RESEARCH ARTICLE

A STUDY ON THE INTERACTION OF DIGITAL SELF-EFFICACY AND PEER CONFORMITY IN THE INTENTION TO USE CHATGPT AMONG HIGH SCHOOL STUDENTS

Wiwik Juwarini Prihastiwi[1]*, Nur Azlina Amrozi[2], Dzulkifli[3]
wiwikjuwariniprihastiwi@um-surabaya.ac.id

[1-3] Universitas Muhammadiyah Surabaya, Surabaya, Indonesia

ABSTRACT

This study aims to examine the relationship between digital self-efficacy and peer conformity with the intention to use ChatGPT among high school students. The research employed a quantitative method using multiple regression analysis. The participants consisted of 299 high school students selected through stratified random sampling. The analysis results revealed that digital self-efficacy had a direct and significant relationship with the intention to use ChatGPT ($t = 5.305$; $p < 0.001$), contributing an effective value of 19.9%. Peer conformity also showed a direct and significant relationship ($t = 18.812$; $p < 0.001$) with an effective contribution of 70.6%. Simultaneously, digital self-efficacy and peer conformity were significantly related to the intention to use ChatGPT ($F = 279.331$; $p < 0.001$) with an R square value of 65.4%. These findings indicate that among high school students, peer conformity contributes more strongly to the intention to use ChatGPT compared to digital self-efficacy.

Keywords: *Digital Self efficacy, Peer Confaormity, Intention use, ChatGPT*

INTRODUCTION

The rapid advancement of artificial intelligence (AI) technology has led to profound changes invarious aspects of human life, as its applications become increasingly widespread. Cope et al. (2020) define artificial intelligence (AI) as the transposition of meaning that transcends human capabilities in natural language, imagery, and perception through digital media. One of the most popular examples of AI today is ChatGPT. The use of ChatGPT has sparked various dilemmas; several studies have shown that ChatGPT provides numerous benefits for students, such as facilitating critical questioning, evaluating information, and enhancing comprehension of learning materials (Guo & Lee, 2023). However, Neumann et al. (2023) presented a contrasting view, emphasizing the potential negative impacts of AI on students' educational outcomes and skill development—particularly critical thinking—due to the ease of obtaining answers, which may discourage students from seeking creative solutions or engaging in independent problem-solving.

Based on primary data obtained through questionnaire distribution, it was found that among 33 female students of SMA Muhammadiyah 10 Surabaya, 66% expressed an intention to use ChatGPT in completing school assignments. Ideally, students should not intend to use ChatGPT for their assignments, as such tendencies may hinder the development of their deep thinking abilities (Sugiarto & Suhono, 2023).

The phenomenon of technology usage intention can be explained through the concept of behavioral intention to use, which refers to an individual's tendency to engage in a particular technological behavior in the future (Venkatesh & Bala, 2008). According to the Theory of Reasoned Action (TRA), behavioral intention is shaped by two main components: attitude toward the behavior and subjective norm (Fishbein & Ajzen, 1975). The TRA model was later extended by Davis (1989)

into the Technology Acceptance Model (TAM) and subsequently developed into TAM 3, which emphasizes that the intention to use technology is influenced by an individual's beliefs regarding perceived usefulness and perceived ease of use (Venkatesh & Bala, 2008).

In the aspect of perceived usefulness, one of the key determinants is the subjective norm, which refers to the extent to which individuals perceive that important people in their lives believe they should or should not use a system. Meanwhile, in the aspect of perceived ease of use, an essential factor is computer self-efficacy, defined as an individual's belief in their ability to use a computer or technology-based system (Venkatesh & Bala, 2008). Both constructs play a crucial role in shaping behavioral intention to use technology, including ChatGPT in educational contexts.

Within the framework of the Technology Acceptance Model 3 (TAM3), computer self-efficacy is believed to influence the perceived ease of use, which in turn affects the behavioral intention to use a particular technology (Venkatesh & Bala, 2008). However, in the current learning context, students are not only using computers but also various digital devices and AI-based applications. Therefore, this study adopts the term digital self-efficacy as an adaptation to better reflect the context of modern digital technology use. According to Ulfert-Blank and Schmidt (2022), digital self-efficacy refers to an individual's perception of their confidence in performing tasks related to the use of digital systems.

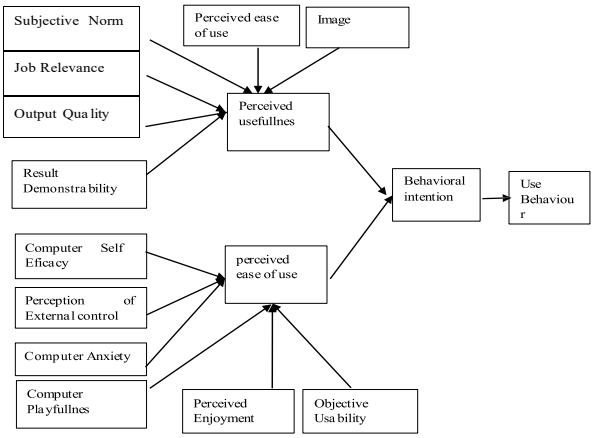

Figure 1. Technology Acceptance Model 3 (TAM3)

According to Venkatesh and Bala (2008), subjective norm refers to the extent to which individuals perceive that important people around them encourage the use of technology. Among high school adolescents, the strongest social influence typically comes from peer groups; therefore, this study focuses on a more specific form of subjective norm, namely peer conformity, which is defined as a change in beliefs or behaviors to align with those of others (Myers, 2010).

Most previous studies on the use of ChatGPT in educational contexts have focused on university students. For instance, Abdi et al. (2025) conducted research in Somalia examining factors such as perceived usefulness, perceived ease of use, social influence, hedonic motivation, and perceived credibility in relation to the intention to use ChatGPT. However, studies investigating psychological factors such as digital self-efficacy and peer conformity as predictors of the intention to use ChatGPT for completing academic assignments—particularly among Indonesian high school students—remain very limited. Therefore, this study seeks to fill this gap by examining the relationships among digital self-efficacy, peer conformity, and the intention to use ChatGPT in the context high school students.

METHOD

Research Design

This study employed a quantitative approach, which is a method used to test specific theories by examining relationships among variables (Creswell, 2014). The research aimed to investigate the relationship between digital self-efficacy and peer conformity with the intention to use ChatGPT. This study involved three main variables: digital self-efficacy and peer conformity as independent

variables, and intention to use ChatGPT as the dependent variable.

Data were analyzed using multiple linear regression analysis, which was employed to determine the relationship between the independent variables (digital self-efficacy and peer conformity) and dependent variable (intention to use ChatGPT) and dependent variable (intention to use ChatGPT). In addition, descriptive analysis was used to describe the characteristics of respondents and the distribution of scores for each variable.

Population and Research Subjects

The population of this study consisted of all students of SMA Muhammadiyah 10 Surabaya, totaling 958 students. A sample of 299 students was selected using the proportionate stratified random sampling technique, with proportional representation from grades X, XI, and XII. The inclusion criteria required participants to be active students who were familiar with or had used ChatGPT in their learning activities. Data collection was conducted through the distribution of an online questionnaire using Google Forms.

Table 1. Gender

		Frequency	Percent	ValidPercent	Cumulative Percent
Valid	Male	159	51.5	53.2	53.2
	Female	140	45.3	46.8	100.0
	Total	299	96.8	100.0	
Missing	System	10	3.2		
	Total	309	100.0		

Based on Table 1, it can be observed that the majority of respondents in this study were male, totaling 159 students (53.2%), while female respondents numbered 140 students (46.8%). This indicates that the proportion of male and female respondents in this study was relatively balanced.

Research Instrument

The research instruments consisted of three psychological scales using a four-point Likert model.

1. Digital Self-Efficacy Scale
   This scale was developed based on the dimensions of digital self-efficacy proposed by Ulfert-Blank and Schmidt (2022), which include information and data literacy, communication and collaboration, digital content creation, safety, and problem solving.
2. Peer Conformity Scale
   This scale was constructed based on Myers' (2012) theory, which classifies conformity into three forms: compliance, obedience, and acceptance.
3. Intention to Use ChatGPT Scale

   This scale was developed by the researcher based on the concept of behavioral intention to use, derived from the Technology Acceptance Model (TAM) framework originally developed by Davis (1989) and later extended by Venkatesh and Bala (2008). The scale consists of two dimensions: perceived usefulness and perceived ease of use.

Item Discrimination and Reliability Testing

The item discrimination analysis in this study was conducted by correlating each item score with the total score using the Pearson Product-Moment Correlation technique (Azwar, 2021). According to Azwar, an item is considered valid if it has an item-total correlation coefficient of at least 0.300. The following are the valid items identified in this study.

Table 2. Item Discriminability Analysis Results

No	Variable	Valid Items	Dropped Item	Range Correlation Coefficient
1	Digital self efficacy	24	0	.498 - .682
2	Peer Conformity	21	0	.513 - .682
3	Intention To Use ChatGPT	20	0	.535 - .703940

Based on the results of the item discrimination analysis presented in Table 2, all items were found to be valid across all measurement instruments for each variable.

Subsequently, the reliability of the instruments was tested using the Cronbach's alpha coefficient. An instrument is considered reliable if the Cronbach's alpha value is greater than 0.60. The results of the reliability analysis are as follows.

Table 3. Analysis Reliability

No	Variable	Alpha Cronbach	Note
1	Digital self efficacy	.940	Reliable
2	Peer Conformity	.936	Reliable
3	Intention To Use ChatGPT	.904	Reliable

RESULTS

Descriptive Data Analysis

This study aimed to examine the relationship between digital self-efficacy and peer conformity with the intention to use ChatGPT among the research subjects. Based on the data processed using SPSS version 25, the descriptive results of the study are presented in the following table:

Tabel 4. Deskripsi Penelitian

	N	Minimum	Maximum	Mean	Std. Deviation
Digital Self Efficacy	299	33.00	96.00	75.3177	12.31832
Konformitas Teman Sebaya	299	28.00	78.00	61.6455	12.23544
Niat Menggunakan ChatGPT	299	29.00	77.00	61.7057	11.31165

Based on the results of the descriptive statistical analysis presented in Table 4, it was found that the digital self-efficacy variable had a minimum score of 33, a maximum score of 96, with a mean (M) = 75.31 and a standard deviation (SD) = 12.31. The peer conformity variable had a minimum score of 28, a maximum score of 78, with M = 61.65 and SD = 12.23. Meanwhile, the intention to use ChatGPT variable had a minimum score of 29, a maximum score of 77, with M = 61.71 and SD = 11.31.

Assumption Testing

a. Normality Test

The normality test was conducted to determine whether the residuals were normally distributed. The criterion for this test is that if the significance value is greater than 0.05, the data are considered to be normally distributed. The results of the normality test for each variable are presented in the following table:

Table 5. Normality Test

One-Sample Kolmogorov-Smirnov Test

		Niat ChatGPT	Digital Self Efficacy	Konformitas
	N	299	299	299
Normal Parameters[a]	Mean	61.69	77.77	59.87
	Std. Deviation	10.759	14.858	11.371
Most Extreme Differences	Absolute	.070	.077	.077
	Positive	.070	.077	.077
	Negative	-.052	-.044	-.057
Kolmogorov-Smirnov Z		1.216	1.333	1.337
Asymp. Sig. (2-tailed)		.104	.057	.056

a. Test distribution is Normal.

Based on Table 5, the results of the normality test using the One-Sample Kolmogorov–Smirnov Test showed significance values of 0.104 for the intention to use variable, 0.057 for digital self-efficacy, and 0.056 for peer conformity. Since all significance values are greater than 0.05, it can be concluded that the data for all three variables are normally distributed.

b. Linearity Test
The linearity test was conducted on the dependent variable (intention to use) and the two independent variables (digital self-efficacy and peer conformity) as follows:

1. Linearity test between digital self-efficacy (VX1) and intention to use (VY).

Tabel 6. Uji linearitas variabel *digitalself efficacy* dan Niat Mengguakan ChatGP

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Niat * DigitalSelfEfficacy	Between Groups	(Combined)	5718,582	50	114,372	1,178	,210
		Linearity	34,745	1	34,745	,358	,550
		Deviation from Linearity	5683,837	49	115,997	1,195	,193
	Within Groups		24077,639	248	97,087		
	Total		29796,221	298			

The test results showed a Linearity significance value of 0.550 (> 0.05) and a Deviation from Linearity value of 0.193 (> 0.05**).** Based on these results, it can be concluded that the relationship between the digital self-efficacy (X1) variable and the intention to use (Y) variable is linear**,** indicating that the linearity assumption in the regression model is fulfilled.

2. Linearity test between peer conformity (VX2) and intention to use (Y).

Table 7. Linearity Test for Peer Conformity and Intention to Use Chat GPT

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Niat * Konformitas	Between Groups	(Combined)	4969,041	45	110,423	1,125	,283
		Linearity	133,550	1	133,550	1,361	,244
		Deviation from Linearity	4835,490	44	109,898	1,120	,291
	Within Groups		24827,180	253	98,131		
	Total		29796,221	298			

The test results showed a Linearity significance value of 0.244 and a Deviation from Linearity value of 0.291, both of which are greater than 0.05. This indicates that the relationship between the peer conformity (X2) variable and the intention to use (Y) variable is linear, thereby confirming that the linearity assumption in the regression model has been met

Hypothesis Testing Results

The hypothesis testing method employed in this study was multiple linear regression analysis. The statistical hypothesis proposed in this research was associative, formulated as follows:

H_a: There is a relationship between digital self-efficacy (X_1) and peer conformity (X_2) with the intention to use ChatGPT (Y).
The statistical results were evaluated based on the significance value. If the significance value is greater than the 5% error level (0.05), the null hypothesis (H_0) is accepted and the alternative hypothesis (H_a) is rejected. Conversely, if the significance value is less than the 5% error level (0.05), the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted.
The following table presents the results obtained from the correlation test using the multiple regression analysis technique.

Table 8. Results of Multiple Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.808[a]	,654	,651	6,67939

a. Predictors: (Constant), Konformitas, DigitalSelfEfficacy

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24924,274	2	12462,137	279,331	.000[a]
	Residual	13205,827	296	44,614		
	Total	38130,100	298			

a. Predictors: (Constant), Konformitas, Digital SelfEfficacy

b. Dependent Variable: Niat

Based on the results of the multiple regression analysis presented in Table 8, the multiple

correlation coefficient (R) was found to be 0.808, with an F-value of 279.331 and a significance level of p = 0.000 (p < 0.001). This indicates a significant relationship between digital self-efficacy and peer conformity, collectively, with the intention to use ChatGPT. The coefficient of determination (R Square) was 0.654, suggesting that 65.4% of the variance in the intention to use ChatGPT can be explained by the two predictor variables, while the remaining 34.6% is influenced by other factors beyond the scope of this study. The following table presents the effects of the two independent variables when tested partially:

Table 9. Results of Partial Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	7,702	2,626		2,933	,004
	DigitalSelfEfficacy	,183	,034	,199	5,305	,000
	Konformitas	,653	,035	,706	18,812	,000

a. Dependent Variable: Intention to Use

Based on the results of the partial regression analysis presented in Table 7, it can be explained that the digital self-efficacy variable has a t-value of 5.305 with a significance level of p = 0.000 < 0.05 and a regression coefficient of B = 0.183. This indicates that digital self-efficacy has a positive and significant relationship with the intention to use ChatGPT. The effective contribution of the digital self-efficacy variable is shown by the standardized beta value of 19.9%, meaning that each increase in digital self-efficacy leads to an increase in students' intention to use ChatGPT.

Meanwhile, the peer conformity variable has a t-value of 18.812 with a significance level of p = 0.000 < 0.05 and a regression coefficient of B = 0.653. This demonstrates that peer conformity also has a positive and significant relationship with the intention to use ChatGPT. The effective contribution of peer conformity is reflected by a standardized beta value of 70.6%, indicating that peer conformity exerts a more dominant influence than digital self-efficacy in predicting students' intention to use ChatGPT.

DISCUSSION

The results of the partial regression test for digital self-efficacy on the intention to use ChatGPT showed a t-value of 5.305 with a significance level of p = 0.000 (p < 0.001), and the effective contribution of digital self-efficacy to the intention to use ChatGPT was 19.9%. This finding indicates a significant relationship between digital self-efficacy and the intention to use ChatGPT. The result supports the Technology Acceptance Model (TAM), which posits that the intention to use

technology is determined by perceived usefulness and perceived ease of use (Venkatesh & Bala,2008). Digital self-efficacy plays a crucial role, as students who are confident in their digital skills are more likely to perceive technology as easy to operate, thereby increasing their intention to use it.

The psychological dynamics underlying this finding suggest that students with high digital self-efficacy feel more confident in exploring ChatGPT, are willing to try its various features, and believe they can overcome technical challenges. Conversely, students with low digital self-efficacy tend to be hesitant and reluctant to use ChatGPT because they perceive themselves as less capable.

The results of the partial regression test for peer conformity on the intention to use ChatGPT showed a t-value of 18.812 with a significance level of $p = 0.000$ ($p < 0.001$). This indicates a significant relationship between peer conformity and the intention to use ChatGPT. Moreover, the results demonstrate that peer conformity has a positive and more dominant influence compared to digital self-efficacy on the intention to use ChatGPT. The effective contribution of peer conformity to the intention to use ChatGPT was 70.6%. This finding supports the concept of subjective norms in the Theory of Reasoned Action (TRA), which explains that an individual's behavior is shaped by social pressure or expectations from significant others (Ajzen & Fishbein, 1975). Within the framework of the Technology Acceptance Model (TAM), strong subjective norms from peers can enhance perceived usefulness and perceived ease of use of technology, thereby strengthening the intention to use (Venkatesh & Bala, 2008).

Based on the results of the multiple regression analysis in this study, the calculated F-value was 279.331 with a significance level of $p = 0.000$ ($p < 0.001$). The coefficient of determination (R Square) was 0.654, indicating that digital self-efficacy and peer conformity simultaneously contributed a significant correlation of 65.4% to the variation in the intention to use ChatGPT, while the remaining 34.6% was influenced by other factors outside the scope of this study.

This finding aligns with the Technology Acceptance Model (TAM) proposed by Venkatesh and Bala (2008), which explains that behavioral intention to use technology is determined by both internal and external factors. In this study, digital self-efficacy represents an internal factor, referring to students' confidence in their ability to use digital technology, while peer conformity represents an external factor, referring to the social influence exerted by their peer environment. Both factors collectively strengthen students' intention to use ChatGPT for completing academic tasks.

Furthermore, peer conformity contributed more significantly to the intention to use ChatGPT compared to digital self-efficacy. This is evidenced by the higher standardized beta coefficient of 70.6% for peer conformity, compared to 19.9% for digital self-efficacy. Therefore, it can be concluded that social factors have a more dominant influence than individual confidence in digital abilities in shaping students' intention to use ChatGPT. The results indicate that students at Muhammadiyah 10 Senior High School Surabaya are more strongly motivated to use ChatGPT due to social influences from their peers. When most of their friends use ChatGPT, other individuals tend to follow suit in order to remain accepted within the group. This illustrates that social influence plays a crucial role in shaping the behavioral intention to use technology among adolescents, for whom the need for social acceptance is an important factor in decision-making. This finding is consistent with Hurlock (1998), who stated that "The peer group represents the real world of youth, providing a stage on which adolescents can test themselves and others." Similarly, Santrock (2003) emphasized that peer groups consist of children or adolescents of similar age or maturity level, who provide and receive feedback from one another regarding their abilities and learn about acceptable and unacceptable behaviors through mutual interaction.

CONCLUSION

Based on the research findings, it can be concluded that digital self-efficacy and peer conformity, when considered together, have a significant relationship with the intention to use ChatGPT among high school students. Partially, digital self-efficacy shows a significant correlation with the intention to use ChatGPT, and similarly, peer conformity also demonstrates a significant correlation with the same variable. Among the two predictor variables, peer conformity exerts a greater influence on the intention to use ChatGPT compared to digital self- efficacy.

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DECLARATION OF POTENTIAL CONFLICT OF INTEREST

Authors declare does not any potential conflicts of interest that might influence the way in which we conduct research and report and present results. If none exist, the author may write the following statement:

Nur Azlina Amrozi, Wiwik Juwarini Prihastiwi2 and Dzulkifli as researcher does not work for, consult, own shares in, or receive funding from any company or organization that would benefit from this manuscript, and has disclosed no affiliations other than those noted above."

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