



Application of TAM to Explore Awareness and Enjoyment of the Use of Artificial Intelligence ChatGPT in Students

Widji Dwi Rohana^a, Jaka Nugraha^b, Inna Koblianska^c

^aUniversitas Negeri Surabaya, Surabaya, Indonesia

^bUniversitas Negeri Surabaya, Surabaya, Indonesia

^cSumy State University, Sumy, Ukraina

ARTICLE INFO

Keywords:

Artificial Intelligence, ChatGPT, Awareness, Enjoyment, Technology Acceptance Model

Article History:

Received , 10 May 2025

Accepted 1 June, 2025

Available online 20 August 2025



<https://10.26740/jpap.v13n2.p498-512>

ABSTRACT

Phenomenon/Issue : The rapid development of artificial intelligence (AI) has influenced various aspects of human life, including education. ChatGPT, as a popular AI tool, is increasingly used by students in the learning process, yet its level of use and acceptance among students varies due to psychological factors and user perceptions.

Purpose : To examine the influence of awareness and enjoyment on the acceptance of ChatGPT among first-year students using the Technology Acceptance Model (TAM) framework.

Research Methods : A quantitative approach using a survey of 145 first-year students. Data were analyzed using Structural Equation Modeling (SEM) with the Generalized Structured Component Analysis (GSCA) method.

Results : Awareness and enjoyment significantly affect perceived usefulness (PU) and perceived ease of use (PEOU). Perceived usefulness (PU) significantly influences behavioral intention to use (BITU), while perceived ease of use (PEOU) does not have a significant effect on behavioral intention to use (BITU).

Research Contributions : The study expands the theoretical framework of the Technology Acceptance Model (TAM) by integrating the effects of awareness and enjoyment in explaining technology adoption, particularly in the context of ChatGPT use in education. The findings also provide insights for curriculum design and educational policy to enhance the benefits of AI technology in learning processes.

INTRODUCTION

Artificial Intelligence brings new opportunities in the world of education, one of which is integrating technology to create an adaptive learning process according to individual needs (Bahroun et al., 2023).

¹ Correspondence:

Widji Dwi Rohana. Faculty of Economics and Business, Universitas Negeri Surabaya, Indonesia.
widjirohana.2021@mhs.unesa.ac.id



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

The use of Artificial Intelligence technology in the education sector in Indonesia is experiencing rapid growth following the education digitalization program established by the government to support progress and reduce educational gaps (Malik, 2024).

The ChatGPT is one example of artificial intelligence that is widely used in the field of education, especially among students. It is recognized as the most popular AI tool out of 40, having the most requests compared to Gemini, Poe, and Perplexity in March 2024 (Rafli, 2024). ChatGPT's ability to contextualize the information provided by users and provide answer responses with high accuracy is one of the reasons for the increasing use of ChatGPT and its popularity among students (Singh & Singh, 2023). This phenomenon shows that students are not only using technology for practical purposes but also to solve challenges in understanding complex material. The increase in the use of ChatGPT is driven by the level of students' awareness of its existence and benefits as well as enjoyment when using ChatGPT to support learning (Abdalla, 2024). However, in the use of ChatGPT, there are still concerns experienced by students regarding the credibility of information and difficulties in compiling commands (Kayalı et al., 2023). Therefore, it is important for students to be aware of the advantages and disadvantages of ChatGPT so that they can learn how it works to be able to take advantage of the potential of ChatGPT to the fullest.

Based on research by Shahzad et al., (2024), awareness is the main thing in the intention of technology users, by realizing the potential and ability, the higher the interest in using the technology. In line with that, Bilquise et al., (2024) explained that users who have a high level of awareness will get more benefits from the technology. Students are happy when ChatGPT can provide benefits and convenience in learning, but in its use there are still obstacles related to how to use ChatGPT effectively due to the limited ability to compile commands input into ChatGPT so that the responses given are less relevant and the accuracy of the answers given is not in accordance with the academic needs of students so that it needs to be evaluated (Xiao & Zhi, 2023). In addition, there are technical obstacles related to the limitations of ChatGPT in providing answers, students tend to feel less satisfied interacting with ChatGPT because the answers given are in the form of less interactive or monotonous text (Hmoud et al., 2024). It can be concluded that low awareness is an obstacle to the use of new technology even though the benefits offered are large. Previous research by Ni & Cheung, (2023) confirmed suggests that Perceived Enjoyment does not have a significant effect on the perceived ease of use of ChatGPT. However, the research of Zhanget al., (2023) givesave different results, where there was showing a significant influence between of Perceived Enjoyment on Perceived ease of use of ChatGPT use. In addition, research by Nnaemeka & Ogunbadejo, (2024) provides an explanation that students who use ChatGPT have a high level of awareness. On the other hand, in the study, Scantamburlo et al., (2024) stated that although user attitudes are positive in using Artificial Intelligence, the level of Awareness is still low.

In fact, the ability potential of ChatGPT has been widely felt by students, including student of the State University of Surabaya, specifically the Office Administration Education study program. Having this in mind, this research takes students of the Class of 2024 as a research sample to fill the gap on students' awareness and enjoyment of ChatGPT impacting its adoption. As far as we know, that's the first case illustrating the adoption of a ChatGPT tool in the learning experience of Indonesian students. The technology acceptance model (TAM) was applied in this study to determine the acceptance of technology by students in learning and predict the ease of use and perceived usefulness (Scherer et al., 2019). Additionally two external variables, namely Awareness and Enjoyment were used in the study. The first one reflects awareness of the capabilities of ChatGPT technology in accordance with the needs of users and the second one measures the pleasure and satisfaction felt when using ChatGPT technology.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Technology Acceptance Model

The Technology Acceptance Model (TAM) theory proposed by Davis, (1989) is a theoretical model to find out the factors that influence individuals in the acceptance and use of technology. The TAM model was developed from a psychological theory approach that explains the relationship between cause and effect, beliefs and individual behavior in using an information system. TAM is the basis for researching the acceptance of technology through two main variables, namely perceived usefulness and perceived ease of use. To improve exploration and prediction according to the context of the research, the TAM model can be combined with external variables, namely Awareness and Enjoyment to obtain relevant study results (Kalayou et al., 2020).

Awareness

Awareness can be defined as an individual's familiarity with technology, including how it works to the benefits that will be obtained when adopting the technology (Scantamburlo et al., 2024). Awareness refers to the introduction of technology through various platforms regarding its functions and potentials that can be utilized in situations, one of which is the academic context (Nnaemeka & Ogunbadejo, 2024). In the research, Shahzad et al., (2024) explained that Awareness is a condition when users can understand and utilize key features to benefit from technology that will create motivation and a positive attitude in its use.

Enjoyment

Enjoyment is defined as the level of confidence of individuals who consider technology to provide pleasure regardless of consideration of performance outcomes and expected outcomes in the process of using it (Teo & Noyes, 2011). According to Ni & Cheung, (2023) Enjoyment can be interpreted as a pleasant experience felt by individuals when using technology and is not only limited to the benefits produced but also the process that creates pleasure so that intrinsic motivation is formed in using technology. Enjoyment includes emotions related to an individual's experience when interacting with technology. In the TAM model, the Enjoyment variable is a variable that can affect the perception of ease in using technology (Zhang et al., 2023).

Hypothesis development

Awareness is related to the level of knowledge and understanding of technology, including its quality, benefits, and risks (Almaiah et al., 2022). Awareness affects individual attitudes and decisions in using artificial intelligence technology. Research by Nnaemeka & Ogunbadejo (2024) states that Awareness is the main thing that can influence individuals in using technology in the learning process. This is in line with Abdalla (2024) who emphasized that if individuals are aware of the benefits of a technology, they will tend to intend to use the technology. Previous research show that Awareness has a significant positive effect on Perceived Usefulness and Perceived ease of use (Shahzad et al., 2024) (Shuhaiber & Mashal, 2019). Following the abovementioned, the research hypotheses are formulated below :

H1: Awareness significantly influences perceived usefulness

H2: Awareness significantly influences perceived ease of use

Enjoyment refers to the positive experience felt by the user and has an effect on the level of individual satisfaction (Lin et al., 2020). Algerafi et al., (2023) support this suggesting that positive experiences perceived by individuals can reduce the perception of the effort required in using technology. In addition, the usefulness of a technology can be felt through a positive experience that offers benefits to users so that when the process of using a technology is enjoyable, users will consider the technology to

be an effective tool to help their performance (Zhou & Feng, 2017). Based on this statement, it can be interpreted that the satisfaction felt by individuals with a technology is related to the perceived usability and ease of use. There are several studies that state that Enjoyment has a significant effect on Perceived usefulness and Perceived ease of use (Salloum et al., 2019), (Cano & Nunez, 2024), (AlHamad, 2020). Therefore, we formulate the following hypotheses for this research:

H3: Enjoyment significantly influences perceived usefulness

H4: Enjoyment significantly influences perceived ease of use

Perceived usefulness is related to an individual's belief in a technology that can be useful to improve performance effectively and efficiently (Kashive et al., 2020). It can be interpreted that perceived usefulness is measured by how useful a technology is for users (Malik et al., 2021). When users feel that technology is useful, they will tend to intend to use it (Foroughi et al., 2024). Warsono et al. (2023) explained that in the use of perceived usefulness technology, it can have a direct influence on intention to use without having to go through an attitude of use. Han (2023) shows that perceived usefulness significantly influences the behavior intention to use technology. There are several studies that support the hypothesis that perceived usefulness affects behavior intention to use, for example, virtual assistant technology (Hussain et al., 2019) and distance learning media (Akour et al., 2022). That determines the hypothesis to be tested in this research:

H5: Perceived usefulness significantly influences behavioral intention to use ChatGPT

Perceived ease of use refers to an individual's belief that technology is easy to use and does not require great effort (Le et al., 2024). When technology is easy to use, users tend to feel satisfied so they intend to use it in the long term (Yu et al., 2024). Rahman et al., (2023) stated that perceived ease of use has a significant effect on attitudes and intentions to use it. There are several studies stating that perceived ease of use has a significant effect on behavior intention to use, in particular in e-commerce (Restianto et al., 2024) and in universities (Akour et al., 2022). Therefore, we formulate the following hypotheses for this research:

H6: Perceived ease of use significantly influences behavioral intention to use ChatGPT

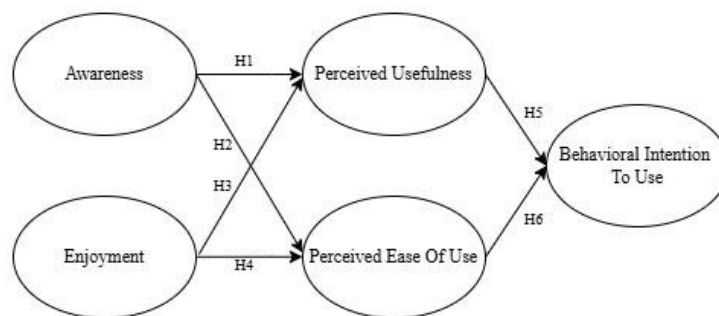


Figure 1. RESEARCH DESIGN

METHOD

This research utilized quantitative data obtained from a survey of Universitas Negeri Surabaya students on the experience of ChatGPT use in the learning process. The questionnaire was composed with the items are taken from previous research and applied a Likert scale. The questionnaire was conducted online using the Google form and collected answers from a total of 145 respondents. The measurement of variables in the Technology Acceptance Model with three constructs, namely perceived usefulness, perceived ease of use and behavioral intention to use consists of fourteen statement items, awareness is measured using five statement items and enjoyment is measured using five statement

items. The respondents were analyzed by applying structural equation modeling with a generalized structured component analysis (SEM – GSCA) approach (Hwang & Takane, 2004). Items in research instruments that have been compiled were tested to check validity and reliability before being used in further research. Validity testing was carried out using Pearson Correlation method, the reliability was tested using Cronbach's Alpha method through JASP. The collected data was tested using Structural Equation Modeling – Generalized Structured Component Analysis via the GSCA pro application.

RESULTS AND DISCUSSIONS

This study covers active students of the Faculty of Economics and Business, Office Administration Education Study Program, Class of 2024 who use ChatGPT. The key characteristics of the respondents categorized based on gender, age and length of experience using ChatGPT. Are given in Table 1

Table 1.
RESPONDENT CHARACTERISTICS

Characteristics	Respondent	Total	%
Gender	Male	6	4%
	Female	139	96%
	Total	145	100%
Age	18 Years Old	30	21%
	19 – 23 Years Old	115	79%
	Total	145	100%
ChatGPT Usage Experience	1-3 times in last years	18	18%
	4-6 times in last years	30	30%
	More than 6 times in last years	97	67%
	Total	145	100%

Source: Processed Data (2025)

Measurement Model Assessment

Based on Table 2, the value of Indicators of Loading on Component is presented in the study. Hair et al., (2019) stated that if the value of the Indicators of Loading on Component value is ≥ 0.7 , it can be stated to test the value requirements. However, according to Chin, (1998) the value of Indicators of Loading on Component which is $\geq 0.5 - 0.6$ can be considered sufficient. In this study, the overall value of Indicators of Loading on Component has a value of ≥ 0.5 so that this research model can be declared to meet the requirements of Indicators of Loading on Component. In the Behavior Intention To Use variable, the highest loading value is at BITU2 (0.821) and the lowest loading value is at BITU4 (0.620). In the Perceived usefulness variable, the highest Loading value is found in the PU1 indicator (0.818) and the lowest value is found in PU5 (0.667). In the Perceived ease of use variable, the highest loading value is PEOU3 (0.868) and the lowest value PEOU4 (0.771). In the Awareness variable, the highest loading value was found in AW3 (0.843) and the lowest loading value was in AW2 (0.539). Furthermore, the Enjoyment variable had the highest loading value in ENJ3 (0.878) while the lowest value was ENJ5 (0.535).

Table 2.
INDICATOR OF LOADING ASSESSMENT

Loadings				
	Estimate	SE	95%CI(L)	95%CI(U)
AW1	0.657	0.052	0.539	0.752
AW2	0.539	0.098	0.291	0.672
AW3	0.843	0.029	0.783	0.888
AW4	0.769	0.042	0.682	0.826
AW5	0.742	0.047	0.654	0.829
ENJ1	0.819	0.038	0.742	0.883
ENJ2	0.721	0.049	0.632	0.815
ENJ3	0.878	0.021	0.831	0.913
ENJ4	0.748	0.052	0.623	0.822
ENJ5	0.535	0.085	0.335	0.672
PU1	0.818	0.032	0.764	0.887
PU2	0.754	0.049	0.649	0.835
PU3	0.770	0.038	0.681	0.831
PU4	0.761	0.047	0.662	0.842
PU5	0.667	0.060	0.521	0.768
PEOU1	0.816	0.029	0.738	0.860
PEOU2	0.792	0.041	0.707	0.854
PEOU3	0.868	0.036	0.781	0.920
PEOU4	0.771	0.040	0.695	0.859
BITU1	0.801	0.029	0.741	0.849
BITU2	0.821	0.028	0.754	0.882
BITU3	0.797	0.033	0.729	0.851
BITU4	0.620	0.084	0.432	0.776
BITU5	0.684	0.062	0.507	0.784

Source : Processed Data (2025)

According to (Hair et al., 2019) the results of the Construct quality measures (Reliability of Indicators) measurement state that to obtain a study that convergent validity, internal consistency, and composite reliability in PVE measurement, the value is said to be good if it is ≥ 0.50 . This is in line with Ali et al., (2021) who stated that the value of Cornbach's Alpha and Composite Reliability (ρ) > 0.70 . And according to (Meneau & Moorthy, 2022) the dimensionality value of 1.0. Based on the table that has been presented above, it shows that the PVE value in the variables AW, ENJ, PU, PEOU, and BITU is above 0.50. The values of Alpha and Rho for the variables AW, ENJ, PU, PEOU, and BITU are above 0.70 and the dimensionality value is 1, therefore it can be concluded that all variables in this research model have an acceptable level of convergent validity, internal consistency, and composite reliability.

Table 3.
CONSTRUCT QUALITY MEASURES

	AW	ENJ	PU	PEOU	BITU
PVE	0.515	0.562	0.571	0.660	0.561
Alpha	0.759	0.799	0.811	0.829	0.801
rho	0.839	0.862	0.869	0.886	0.863
Dimensionality	1	1	1	1	1

Source : Processed Data (2025)

R Square is used to measure the predictive strength of a structural model. From the table 4 R squared, it can be seen the values of PU (0.551), PEOU (0.511) and BITU (0.551). The value of the PU variable is 0.551 if presented to 55.1% which can be interpreted as 55.1% of PU is influenced by exogenous variables in the study while 44.9% is influenced by variables outside this study. The PEOU value was 0.511 which can be interpreted as 51.1% of PEOU was influenced by exogenous variables in this study while 48.9% was influenced by variables outside the study. The value of the BITU variable is 0.551 if presented to 55.1% which can be interpreted as 55.1% of BITU is influenced by exogenous variables in the study while 44.9% is influenced by variables outside this study. Overall, the research model has met reliability and validity standards so that it can be continued for assessment on the structural model.

Table 4.
R SQUARE VALUE

AW	ENJ	PU	PEOU	BITU
<u>0.000</u>	<u>0.000</u>	<u>0.551</u>	<u>0.511</u>	<u>0.551</u>

Source : Processed Data (2025)

Structural model assessment

FIT is an indicator that shows how much variance of all variables is described in the research model (Hwang et al., 2021). From the table presented, it can be seen that the FIT value of 0.527 can be interpreted that the research model is able to explain 52.7% of the variance. The AFIT value has a similar meaning to the FIT but also takes into account the complexity of the model and ranges from 0 to 1, based on the table above the AFIT value of 0.520 indicates that the research model explains 52% of the variance. FITs, which are able to explain the total variance of all model components, have a value of 0.323 which means that 32.3% of the variance is described in the structural model. While the FITm with a value of 0.570 indicates that 57% of the variance has been described in the measurement model. Hwang et al. (2021) revealed that when the sample > 100 then the GFI value should be > 0.93 and the SRMR should be < 0.08. From the table 5 Structural model fit measures that have been presented, the values of GFI and SRMR in this study are respectively 0.968 and 0.073 so that they meet the requirements of the FIT model.

Table 5.
STRUCTURAL MODEL FIT MEASURES

FIT	AFIT	FITs	FITm	GFI	SRMR	OPE	OPEs	OPEm
0.527	0.520	0.323	0.570	0.968	0.073	0.479	0.697	0.433

Source : Processed Data (2025)

The value on the path Coefficient can be considered statistically significant when it is within the 95% confidence interval and has a positive value (Hwang et al., 2021). Based on table 6 in this study, Awareness (AW) towards Perceived usefulness (PU) shows a Coefficient of 0.170 (CI L = 0.017,

CI U = 0.344) which indicates that the first hypothesis is accepted and indicates that Awareness has a positive influence on perceived usefulness. Awareness (AW) of Perceived ease of use (PEOU) shows a Coefficient of 0.441 (CI L = 0.320 CI U = 0.565) which indicates that the second hypothesis is accepted and can be interpreted as Awareness has a positive influence on Perceived ease of use. Enjoyment (ENJ) for perceived usefulness (PU) shows a Coefficient of 0.637 (CI L = 0.522 CI U = 0.713) which indicates that the third hypothesis is accepted and can be interpreted as having a positive influence on perceived usefulness. Enjoyment (ENJ) Perceived ease of use (PEOU) shows a Coefficient of 0.374 (CI L = 0.224 CI U = 0.495) which indicates that the fourth hypothesis is accepted and can be interpreted as having a positive influence on perceived ease of use. Perceived usefulness (PU) for Behavior Intention To Use (BITU) shows a Coefficient of 0.715 (CI L = 0.588 CI U = 0.839) which indicates that the fifth hypothesis is accepted and can be interpreted as Perceived usefulness has a positive influence on Behavior Intention To Use. Perceived ease of use (PEOU) for Behavior Intention To Use (BITU) shows a Coefficient of 0.046 (CI L = -0.115 CI U = 0.219) which indicates that the sixth hypothesis is rejected and can be interpreted as Perceived ease of use has no effect on Behavior Intention To Use.

Table 6.
PATH COEFFICIENTS

	Estimate	SE	95%CI(L)	95%CI(U)	Decision
AW->PU	0.170	0.081	0.017	0.344	Accepted
ENJ->PU	0.637	0.049	0.522	0.713	Accepted
AW->PEOU	0.441	0.063	0.320	0.565	Accepted
ENJ->PEOU	0.374	0.059	0.224	0.495	Accepted
PU->BITU	0.715	0.068	0.588	0.839	Accepted
PEOU->BITU	0.046	0.089	-0.115	0.219	Rejected

Source : Processed Data (2025)

The Effect of Awareness on Perceived Usefulness

Awareness has a significant influence on the perceived usefulness of ChatGPT with students understanding how does ChatGPT work and its features, reporting the more benefits obtained. Awareness is stated to affect perceived usefulness because the better the user's understanding of ChatGPT's capabilities, the more benefits will be felt (Niu & Mvondo, 2024). By realizing the potential of a technology, users will feel confident when using and minimize obstacles that may be experienced (Chu et al., 2009). Users can improve their performance to be more effective and efficient by utilizing technology through awareness of the existence and potential provided by the technology (Saenphon, 2017). Based on direct observations that have been made, students can use ChatGPT in the learning process by utilizing ChatGPT features such as Translate GPT, Scholar GPT and Websearch. Students use websearch to understand complex learning materials and find ideas or references in doing assignments, for example in student learning theory courses, using ChatGPT websearch to help provide examples of the application of learning theory. In addition, students also use the Scholar GPT feature to help students find articles as learning resources. These findings support the results of the research conducted (Abdalla, 2024) (Shahzad et al., 2024) where the results of the study Awareness affects perceived usefulness.

The Effect of Awareness on Perceived Ease of Use

Awareness has a significant influence on the perceived ease of use of ChatGPT having a good understanding of how to use a technology, users feel it easy to use. Awareness is stated to affect perceived ease of use where when users understand the capabilities of a technology, the ease of use is felt (Al-Abdullatif, 2023). Differences in user awareness levels will create diverse perceptions about the ease of use of a technology (Shahzad et al., 2024). Users who have a high level of understanding will tend to find it easy to use technology and obtain satisfactory results (Bilquise et al., 2024). Based on direct observations that have been carried out, it is evident that students can understand

how to use ChatGPT, especially in the context of learning, as evidenced by students feeling the ease of getting information, through various ChatGPT tools. For example, getting assignment to make questions students use ChatGPT as an efficient tool namely by giving commands to ChatGPT to produce questions with a clear structure. Further students can validate and adjust the quality of the questions generated. In this context, students can create questions automatically and do not require much time. The ease of access and use of ChatGPT can be felt directly through various devices without special configuration, this also support by the increasing popularity of ChatGPT among students.

The Effect of Enjoyment on Perceived Usefulness

Enjoyment has a significant influence on the perceived usefulness of ChatGPT. Students feel satisfied using ChatGPT in the learning process because of its ability to present information quickly and responsively compared to ordinary search engines. The answers generated by ChatGPT are in the form of easy-to-understand definitions. Enjoyment has an important role in influencing the perceived usefulness of the use of a technology (Teo & Noyes, 2011). A pleasant experience and the satisfaction felt by users shows the technology's benefits concerning the ability to inspire and offer a more engaging learning experience (Al-Abdullatif & Alsubaie, 2024). In group learning, students use ChatGPT to find development ideas to be further developed and applied to summarise of the material concepts described in the teaching materials. Having a background different majors, students can understand the teaching materials from various sources at once. This study supports the results of the research conducted (Zhang et al., 2023) (Ni & Cheung, 2023) where the results of the study Enjoyment has an effect on perceived usefulness.

The Effect of Enjoyment on Perceived Ease of Use

Enjoyment has a significant influence on the perceived ease of use of ChatGPT. Enjoyment plays an intrinsic factor that can affect perceived ease of use by motivating users to be more confident in using technology (Van Schaik & Ling, 2011). In addition, the pleasure perceived by the user is affected by the level of convenience, the response provided and the user-friendly design (Panda & Kaur, 2023). From field observations, it is known that students feel that ChatGPT is easy to use with a simple display that can be understood in a short time, where the initial view is a simple navigation containing the features provided by ChatGPT and the user's search history to see the answers given again without having to re-enter commands in ChatGPT. Furthermore, students also use ScholarGPT to do essay writing assignments, one of which is in the citizenship course where students must find theories and provide case study examples. By using ChatGPT students can find and summarize articles that outline theories or case studies needed by students automatically while including literature sources. In this regard, this study supports the results of research conducted (Zhang et al., 2023) (Algerafi et al., 2023) illustrating that Enjoyment has an effect on perceived ease of use, and is contrary to the research of Ni & Cheung, (2023) which states that Enjoyment does not have a significant effect on perceived ease of use.

The Effect of Perceived Usefulness on Behavioral Intention to Use

The results of this study prove that perceived usefulness has a significant influence on Behavior Intention To Use ChatGPT, the more benefits are felt from the use of ChatGPT, the higher the student's intention to use it. Perceived usefulness is one of the TAM variables used to measure technology acceptance because it is a factor that can affect user intentions (Rahman et al., 2023). Intention to use a technology can increase when users feel the benefits of technology to support the effectiveness and efficiency of user performance, the higher the benefits felt, the higher the intention to use technology (Amali et al., 2022). By entering questions with the desired keywords in the websearch, students can get an information they need. For example the Introductory Business Course there is the task of reviewing international articles with a predetermined number of words and articles. The keywords contained in the input statement will affect the information produced, therefore students need to

understand how ChatGPT works to get answers according to their needs. Students need to paraphrase to avoid plagiarism in accordance with the provisions given. As a result, students benefit from ChatGPT because they can understand learning and perform assigned tasks effectively. This allow saving time and increases students' intention to use ChatGPT in the next meeting with similar or more complex tasks, by further exploring the advantages of ChatGPT to gain more benefits. In this context, this research supports the results of research conducted by (Le et al., 2024) and (Algerafi et al., 2023) stating that perceived usefulness affect Behavior Intention To Use. The results of this study are in contrast to previous research of (Wu et al., 2024) which stated that perceived usefulness does not have a significant effect on Behavior Intention To Use.

The Effect of Perceived Ease of Use on Behavioral Intention to Use

The results of this study prove that perceived ease of use does not have a significant effect on ChatGPT's Behavior Intention To Use Perceived ease of use is one of the factors used in measuring technology acceptance but often does not have a dignified influence on Behavioral Intention To Use (Li & Chen, 2019). This is because even though users think technology is easy to use but do not find the expected benefits, they are less motivated and do not intend to use the technology (Gideon & Mirza, 2021). Students consider ChatGPT easy to use, especially in finding information needed in learning through websearch, but there are obstacles that are often experienced by students, namely the error system requiring reload and the need to re-enter questions to get a response from ChatGPT. In addition, there are obstacles that are often experienced by new ChatGPT users, namely the information provided is general and the responses given are not enough to motivate students to increase the intention to use ChatGPT making it necessary to revise the questions to get more in-depth answers. Students also use ChatGPT to help in finding and summarizing journals automatically, but students need to make sure the answers provided by ChatGPT are in accordance with the original source. In this case students often feel an obstacle, namely the citation or summary provided is not in accordance with the article used as a source. The result are in line with the research of (Fang et al., 2024) stating that students tend to use ChatGPT if students feel that the answers generated by ChatGPT have a good level of accuracy and are in accordance with students' questions. However, other factors significantly affect students' intentions in using ChatGPT, namely suitability for student needs (Zogheib & Zogheib, 2024). Thus, this study supports the results of research conducted (Ho et al., 2022) (Jaya et al., 2024) and is contrary to previous research (Masa'deh et al., 2024) (Alshurideh et al., 2024) which states that perceived ease of use has a significant effect on Behavior Intention To Use.

CONCLUSION

Based on the discussion of the research results, it can be concluded that Awareness has a significant positive effect on the perceived usefulness and the perceived ease of use of ChatGPT, Enjoyment has a significant positive effect on the perceived usefulness and perceived ease of use of ChatGPT, Perceived usefulness has a significant positive effect on Behavioral Intention To Use ChatGPT while Perceived ease of use does not have a significant positive effect on Behavioral Intention To Use ChatGPT. The results show that ChatGPT is an Artificial Intelligence that can be accessed easily and is useful for students to support the learning process. The high intention to use ChatGPT could contribute to improving the quality of education in case the AI tool is evenly distributed and accessible to all students. The high use of ChatGPT among students reflects the significant growth of technological innovations in the scope of education. Supporting the achievement of the sustainable development goals (SDGs) namely the inclusive, quality and equitable education for all and encouraging lifelong learning. The limitation of this study lies in the use of a limited sample constituting of one batch with theoretical courses, This limits the variation of students' experiences and perceptions of the use of ChatGPT and other AI technologies affecting assessments of students' perceptions and experiences of the use of ChatGPT. Therefore, it is desirable to focus further research on the exploration of the use the latest artificial intelligence tool. To the understanding of the use of technology in education. Adding other variables not discussed in this study including attitude toward using and intervening variables to strengthen the analysis could provide additional insight on technology adoption in the education.

REFERENCES

- Abdalla. (2024). Examining awareness, social influence, and perceived enjoyment in the TAM framework as determinants of ChatGPT. Personalization as a moderator. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(3), 100327. <https://doi.org/10.1016/j.joitmc.2024.100327>
- Akour, I. A., Al-Marouf, R. S., Alfaisal, R., & Salloum, S. A. (2022). A conceptual framework for determining metaverse adoption in higher institutions of gulf area: An empirical study using hybrid SEM-ANN approach. *Computers and Education: Artificial Intelligence*, 3, 100052. <https://doi.org/10.1016/j.caeai.2022.100052>
- Al-Abdullatif, A. M. (2023). Modeling Students' Perceptions of Chatbots in Learning: Integrating Technology Acceptance with the Value-Based Adoption Model. *Education Sciences*, 13(11), 1151. <https://doi.org/10.3390/educsci13111151>
- Al-Abdullatif, A. M., & Alsubaie, M. A. (2024). ChatGPT in Learning: Assessing Students' Use Intentions through the Lens of Perceived Value and the Influence of AI Literacy. *Behavioral Sciences*, 14(9), 845. <https://doi.org/10.3390/bs14090845>
- Algerafi, M. A. M., Zhou, Y., Alfadda, H., & Wijaya, T. T. (2023). Understanding the Factors Influencing Higher Education Students' Intention to Adopt Artificial Intelligence-Based Robots. *IEEE Access*, 11, 99752–99764. <https://doi.org/10.1109/ACCESS.2023.3314499>
- AlHamad, A. Q. M. (2020). Acceptance of E-learning among university students in UAE: A practical study. *International Journal of Electrical and Computer Engineering (IJECE)*, 10(4), 3660. <https://doi.org/10.11591/ijece.v10i4.pp3660-3671>
- Ali, R., Bashir, F., & Ahmad, R. (2021). Imprints of Lower Socioeconomic Class in English Speaking Anxieties and Academic Performance of Rural and Urban Students. *iRASD Journal of Economics*, 3(3). <https://doi.org/10.52131/joe.2021.0303.0055>
- Almaiah, M. A., Alfaisal, R., Salloum, S. A., Hajjej, F., Shishakly, R., Lutfi, A., Alrawad, M., Al Mulhem, A., Alkhdour, T., & Al-Marouf, R. S. (2022). Measuring Institutions' Adoption of Artificial Intelligence Applications in Online Learning Environments: Integrating the Innovation Diffusion Theory with Technology Adoption Rate. *Electronics*, 11(20), 3291. <https://doi.org/10.3390/electronics11203291>
- Alshurideh, M., Jdaitawi, A., Sukkari, L., Al-Gasaymeh, A., Alzoubi, H. M., Damra, Y., Yasin, S., Kurdi, B. A., & Alshurideh, H. (2024). Factors affecting ChatGPT use in education employing TAM: A Jordanian universities' perspective. *International Journal of Data and Network Science*, 8(3), 1599–1606. <https://doi.org/10.5267/j.ijdns.2024.3.007>
- Amali, L. N., Katili, M. R., Suhada, S., Hadjaratie, L., & Mardlatillah, H. (2022). Technology Acceptance Model in Government Context: A Systematic Review on the Implementation of IT Governance in a Government Institution. *Jurnal Online Informatika*, 7(1), 80–88. <https://doi.org/10.15575/join.v7i1.853>
- Bahroun, Z., Anane, C., Ahmed, V., & Zacca, A. (2023). Transforming Education: A Comprehensive Review of Generative Artificial Intelligence in Educational Settings through Bibliometric and Content Analysis. *Sustainability*, 15(17), 12983. <https://doi.org/10.3390/su151712983>
- Bilquise, G., Ibrahim, S., & Salhieh, S. M. (2024). Investigating student acceptance of an academic advising chatbot in higher education institutions. *Education and Information Technologies*, 29(5), 6357–6382. <https://doi.org/10.1007/s10639-023-12076-x>
- Boru, T. (2018). *CHAPTER FIVE RESEARCH DESIGN AND METHODOLOGY* [University of South Africa]. <http://rgdoi.net/10.13140/RG.2.2.21467.62242>

- Cano, J. R., & Nunez, N. A. (2024). Unlocking innovation: How enjoyment drives GenAI use in higher education. *Frontiers in Education*, 9, 1483853. <https://doi.org/10.3389/feduc.2024.1483853>
- Chin, W. W. (1998). The Partial Least Squares Approach to Structural Equation Modeling. In *MODERN METHODS FOR BUSINESS RESEARCH* (pp. 295–336). LAWRENCE ERLBAUM ASSOCIATES.
- Chu, P. Y., Wu, T. Z., & Lee, C. H. (2009). Technology acceptance in public sector: An empirical study of a Knowledge Management System in Kaohsiung City Government. *International Journal of Management and Decision Making*, 10(5/6), 341. <https://doi.org/10.1504/IJMDM.2009.026682>
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319. <https://doi.org/10.2307/249008>
- Fang, X., Wang, X., & Ma, W. (2024). An Empirical Study on the Educational Application of ChatGPT. *Journal of Electrical Systems*, 20(2), 829–841. <https://doi.org/10.52783/jes.1241>
- Foroughi, B., Senali, M. G., Iranmanesh, M., Khanfar, A., Ghobakhloo, M., Annamalai, N., & Naghmeh-Abbaspour, B. (2024). Determinants of Intention to Use ChatGPT for Educational Purposes: Findings from PLS-SEM and fsQCA. *International Journal of Human-Computer Interaction*, 40(17), 4501–4520. <https://doi.org/10.1080/10447318.2023.2226495>
- Gideon, D. S., & Mirza. (2021). The Influence of Perceived Ease of Use, Perceived Usefulness and Effort Expectancy with Intention to Use as an Intervening Variable on Use Behavior Mobile Banking: Study at Bank BNI in DKI Jakarta, Indonesia. *The International Journal of Business & Management*, 9(1). <https://doi.org/10.24940/theijbm/2021/v9/i1/BM2101-040>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hmoud, M., Swait, H., Hamad, N., Karram, O., & Daher, W. (2024). Higher Education Students' Task Motivation in the Generative Artificial Intelligence Context: The Case of ChatGPT. *Information*, 15(1), 33. <https://doi.org/10.3390/info15010033>
- Ho, Y.-H., Alam, S. S., Masukujjaman, M., Lin, C.-Y., Susmit, S., & Susmit, S. (2022). Intention to Adopt AI-Powered Online Service Among Tourism and Hospitality Companies: *International Journal of Technology and Human Interaction*, 18(1), 1–19. <https://doi.org/10.4018/IJTHI.299357>
- Hwang, H., Cho, G., & Choo, H. (2021). *GSCA Pro for Windows User's Manual*. <https://www.researchgate.net/publication/350637682>
- Hwang, H., & Takane, Y. (2004). *Generalized Structured Component Analysis*. <https://doi.org/10.1007/BF02295841>
- Jaya, U. A., Kusnara, H. P., Hodijah, C., Yunita, M., & Kusumadewi, A. N. (2024). Analysis of Perceived Ease of Use and Perceived Enjoyment on Behavior Intention in Digital Payment on Generation Z in Sukabumi City. *Ekonomis: Journal of Economics and Business*, 8(2), 1555. <https://doi.org/10.33087/ekonomis.v8i2.1945>
- Kalayou, M. H., Endehabtu, B. F., & Tilahun, B. (2020). The Applicability of the Modified Technology Acceptance Model (TAM) on the Sustainable Adoption of eHealth Systems in Resource-Limited Settings. *Journal of Multidisciplinary Healthcare, Volume 13*, 1827–1837. <https://doi.org/10.2147/JMDH.S284973>

- Kashive, N., Powale, L., & Kashive, K. (2020). Understanding user perception toward artificial intelligence (AI) enabled e-learning. *The International Journal of Information and Learning Technology*, 38(1), 1–19. <https://doi.org/10.1108/IJILT-05-2020-0090>
- Kayalı, B., Yavuz, M., Balat, Ş., & Çalışan, M. (2023). Investigation of student experiences with ChatGPT-supported online learning applications in higher education. *Australasian Journal of Educational Technology*, 39(5), 20–39. <https://doi.org/10.14742/ajet.8915>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607–610. <https://doi.org/10.1177/001316447003000308>
- Le, T. M. D., Do, H. T. N., Tran, K. M., Dang, V. T., & Nguyen, B. K. H. (2024). Integrating Tam and UGT to explore students' motivation for using ChatGPT for learning in Vietnam. *Journal of Research in Innovative Teaching & Learning*. <https://doi.org/10.1108/JRIT-05-2024-0116>
- Li, T., & Chen, Y. (2019). Will virtual reality be a double-edged sword? Exploring the moderation effects of the expected enjoyment of a destination on travel intention. *Journal of Destination Marketing & Management*, 12, 15–26. <https://doi.org/10.1016/j.jdmm.2019.02.003>
- Lin, C.-Y., Huang, C.-K., & Ko, C.-J. (2020). The impact of perceived enjoyment on team effectiveness and individual learning in a blended learning business course: The mediating effect of knowledge sharing. *Australasian Journal of Educational Technology*. <https://doi.org/10.14742/ajet.4446>
- Malik, A. R. (2024). Exploring Student Perspectives on the Multimodal Transformation of Language Learning Through Artificial Intelligence in Indonesia. *Edumaspul: Jurnal Pendidikan*, 8(1), page 4415-4422. <https://doi.org/10.33487/edumaspul.v8i1>
- Masa'deh, R., Majali, S. A., Alkhaffaf, M., Thurasamy, R., Almajali, D., Altarawneh, K., Al-Sherideh, A., & Altarawni, I. (2024). Antecedents of adoption and usage of ChatGPT among Jordanian university students: Empirical study. *International Journal of Data and Network Science*, 8(2), 1099–1110. <https://doi.org/10.5267/j.ijdns.2023.11.024>
- Meneau, L. K., & Moorthy, J. (2022). Struggling to make ends meet: Can consumer financial behaviors improve? *International Journal of Bank Marketing*, 40(2), 263–296. <https://doi.org/10.1108/IJBM-12-2020-0595>
- Miles, D. A. (2017). *A Taxonomy of Research Gaps: Identifying and Defining the Seven Research Gaps*.
- Ni, A., & Cheung, A. (2023). Understanding secondary students' continuance intention to adopt AI-powered intelligent tutoring system for English learning. *Education and Information Technologies*, 28(3), 3191–3216. <https://doi.org/10.1007/s10639-022-11305-z>
- Niu, B., & Mvondo, G. F. N. (2024). I Am ChatGPT, the ultimate AI Chatbot! Investigating the determinants of users' loyalty and ethical usage concerns of ChatGPT. *Journal of Retailing and Consumer Services*, 76, 103562. <https://doi.org/10.1016/j.jretconser.2023.103562>
- Nnaemeka, O. F., & Ogunbadejo, S. I. (2024). Awareness, Knowledge and Perception of ChatGPT among Undergraduates of Nnamdi Azikiwe University, Awka, Anambra State, Nigeria. *International Journal of Research and Scientific Innovation*, XI(III), 187–201. <https://doi.org/10.51244/IJRSI.2024.1103014>
- Nugroho, M. A., Susilo, A. Z., Fajar, M. A., & Rahmawati, D. (2017). Exploratory Study of SMEs Technology Adoption Readiness Factors. *Procedia Computer Science*, 124, 329–336. <https://doi.org/10.1016/j.procs.2017.12.162>

- Panda, S., & Kaur, N. (2023). Exploring the viability of ChatGPT as an alternative to traditional chatbot systems in library and information centers. *Library Hi Tech News*, 40(3), 22–25. <https://doi.org/10.1108/LHTN-02-2023-0032>
- Rafli, M. (2024, Oktober). *ChatGPT Jadi Generative AI Terpopuler 2024*. data.goodstats.id. <https://data.goodstats.id/statistic/chatgpt-jadi-generative-ai-terpopuler-2024-b3RT7>
- Rahman, Md. S., Sabbir, Md. M., Zhang, Dr. J., Moral, I. H., & Hossain, G. Md. S. (2023). Examining students' intention to use ChatGPT: Does trust matter? *Australasian Journal of Educational Technology*, 51–71. <https://doi.org/10.14742/ajet.8956>
- Restianto, Y. E., Suliyanto, S., Naufalin, L. R., Krisnaresanti, A., Dinanti, A., Iskandar, D., & Sugiyono, S. (2024). User experience and behavioral intention to use e-commerce: A study of digital literacy as a moderating variable. *Journal of Governance and Regulation*, 13(1), 8–17. <https://doi.org/10.22495/jgrv13i1art1>
- Saenphon, T. (2017). An Analysis of the Technology Acceptance Model in Understanding University Student's Awareness to Using Internet of Things. *Proceedings of the 2017 International Conference on E-Commerce, E-Business and E-Government*, 61–64. <https://doi.org/10.1145/3108421.3108432>
- Salloum, S. A., Qasim Mohammad Alhamad, A., Al-Emran, M., Abdel Monem, A., & Shaalan, K. (2019). Exploring Students' Acceptance of E-Learning Through the Development of a Comprehensive Technology Acceptance Model. *IEEE Access*, 7, 128445–128462. <https://doi.org/10.1109/ACCESS.2019.2939467>
- Scantamburlo, T., Cortés, A., Foffano, F., Barrué, C., Distefano, V., Pham, L., & Fabris, A. (2024). Artificial Intelligence across Europe: A Study on Awareness, Attitude and Trust. *IEEE Transactions on Artificial Intelligence*, 1–14. <https://doi.org/10.1109/TAI.2024.3461633>
- Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education. *Computers & Education*, 128, 13–35. <https://doi.org/10.1016/j.compedu.2018.09.009>
- Shahzad, M. F., Xu, S., & Javed, I. (2024). ChatGPT awareness, acceptance, and adoption in higher education: The role of trust as a cornerstone. *International Journal of Educational Technology in Higher Education*, 21(1), 46. <https://doi.org/10.1186/s41239-024-00478-x>
- Singh, H., & Singh, A. (2023). ChatGPT: Systematic Review, Applications, and Agenda for Multidisciplinary Research. *Journal of Chinese Economic and Business Studies*, 21(2), 193–212. <https://doi.org/10.1080/14765284.2023.2210482>
- Teo, T., & Noyes, J. (2011). An assessment of the influence of perceived enjoyment and attitude on the intention to use technology among pre-service teachers: A structural equation modeling approach. *Computers & Education*, 57(2), 1645–1653. <https://doi.org/10.1016/j.compedu.2011.03.002>
- Van Schaik, P., & Ling, J. (2011). An integrated model of interaction experience for information retrieval in a Web-based encyclopaedia. *Interacting with Computers*, 23(1), 18–32. <https://doi.org/10.1016/j.intcom.2010.07.002>
- Wu, H., Wang, Y., & Wang, Y. (2024). "To Use or Not to Use?" A Mixed-Methods Study on the Determinants of EFL College Learners' Behavioral Intention to Use AI in the Distributed Learning Context. *The International Review of Research in Open and Distributed Learning*, 25(3), 158–178. <https://doi.org/10.19173/irrodl.v25i3.7708>
- Xiao, Y., & Zhi, Y. (2023). An Exploratory Study of EFL Learners' Use of ChatGPT for Language Learning Tasks: Experience and Perceptions. *Languages*, 8(3), 212.

<https://doi.org/10.3390/languages8030212>

- Yu, C., Yan, J., & Cai, N. (2024). ChatGPT in higher education: Factors influencing ChatGPT user satisfaction and continued use intention. *Frontiers in Education*, 9, 1354929. <https://doi.org/10.3389/educ.2024.1354929>
- Zhang, C., Schießl, J., Plöbl, L., Hofmann, F., & Gläser-Zikuda, M. (2023). Acceptance of artificial intelligence among pre-service teachers: A multigroup analysis. *International Journal of Educational Technology in Higher Education*, 20(1), 49. <https://doi.org/10.1186/s41239-023-00420-7>
- Zhou, R., & Feng, C. (2017). Difference between Leisure and Work Contexts: The Roles of Perceived Enjoyment and Perceived Usefulness in Predicting Mobile Video Calling Use Acceptance. *Frontiers in Psychology*, 8. <https://doi.org/10.3389/fpsyg.2017.00350>
- Zogheib, S., & Zogheib, B. (2024). Understanding University Students' Adoption of ChatGPT: Insights from TAM, SDT, and Beyond. *Journal of Information Technology Education: Research*, 23, 025. <https://doi.org/10.28945/5377>