



## THE EFFECT OF CHATGPT USAGE INTENSITY ON STUDENT LEARNING INDEPENDENCE

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### Abstrak

Perkembangan teknologi telah menghadirkan berbagai peluang baru dalam dunia pendidikan, salah satunya melalui penggunaan ChatGPT sebagai alat bantu belajar. Mahasiswa kini semakin terbiasa menggunakan ChatGPT untuk mendukung kegiatan perkuliahan, mulai dari memahami materi, menyelesaikan tugas, hingga mencari informasi tambahan secara mandiri. Penelitian ini bertujuan untuk mengetahui pengaruh intensitas penggunaan ChatGPT terhadap kemandirian belajar mahasiswa. Penelitian ini menggunakan pendekatan kuantitatif dengan jenis penelitian korelasional. Teknik pengumpulan data yang digunakan yaitu kuesioner, dengan sampel penelitian terdiri dari 35 mahasiswa Teknologi Pendidikan Universitas Negeri Yogyakarta angkatan 2024 rombel A. Hasil perhitungan uji korelasi diperoleh nilai  $r$  sebesar 0,8494, artinya intensitas penggunaan ChatGPT memiliki pengaruh terhadap kemandirian belajar mahasiswa, di mana semakin tinggi intensitas penggunaan ChatGPT, semakin tinggi pula tingkat kemandirian belajar mahasiswa. Dengan demikian, ChatGPT berperan penting dalam mendukung peningkatan kemandirian belajar mahasiswa.

**Kata kunci :** ChatGPT; Kecerdasan Buatan; Kemandirian Belajar, Mahasiswa

### Abstract

*Technological developments have brought about various new opportunities in the world of education, one of which is through the use of ChatGPT as a learning tool. Students are now increasingly accustomed to using ChatGPT to support their lectures, from understanding the material, completing assignments, to searching for additional information independently. This study aims to determine the effect of ChatGPT usage intensity on student learning independence. This study uses a quantitative approach with a correlational research design. The data collection technique used is a questionnaire, with a sample consisting of 35 students majoring in Educational Technology at Yogyakarta State University, class of 2024, group A. The correlation test results obtained an  $r$  value of 0.8494, meaning that the intensity of ChatGPT usage has an effect on student learning independence, where the higher the intensity of ChatGPT usage, the higher the level of student learning independence. Thus, ChatGPT plays an important role in supporting the improvement of student learning independence.*

**Keywords:** ChatGPT; Artificial Intelligence; Learning Independence, Student

## I. Introduction

The digital age has brought about major changes in almost all aspects of life, including education. The digital age is characterized by rapid technological developments, enabling almost all activities to be carried out digitally. In this digital age, not only have the ways we live, learn, and work changed, but we are also required to continuously adapt to technology as it continues to evolve with the times. One of the innovations that has emerged and is widely used today is artificial intelligence (AI). There are various types of artificial intelligence, one of which is ChatGPT. ChatGPT is an artificial intelligence (AI) technology developed by OpenAI, which is capable of generating high-quality and natural-sounding text (Murcahyanto, 2023). On the other hand, Pontjowulan (2023) states that ChatGPT is a robot or chatbot that utilizes Artificial Intelligence (AI) and is capable of interacting with and assisting humans in performing various tasks.

ChatGPT's ability to provide answers, explanations, and guidance has been widely used in education as a learning tool. Its popularity has grown rapidly due to its ability to automatically generate text based on user requests (Thorp, 2023). Additionally, ChatGPT can also assist in understanding readings, summarizing texts, and performing simple translations (Elkins, K., & Chun, 2020). From these definitions, it can be concluded that ChatGPT is an artificial intelligence-based chatbot developed by OpenAI and is one of the artificial intelligence (AI) tools frequently used by students to support the learning process.

Learning independence is the behavior of students in achieving their learning goals without depending on others (Nurhamidah & Nurachadijat, 2023). In addition, Yanti & Surya (2022) argue that independent learning is a learning skill possessed by students in a learning process that is driven and controlled, as well as assessed by the students themselves, so that students can manage their own learning by activating their cognitive, affective, and behavioral abilities and achieving their desired learning goals. At the university level, learning independence is an important aspect in supporting academic success, where students are not only passive learners who only receive information, but also actively seek information independently. The main goal is to master the material or knowledge well through self-awareness (Telaumbanua & Adiwinata, 2025).

ChatGPT can be optimally utilized to enhance student learning independence, where the use of ChatGPT allows students to be more independent in searching for information and understanding lecture materials, without always having to rely on the lecturer's explanations. In addition, ChatGPT is also often used by students to help them complete their coursework. Students who use ChatGPT wisely will be able to ask relevant questions, filter the information obtained, and integrate the results into a deeper understanding, so that ChatGPT is only used as a tool, not as a substitute for thinking.

Based on initial observations of the learning process in the classroom, it was found that only a small portion of the 52 students were able to complete the quiz given by the lecturer independently without the help of ChatGPT or other AI, while the majority of the 52 students needed the help of ChatGPT or other AI to complete the quiz. Similarly, King in his research (Risnina et al., 2023) revealed that students can give ChatGPT prompts related to their assignments, then copy the answers and put them directly into their assignments, so that students only need to put in a little effort in completing their assignments.

Although the use of ChatGPT provides benefits in the world of education, its use in education also presents new challenges. Several studies reveal that dependence on this technology can reduce students' critical thinking skills and initiative to learn independently (Nufus, 2024). This is in line with the research by Gaol & Manalu (2024), which states that the convenience provided by ChatGPT makes students dependent without thinking or finding out whether the information obtained is relevant or not, because ChatGPT does not provide the source of information from the responses given. By simply copying and pasting answers from ChatGPT, it is uncertain whether students truly understand the material they are supposed to learn (Risnina et al., 2023). This shows that students rely more on instant help from artificial intelligence (AI) than on developing critical thinking and independent learning skills.

Although there have been many studies examining the use of ChatGPT in education, most of the existing studies still focus on its effectiveness in improving learning outcomes, learning motivation, or students' perceptions of ChatGPT use. Studies that specifically highlight the relationship between the intensity of ChatGPT use and aspects of student learning independence are still very limited. However, learning independence is an important competency that determines students' ability to set strategies, manage time, and make decisions in the learning process without excessive dependence on others. This research gap indicates that there is not much empirical evidence explaining whether intensive use of ChatGPT increases learning independence or, on the contrary, decreases learning independence and leads to dependence on artificial intelligence. Therefore, this research is important to fill the literature gap and provide a more comprehensive understanding of the effect of ChatGPT usage intensity on student learning independence.

On the one hand, the use of ChatGPT can indeed facilitate the learning process. However, on the other hand, the use of ChatGPT also raises concerns about a decline in student learning independence due to dependence on AI. Therefore, this study aims to determine the effect of the intensity of ChatGPT use on student learning independence. Thus, the results of this study are expected to provide practical recommendations for lecturers and educational institutions to formulate appropriate mentoring strategies and policies to maintain the quality of education amid the rapid pace of digitalization.

## II. Research Method

This study uses a quantitative approach with a correlational research design. A quantitative approach was chosen because this study is oriented towards numerical data that can be processed statistically to obtain an objective picture of the phenomenon being studied. Correlational research itself is a type of research that aims to determine the relationship and the degree of closeness between two or more variables without manipulation. This is in line with the opinion of El Hasbi et al. (2023), who state that correlational research is research that specifically aims to determine the relationship between two or more variables in a particular context.

This research was conducted at the Educational Technology Study Program, Faculty of Education, Yogyakarta State University in October 2025. The selection of the research location was based on several considerations, namely the accessibility of the location, which made it easier for researchers to access respondents; the relevance of the location to the research objectives, as the research subjects were Educational Technology students; and the ease of access to the necessary data so that the research process could run more effectively and efficiently. The population in this study consisted of all active students of the Educational Technology Study Program, Faculty of Education, Yogyakarta State University, class of 2024, group A. From this population, a sample of 35 students was determined to be representative of the overall population.

The data collection technique in this study used questionnaires or surveys as instruments. The questionnaire consisted of a total of 13 questions designed to explore information related to the research variables. As a data collection tool, the questionnaire served to obtain information from individuals or groups systematically through the answers provided by respondents. This questionnaire uses a 4-point Likert scale with answer options ranging from "Strongly Disagree" to "Strongly Agree." The validity test in this study was conducted using the Pearson Product-Moment correlation technique, which aims to ensure that each question item in the questionnaire is able to accurately and precisely reveal data from the research variables. Furthermore, a reliability test was conducted using Cronbach's Alpha to determine the consistency of the instrument, so that it could be ensured that the questionnaire did not contain any elements of chance and had a good level of reliability. After the instrument was declared valid and reliable, the collected data were then analyzed using simple linear regression to test the effect of ChatGPT usage intensity (variable X) on the learning independence of Educational Technology students at Yogyakarta State University (variable Y). Then, a correlation test and a significance test were conducted to see the relationship between variables X and Y.

### **III. Findings and Discussion**

#### **A. Research Findings**

The results of statistical analysis of the questionnaire data can be seen in Table 1.

Table 1. Statistical Analysis Calculation Results

No	Statistics	Variable X	Variable Y
1	Number of Samples	35	35
2	Standard Deviation	1,22	1,51
3	Average	20,91	23,71
4	Median	21,00	24,00
5	Frequently Occuring Values	21,00	22,00
6	Range	5,00	5,00
7	Lowest Value	18,00	21,00
8	Highest Value	23,00	26,00
9	Total Value	732	830

Source: Questionnaire Results

Based on the data in Table 1, the distribution of response values for the ChatGPT usage intensity indicator (variable X) ranges from a minimum value of 18 to a maximum value of 23. Based on this distribution of values, the mean value is 20.91 with a standard deviation of 1.22. Furthermore, the median = 21.00, the mode = 21.00, the range = 5.00, and the total value = 732. From the questionnaire results, it can be seen that the intensity of ChatGPT usage among Educational Technology students at Yogyakarta State University is in the moderate category.

Furthermore, the distribution of answers on the indicator of student learning independence (variable Y) ranges from a minimum value of 21 to a maximum value of 26. Based on this distribution of values, the mean value is 23.71 with a standard deviation of 1.51. Furthermore, the median = 24.00, the most frequently occurring value = 22.00, the range = 5.00, and the total score = 830. From the questionnaire results, it can be seen that the learning independence of Education Technology students at Yogyakarta State University is in the moderate category.

Table 2. Correlation Test Results and Significance of Variables X and Y

Hypothesis Testing	Value	Description
Correlation Test	$r_{calculation} = 0,8494$	$r_{table} = 0,334$ Significant at $\alpha = 0,05$
Significance Test	$t_{calculation} = 9,2476$	$t_{table} = 2,035$ and $n = 35$

Source: Processed Data

Based on the data in Table 2, it was found that the correlation coefficient between the intensity of ChatGPT use (variable X) and the learning independence of Educational Technology students at Yogyakarta State University (variable Y) was 0.8494 with  $\alpha = 0.05$ . The correlation coefficient ( $r_{calculation}$ ) is greater than the Product-moment  $r_{table}$  which is  $0.8494 > 0.334$ , so it can be concluded that this value indicates a very strong positive correlation between variable X and variable Y.

In the significance test, the  $t_{calculation}$  was greater than  $t_{table}$  ( $9,2476 > 2,035$ ) with  $\alpha = 0,05$ . Thus, it can be concluded that there is a significant relationship between the intensity of ChatGPT use (variable X) and student learning independence (variable Y). Therefore, the Null Hypothesis ( $H_0$ ) is rejected and the Alternative Hypothesis ( $H_a$ ) is accepted. This means that the intensity of ChatGPT usage has an effect on student learning independence.

## B. Discussion

The results of the study indicate that the intensity of ChatGPT use has an effect on the learning independence of Education Technology students at Yogyakarta State University. Questionnaire data shows that most students use ChatGPT intensively in various academic activities, ranging from assisting with lectures, completing assignments, obtaining explanations of material, creating resumes, to searching for additional information beyond the material provided by lecturers. This finding is in line with the research by Listiana et al. (2025), which states that the use of ChatGPT not only improves students' ability to access information quickly and accurately, but also encourages them to be more proactive and confident in completing assignments and understanding the material independently. This indicates that ChatGPT has become one of the most frequently used learning resources and plays an important role in supporting the learning process of students.

Although there are indications of dependence, where some students admit to relying on ChatGPT to solve academic problems, this tendency does not necessarily reduce their independence in learning, but rather shows a drive to be more active in finding solutions to academic problems by utilizing ChatGPT. This is in line with the research by Anggraini et al. (2025), which shows that students who use ChatGPT intensively tend to be more active in seeking answers to academic problems. In other

words, the intensity of ChatGPT use can be a tool to increase student learning independence.

In addition, data from questionnaires on learning independence show that the level of learning independence among students majoring in Educational Technology at Yogyakarta State University is moderate. They have the initiative to study course material in greater depth without being instructed to do so by their lecturers, create personal study schedules, actively seek additional learning resources, and try to complete assignments independently before asking others for help. This is in line with the research by Habibullah & Lubis (2025), which states that the use of ChatGPT has an effect on increasing student independence in completing lecture assignments. Students are also accustomed to trying various ways to solve learning problems, conducting regular evaluations of their understanding of the material, and making mastery of the material the main goal of learning, rather than simply pursuing a high GPA. These findings show that students do not only depend on lecturers, but also strive to develop independent learning strategies.

The correlation test results further reinforce this finding. An  $r$  value of 0.8494 indicates a very strong relationship between the intensity of ChatGPT use and the learning independence of Educational Technology students at Yogyakarta State University. The significance test also shows that variables X and Y have a significant relationship, with  $t_{\text{calculation}} > t_{\text{table}}$  ( $9,2476 > 2,035$ ). In other words, the higher the intensity of ChatGPT use, the higher the level of student learning independence. Students who intensively use ChatGPT tend to have higher initiative, consistency in learning, and the ability to evaluate themselves. This is in line with the research by Supriyono et al. (2024), which confirms that the use of ChatGPT can encourage students to be more independent in exploring material. Thus, the intensity of ChatGPT usage has been proven to contribute to an increase in student learning independence, although supervision is still needed to prevent excessive dependence.

#### IV. Conclusion

Based on the results of the study, it can be concluded that the intensity of ChatGPT use affects student learning independence, where the higher the intensity of ChatGPT use, the higher the level of student learning independence. Students who use ChatGPT intensively are proven to be more proactive, confident, and consistent in managing the learning process, from understanding the material, completing assignments, to independently searching for additional learning resources. Although there are indications of dependence, this tendency actually shows a drive to be more active in seeking academic solutions by utilizing ChatGPT. The implication is that the use of ChatGPT needs to be directed wisely so that it can support learning independence without causing excessive dependence.

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