influence the world of education and learning. ChatGPT is software that allows users to ask questions using natural and easy-to-understand language in conversation. The technology was released by American company Open AI on November 30, 2022. The model can understand and respond to user input in a way that mimics human conversation, making interactions more natural and engaging. Additionally, ChatGPT can generate text in a variety of styles and formats, such as news articles, emails, and poetry, making it a versatile and useful technology for a variety of applications. ChatGPT makes it easier for many people, especially students or scholars, to do their assignments. Not only searching for specific searches, creating essays, papers, even written final assignments, ChatGPT is also able to provide answers to mathematical searches, such as algebra, statistics and trigonometry.
10. In the tenth question about how long have respondents used chatGPT, the answers from the respondents varied greatly. Some respondents have been using chatGPT since some time ago, which means that respondents have only used chatGPT since the beginning of college, semester 3, 4, as well as in the final semesters or semester 7, this shows that respondents using chatGPT are still quite new among female students.

In the eleventh question regarding chatGPT access, the results obtained show that on average the respondents' answers accessed chatGPT from Google Chrome or websites and a small portion from the ChatGPT application, but the majority used Google Chrome to access ChatGPT. This shows that Chrome is the main web browser of choice for accessing ChatGPT, because most laptops and cellphones now have Chrome built in.

#### D. Conclusion

Based on the results and discussion, the influence of AI ChatGPT technology on student thinking patterns is complex and varied, it can have a positive or negative effect depending on the context of its use. Access to information provided by ChatGPT is simple, easy, fast, many students are interested in ChatGPT because of its advantages. Apart from being simple, easy, fast, ChatGPT also provides instant and accurate answers. On average, students use chatGPT to find answers to questions they encounter, or to understand material. ChatGPT helps make it easier for students to understand material that is difficult to understand in learning, understand statements, answer questions, increase insight, find sources or references, and helps to save time. However, there are some students who do not use ChatGPT who think that ChatGPT can reduce creative thinking. The negative influence of AI ChatGPT technology on student thinking patterns, judging from the percentage in the results section, 38.5 percent of students admitted that ChatGPT made them lazy to think because of ChatGPT's practicality and accuracy in providing answers. ChatGPT makes students dependent, when they feel they can no longer find answers to the questions they encounter, they use ChatGPT as the solution. ChatGPT has changed many students' mindsets, either for the better or vice versa.

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