

The Effect of ChatGPT Usage on Student Learning Motivation at STIE Pancasetia Banjarmasin

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ABSTRACT

This study aims to analyze the effect of the use of artificial intelligence technology, specifically ChatGPT, on the learning motivation of STIE Pancasetia Banjarmasin students in the Change Management course. ChatGPT is an AI-based language model that provides fast, flexible, and interactive access to information, and has the potential to increase learning effectiveness. The method used is a quantitative approach with a questionnaire data collection technique for 40 students. The results of the regression analysis show that the use of ChatGPT has a significant effect on student learning motivation, with a significance value of 0.014 (<0.05). The coefficient of determination of 0.150 indicates that 15% of the variation in learning motivation can be explained by the use of ChatGPT, while the remaining 85% is influenced by other factors. These findings emphasize the importance of using ChatGPT wisely as a learning tool that can support student learning motivation in the digital era.

Keywords: Chatgpt, Artificial Intelligence, Learning Motivation, Students, Educational Technology
Introduction

INTRODUCTION

The development of artificial intelligence (AI) technology has brought about significant changes in various aspects of life, including in higher education. One of the most prominent AI innovations is ChatGPT, an advanced language model based on the Generative Pre-trained Transformer developed by OpenAI. ChatGPT allows users to interact naturally with computer systems, answering questions, providing explanations, and even helping to compose academic texts efficiently and flexibly. In the context of learning, the presence of ChatGPT provides new opportunities for students to obtain information and guidance instantly without having to wait for direct interaction with lecturers. Amidst increasing academic demands, ChatGPT is a digital solution that supports independent learning and personalized course materials.

In Indonesia, the use of ChatGPT continues to experience significant growth. A Boston Consulting Group report (2023) shows that Indonesia ranks fourth globally in terms of the number of active ChatGPT users, with 32% of digital users in Indonesia reportedly using the platform regularly for various purposes, including education (Boston Consulting Group, 2023). Students, as part of the digital native generation, tend to quickly adopt the latest technology, including utilizing artificial intelligence as part of their learning strategies. In this situation, ChatGPT is often used to search for references, formulate ideas, structure writing, or understand difficult academic concepts. This makes ChatGPT a relevant learning tool for today's students (Diktiristek, 2024).



However, while ChatGPT offers convenience in obtaining information and supports independent learning, the use of this technology also poses a number of challenges. One major concern is the potential for students to become dependent on the system's instant answers, thereby discouraging critical thinking and in-depth exploration of the material. When students rely too much on ChatGPT, the risk of a decline in intrinsic motivation increases (Manalu, 2024). Intrinsic motivation, which stems from internal drives such as curiosity and the desire to master the material, can potentially weaken when the learning process is replaced by simplifying technological assistance (Ryan & Deci, 2000). This is further exacerbated by academic ethical risks such as covert plagiarism, where students copy AI answers without adequately modifying or reflecting on their content (Dwivedi et al., 2023).

Learning motivation is a key element in the learning process. When learning motivation is high, students tend to be more active, diligent, and consistent in studying and completing academic assignments. Uno (2016) states that learning motivation is an internal and external drive that drives individuals to change their learning behavior toward achieving specific goals (Uno, 2016). Therefore, it is important to examine whether the use of ChatGPT supports or hinders students' learning motivation. In the context of higher education, particularly in the digital era, understanding the interaction between technology and the psychological aspects of learning is crucial.

Several previous studies have attempted to identify the impact of ChatGPT use on learning motivation. Meiriza et al. (2025), in a quantitative study of students at the Faculty of Economics at Medan State University, found that ChatGPT use positively contributed to learning motivation by 17.3% (Meiriza et al., 2025). This study indicates that students felt helped and more motivated when using ChatGPT as part of the learning process. Similar results were also found in a study by Yunarzat (2024) on students at SMK Negeri 6 Makassar, where ChatGPT as a learning medium had a 16.81% impact on learning motivation (Yunarzat, 2024). Meanwhile, a study conducted by Hayatun Nufus (2024) at STMIK Antar Bangsa concluded that the use of ChatGPT helped students understand the material and increased their confidence in facing academic assignments (Nufus, 2024).

Another, more extensive study conducted by Nelliraharti (2024) on students of the Faculty of Tarbiyah and Teacher Training at UIN Ar-Raniry found that the use of AI generally contributed 36% to increased student learning motivation. This study confirmed that integrating AI technology into learning can create a more engaging learning environment and stimulate student enthusiasm for learning (Nelliraharti, 2024). However, all of these studies also agree that the use of AI, such as ChatGPT, must be accompanied by adequate supervision and digital literacy to avoid long-term negative impacts.

Based on this background, this research will focus on students of STIE Pancasetia Banjarmasin as the object of study. Students at this institution have begun using ChatGPT to support their learning, particularly in the Change Management course. This study aims to empirically examine the effect of ChatGPT use on student learning motivation, both in terms of its effectiveness and its impact on internal and external motivational dimensions. The results of this study are expected to provide scientific and practical contributions to the development of technology-based learning strategies that are adaptive, ethical, and oriented towards improving the quality of higher education in the digital era.

METHOD

This study uses a quantitative approach with an associative research type, which aims to determine the effect of the use of ChatGPT (variable X) on student learning motivation (variable Y). The study was conducted at STIE Pancasetia Banjarmasin, on sixth semester students majoring in Management who took the Change Management course, during the period of March to June 2025. The study population was all active students of STIE Pancasetia in the even semester of the 2024/2025 academic year totaling 3,149 people, with the sampling technique using the saturated sampling method on 40 regular morning students in the sixth semester.

The primary data collection technique used a 5-point Likert-scale questionnaire, which measured respondents' perceptions of ChatGPT usage and learning motivation. Additional data

were collected through interviews, documentation, and literature review. Operational definitions of the variables were determined based on measurable indicators: ChatGPT Usage (frequency, purpose, ease of use, satisfaction, and relevance), and Learning Motivation (interest, effort, persistence, purpose, satisfaction, and initiative).

The collected data were analyzed using descriptive and inferential statistics using SPSS. Simple linear regression was used to examine the effect of independent variables on the dependent variable. Prior to analysis, the data were tested for validity and reliability, and classical assumptions such as normality, multicollinearity, and heteroscedasticity were tested to ensure the feasibility of the regression model.

Results and Discussions

Results

Respondent Characteristics

Category	Sub-Category	Frequency	Percentage
Gender	Man	14 People	35%
	Woman	26 People	65%
Age	20 - 25 Years	34 People	85%
	26 - 30 Years	2 persons	5%
	> 30 Years	4 People	10%
ChatGPT Usage	Once	40 People	100%
	Never	0 People	0%
Total Respondents		40 People	100%

Source: Processed data, 2025

Based on the distribution of respondents, the majority were female (26 people) while 14 were male (35%). In terms of age, the majority of respondents were in the 20–25 year age range, namely 34 people (85%), while only 2 respondents aged 26–30 years (5%) and 4 people aged over 30 years (10%). All respondents (100%) stated that they had used ChatGPT. This finding indicates that the majority of respondents were young women who were familiar with technology, especially the use of ChatGPT, making it relevant for further analysis in the context of the influence of technology on learning motivation.

Instrument Test

a. Validity Test

Variables	Item	R Count	R table	Information
ChatGpt (X) Usage	Q1	0.752	0.312	Valid
	Q2	0.794	0.312	Valid
	Q3	0.702	0.312	Valid
	Q4	0.740	0.312	Valid
	Q5	0.690	0.312	Valid
Learning Motivation (Y)	Q6	0.831	0.312	Valid
	Q7	0.852	0.312	Valid

Q8	0.791	0.312	Valid
Q9	0.764	0.312	Valid
Q10	0.824	0.312	Valid

Source: processed data (2025)

In the table above, it can be seen that all statements used to measure the five variables have a validity coefficient greater than the critical value, namely 0.312 (>0.0312), so that all statements are declared valid.

b. Reliability Test

Table 5.6
Summary of Questionnaire Reliability Test Results

Variables	Indicator	Cronbah's Alpha	Role of Thumb	Information
ChatGpt (X) Usage	Q1	0.919	0.700	Reliable
	Q2	0.917	0.700	Reliable
	Q3	0.922	0.700	Reliable
	Q4	0.920	0.700	Reliable
	Q5	0.923	0.700	Reliable
	Q6	0.914	0.700	Reliable
Learning Motivation (Y)	Q7	0.913	0.700	Reliable
	Q8	0.918	0.700	Reliable
	Q9	0.919	0.700	Reliable
	Q10	0.915	0.700	Reliable

Source: processed data (2025)

The reliability coefficient value for each variable as shown in the table above is greater than 0.700 so it can be concluded that the measuring instrument used is reliable and the answers given by respondents relating to the statements submitted as a reference for this study can be trusted (reliable) or are reliable.

Classical Assumption Test

a. Normality Test

Table 5.7
Normality Test

One-Sample Kolmogorov-Smirnov Test		Unstandar dized Residual
N		40
Normal Parameters^{a,b}	Mean	.0000000
	Standard Deviation	3.6036608
		8
Most Extreme Differences	Absolute	.106
	Positive	.079
	Negative	-.106
Test Statistics		.106
Asymp. Sig. (2-tailed)^c		.200^d

Monte Carlo Sig. (2-tailed)	Sig. 99% Confidence Interval	Lower Bound	.301
		Upper Bound	.289
			.313

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

In table 1, it can be concluded that the Asymp. Sig. (2-tailed) value is 0.301, $> \alpha = 0.05$, meaning that according to decision making using the Kolmogorov-Smirnov test, the data has a normal distribution and has met the normality requirements in the regression model.

b. Multicollinearity Test

Table 5.8
Multicollinearity Test

		Coefficients ^a				Collinearity Statistics	
		Unstandardized Coefficients	Standardized Coefficients				
		B	Std. Error	Beta	t	Sig.	
1	(Constant)	11,823	2,147		5,507	.000	
	Student Learning Motivation	.323	.125	.387	2,589	.014	1,000

a. Dependent Variable: ChatGpt Usage

Based on the SPSS output in Table 5.8 above, it can be concluded that the tolerance value for Responsiveness is 1.000. Since the Tolerance value is 1.000 and the VIF is 1.000, there is no multicollinearity in this regression model. This is also confirmed because only one independent variable is used.

c. Heteroscedasticity Test

Table 5.9
Heteroscedasticity Test

		Coefficients ^a				
		Unstandardized Coefficients	Standardized Coefficients			Sig.
		B	Std. Error	Beta	t	
	(Constant)	.931	1,371		.867	.007
	ChatGpt Usage	.052	.078	-.109	.673	.505

a. Dependent Variable: ABS_RES1

Based on Table 5.9, the results of the heteroscedasticity test using the Glejser method obtained a significance value of 0.505 (> 0.05). Thus, it can be concluded that the regression model does not experience heteroscedasticity problems and meets the classical assumptions.

Multiple Linear Regression Analysis

To determine whether or not the use of chatgpt has an effect on the learning motivation of STIE Pancasetia Banjarmasin students, multiple linear regression was used. Based on the processed data tested using the SPSS computer application program, the multiple regression results were as follows:

Table 5.10
Results of Multiple Linear Regression Analysis
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Error Std.	Beta		
1	(Constant)	11,823	2,147		5,507	.000
	Student Learning Motivation	.323	.125	.387	2,589	.014

a. Dependent Variable: ChatGpt Usage

Based on these results, the following multiple linear regression was obtained:

$$Y = a + \beta X + e$$

$$Y = 11.823 + 0.323X + e$$

Information:

Y = Student Learning Motivation

a = Constant

X = ChatGpt Usage

Based on the regression equation above, the interpretation of the coefficients of each variable is as follows:

- Based on the results of a simple regression test, a constant value of 11.823 was obtained. This indicates that if Student Learning Motivation is at zero (0), then the level of ChatGPT Use is estimated at 11.823 units. Although in the real world context a learning motivation value that is truly zero is very rare, this constant still has important meaning in the model, namely as a baseline value (intercept) of ChatGPT use before accounting for the influence of independent variables. Thus, the constant serves as a starting point for estimation before considering the contribution of learning motivation in the prediction model.
- For the Student Learning Motivation Variable, an increase of 1 unit leads to an increase in ChatGPT usage by 0.323 units, assuming other variables remain constant. Based on the results of the simple regression test, a significance value of 0.014 was obtained, less than 0.05. Thus, it can be concluded that Student Learning Motivation has a significant effect on ChatGPT usage. The regression coefficient of 0.323 indicates that every one unit increase in learning motivation will increase ChatGPT usage by 0.323 units.

Hypothesis Test Results

a. f test

The F test shows whether all independent variables have a joint influence on the dependent variable.

Table 5.11
F Test Results

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	89,307	1	89,307	6,701	.014b
	Residual	506,468	38	13,328		
	Total	595,775	39			

a. Dependent Variable: ChatGpt Usage

b. Predictors: (Constant), Student Learning Motivation

Based on Table 5.11, the calculated F value is 6.701 with a significance value (Sig.) of 0.014. Because the significance value is smaller than 0.05 ($0.014 < 0.05$), it can be concluded that the regression model is simultaneously significant. This means that the independent variables, namely Student Learning Motivation, simultaneously have a significant effect on the dependent variable, namely the Use of ChatGPT.

b. t-test

Table 5.12
t-test
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11,823	2,147		5,507	.000
	Student Learning Motivation	.323	.125	.387	2,589	.014

a. Dependent Variable: ChatGpt Usage

Based on the data above, the following results can be seen Based on the Coefficients table above, it is known that the Student Learning Motivation variable has a t-value of 2.589 with a significance value of 0.014. Because the significance value is smaller than 0.05 ($0.014 < 0.05$), it can be concluded that Student Learning Motivation has a partial significant effect on the Use of ChatGPT. Thus, the higher the student's learning motivation, the higher the level of ChatGPT use carried out by students.

Coefficient of Determination

The coefficient of determination (R^2) measures the extent to which the model is able to explain variations in student learning motivation at STIE Pancasetia Banjarmasin (Y). The coefficient of determination value is between 0 and 1. An R^2 value close to one means that the independent variables in the study provide almost all the information needed to predict

student learning motivation (Y). The results of the coefficient of determination can be seen in table 5.13 below:

Table 5.13
Results of the Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.387a	.150	.128	3,651

a. Predictors: (Constant), Student Learning Motivation

Based on the Model Summary table, the R-square value is 0.150, meaning that Student Learning Motivation explains 15% of the variation in ChatGPT Usage. The remaining 85% is explained by other variables not included in this regression model.

Discussion

Based on the results of a study conducted with 40 respondents, we can determine how they responded to the variables presented in the questionnaire. These responses are explained in the following discussion:

a. First Hypothesis

There is a significant influence between student learning motivation and the use of ChatGPT (Siregar et al., 2023). The results of the regression analysis show that the regression coefficient value for the Student Learning Motivation variable is 0.323 with a significance value of 0.014. Because the significance value is <0.05 , then H_1 is accepted. This means that there is a significant influence between learning motivation and the use of ChatGPT. In other words, the higher the student's learning motivation, the higher their tendency to use ChatGPT as a learning support medium. This is supported by the R Square value of 0.150, which indicates that 15% of the variation in ChatGPT use can be explained by learning motivation, while the remaining 85% is explained by other factors not included in this research model.

In addition to statistical results showing a significant influence between ChatGPT use and student learning motivation, it's also important to understand that various factors indirectly influence both variables. These factors enhance our understanding of the dynamic relationship between artificial intelligence-based learning technology and student psychology in the learning context (A'ini et al., 2024).

Students' use of ChatGPT as a learning tool is not only determined by the availability of the application itself, but also significantly influenced by their level of digital literacy. Students who are accustomed to using digital technology tend to be more adaptable in exploring ChatGPT's functions and benefits. Furthermore, access to technological devices and a stable internet connection are also important factors supporting the application's intensive use in the learning process (Aly, 2025).

Another factor driving students to use ChatGPT is academic needs that require speed and efficiency, such as completing assignments, searching for references, or understanding difficult material. In these situations, ChatGPT is often chosen as a quick and practical solution. Furthermore, institutional and faculty support for the use of learning technology also plays a role, as faculty who are open to the use of technology create a learning environment conducive to student innovation (Kurniawan, 2024).

On the other hand, student learning motivation is also influenced by various factors beyond the use of ChatGPT itself. For example, students with clear learning goals and an

internal drive to achieve typically demonstrate higher levels of learning motivation. A supportive learning environment, engaging teaching methods from lecturers, and encouragement from family and peers are also important factors in strengthening students' enthusiasm for learning (Tarumasely et al., 2024).

Thus, although the use of ChatGPT has been shown to influence learning motivation, this relationship is not independent. A complex interaction between technological, psychological, and environmental factors shapes students' learning patterns. Therefore, when designing digital-based learning strategies, it is crucial for educational institutions to focus not only on providing technology but also on the readiness and support of other aspects that contribute to holistically enhancing learning motivation (Maryani, 2025).

Conclusions

This study reveals that the use of ChatGPT has a significant impact on the learning motivation of students at STIE Pancasetia Banjarmasin, particularly in the Change Management course. The results of the simple regression analysis show a significance value of 0.014 (<0.05), indicating that ChatGPT contributes to enhancing students' learning motivation. The coefficient of determination (R^2) is 0.150, meaning that 15% of the variation in learning motivation can be explained by ChatGPT usage, while the remaining 85% is influenced by other factors outside the research model. Practically, these findings confirm that ChatGPT can be an effective learning support tool, especially in providing quick access to information, helping students understand course materials, and assisting with assignment completion. However, the use of ChatGPT must be accompanied by adequate digital literacy, academic integrity, and proper supervision to prevent a decline in students' intrinsic motivation. Therefore, educational institutions should develop digital learning strategies that not only emphasize technology but also consider psychological and environmental aspects of student learning in a holistic manner.

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