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LEVEL OF GPT CHAT USE AMONG STUDENTS AND FACTORS AFFECTING ITS USE

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ABSTRACT

One of the preferred AI language models that can be used in natural language interaction with consumers is Open AI's ChatGPT. Based on a quantitative research methodology with a questionnaire survey method, this study examines the factors that influence users' acceptance and use of ChatGPT using the theory of acceptance model (TAM). Respondents in this study were 100 ChatGPT users. Acceptance and use of ChatGPT through the theory of acceptance and use (TAM). The findings are six factors, there are five factors accepted, but one factor is rejected, namely the perceived interactivity factor User participation with ChatGPT is explained by perceived interactivity and shows that in the future people will use chat gpt to help them in terms of learning.

Keywords: *Chat GPT, TAM, PLS-SEM, Education,*

1. INTRODUCTION

Computer software with artificial intelligence can communicate with humans by translating words into natural language (NLP) [1]. Chatbots were invented in the 60s. Natural language processing and algorithm-based decision tree approaches are the basis of chatbots (Vukomanović et al., 2022)). The development of chatbots has made great progress. Initially, chatbots could only respond to a limited number of inputs. Over the years NLP has made significant progress to perform language processing. The comprehension and recognition capabilities of Natural Language Processing (NLP) models have improved significantly as a result of training models on large amounts of data and specialized improvements for specific tasks such as sentence comprehension, question answering, and entity recognition.

Kasneci et al., (2023)state that NLP can exceed the human ability to perform language processing. With this improvement, text interpretation and handling becomes much better, especially when it comes to understanding the relationship between words [3]. In recent times, chatbots have gained significant traction and are used by companies for a variety of purposes, including customer support, assisting with online sales, assisting with learning, and providing general information. Chatbots can be found on various platforms, such as social media platforms, mobile apps, and websites. Natural language processing and artificial intelligence technologies are constantly evolving to develop chatbots. More advanced chatbots can understand human language better, learn from previous interactions, and improve user experience.

ChatGPT is becoming more popular in many fields, but many people do not yet understand it and use it, especially in higher education. As an effective tool, with its strengths and limitations, ChatGPT may be a useful resource for teachers and students. "Chat GPT has a very high analytical capability that can be integrated into certain university curricula" a statement made by Lundberg from Lund University [4]. This remarkable development of Chat GPT technology poses challenges for universities when implementing Chat GPT in higher education.

There was a study that examined the use of ChatGPT in an academic environment with 1000 undergraduate and graduate students as respondents, and found that 55% of students used ChatGPT, and 22% used it specifically for academic purposes [5].

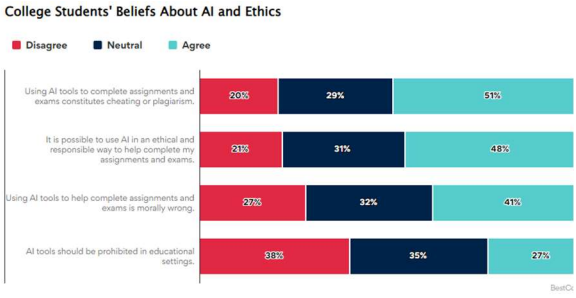

Figure 1. College Students' Beliefs About AI and Ethnics

Figure 1 explains that overall, 43% of students said they have used AI tools such as ChatGPT. Of those who have used it, half (50%) used it for assignments or exams, which is 22% of all survey participants, meaning 1 in 5 students used AI to complete schoolwork.

Of the ten students who tried the AI tool, nine said they used it for personal projects out of fun or curiosity. While most students (57%) said they had no intention of using or continuing to use AI when working on assignments or exams. However, nearly thirty-two percent of students answered the question, and eleven percent chose not to answer.

Among students who said they had used AI tools for schoolwork, half (50%) used the tools for some tasks but mostly completed them on their own. Three in ten (30%) used AI for most of their assignments, and 17% used AI to complete assignments then handed them in without making any edits.

Based on the above study, GPT chat is an important topic of exploration today. The rapid growth and use of GPT chats is an impetus for educators and institutions to better understand this technology including its advantages and disadvantages [3]. This research opens up opportunities to better understand "the extent of GPT chat usage among university students and the factors that influence GPT chat usage" in making positive contributions in various fields, from learning to research, as well as assisting with complex problem solving.

1.1 Problem Formulation

Given the above context, the main questions of this study are: How much is the use of GPT chat among university students in Java and its surrounding areas, and what factors influence its use in various student groups

1.2 Research Objectives

The purpose of this research is to find out how often students in Java and surrounding areas use GPT chat, as well as what factors influence this use in various community groups.

1.3 Research Benefits

This research can provide theoretical contributions about the level of use of GPT chat among students and the biggest factors in the use of chat GPT. This research is expected to be a reference for lecturers or software developers about how students use GPT chat in the academic environment and the factors that influence the use of GPT chat.

2. LITERATURE REVIEWS

2.1 Theoritical Reviews

2.1.1 Artificial Intelligence

Artificial intelligence is a technology that mimics the logic of mathematics, statistics, probability and computer science. The advancement of this technology began during the second world war as it related to computing and has enabled computers to perform increasingly complex tasks that previously could only be performed by humans [6].

In 1950, Alan Turing's landmark paper "Computing Machinery and Intelligence" served as a catalyst for the development of artificial intelligence. Alan Turing, dubbed the "father of computer science," asked the question in this book, "Can machines think?" In response, he developed the "Turing Test" to see if computers could demonstrate human-level intelligence [7]. The following discoveries were made in 1980 by experts David Rumelhart, Lotfi Zadeh, John Holland, Lawrence Fogel, Ingo Rechenberg, and John Koza: MLP learning, fuzzy logic, genetic algorithms, evolutionary strategies, evolutionary programming, and genetic programming. [8]. Artificial intelligence emerged in 2000, the year of the internet and computers, among the products were the World Wide Web (WWW), which Tim Berners-Lee invented in 1989; the Internet of Things, which Kevin Ashton invented in 1999; the term "big data" which John R. Mashey invented in 1998; and the invention of deep learning, which Geoffrey Hinton invented in 2006[8].

2.1.2 Natural Language Processing

A language is a set of symbols used to convey or broadcast a message. Natural language processing (NLP) helps some users who are not familiar with machine language. On the other hand, the process of making a computer understand words or statements written in human language is known as natural language processing (NLP). NLP was created to make users' tasks easier and fulfill the need to speak natural language with computers [3]. There are two components of NLP described in the journal "Natural language processing: state of the art,

current trends and challenges" [9]. The first component, Natural Language Understanding (NLU), can be defined as a machine that can understand natural language and analyze it by extracting concepts, emotions, keywords and others. The second component of natural language generation (NLG) is the process of generating phrases, sentences and paragraphs that have meaning.

2.1.3 Chat GPT

Systems or machines that mimic human intelligence and use collected data to transform themselves are called artificial intelligence (AI) [10]. The goal of artificial intelligence is to enable computers to perform tasks that typically require human thinking, analysis, decision-making, and problem-solving [11].

A chatbot consists of a combination of artificial intelligence (AI) and natural language processing to communicate with interlocutors at a certain conversational level through voice or text [12]. The use of Chatbot can help answer and provide appropriate responses to [13].

The emergence of Chatbot has opened up opportunities to utilize AI chatbot for education, especially in helping students to increase learning motivation. This can provide convenience in conveying information and learning various fields of science [14]. The main focus of the research is the influence of ChatGPT in an academic context. The rapid growth and adoption of this technology has prompted educators and educational institutions to delve deeper into the limitations and possible outcomes of using this technology.

2.1.4 How to Use Chat GPT

Using GPT chat is very easy, here are the steps to using GPT chat:

1) Open the browser and type Open Ai in the browser
2) Then, click "Sign Up" and please activate your personal account. You can register with your Microsoft account, email, or Google Account.
3) After that, a verification code will be sent, so enter the currently active personal number.
4) You will be immediately redirected to the GPT Chat dashboard after entering the verification code that has been sent.
5) Finally, enter the desired question and wait for Chat GPT to complete it.

2.2 Technology Acceptance Theory

2.2.1 Technology Acceptance Model

The Technology Acceptance Model (TAM) explains the perspective of technology users. This model explains how system characteristics can influence users of computer-based technology systems, according to a 1996 journal article by Davis and Venkatesh. In accordance with the Technology Acceptance Model (TAM), users' judgments about when and how to use technology are influenced by various aspects when they are introduced to new technology components. The TAM model describes the following variables:

2.2.1.1 Perceived Ease of Use

This variable measures the ease of use of technology systems. [4]. The most important factor in knowing the system is acceptable is how easy the system is to use. Davis (1986) in the journal Tahar et al., (2020) says convenience means that people find it easy when using a particular system because they don't need to do anything.

2.2.1.2 Perceived Usefulness

The basic principle of Perceived Usefulness describes how much a person thinks that using a particular technology will make things better. their ability to get their work done. As a result, people will be willing to utilize technology more if it is more useful [15].

2.2.1.3 Perceived Interactivity

The perceived interaction is two-way communication enabled by the process of asking questions and receiving responses [16].

2.2.1.4 Decision to Use

Individual readiness is the extent to which people can accept new technology and do not hesitate to use it [17]

2.2.1.5 Continuance Use Intention

Continuance use intention is the intention to want to use information technology in the future based on previous user experience. perceived ease of use has a greater impact on sustainable use intentions than perceived usefulness[18]

2.2.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology was created by Venkatesh et al., (2003)The theory was developed to unify many different models that focus on users and innovation in the acceptance of a technology [20]. This method can be used to pinpoint the important elements that motivate people to use certain technologies in certain situations. [20].

2.2.3 Delone & McLean Theory

McLean's theory identifies six key dimensions of IS success: user satisfaction, information quality, system quality, usage, individual effects, and organizational effects [21], general systems information theory describes systems if end users are satisfied and make good use of the system, quality

and information quality may be positively correlated with performance.

2.3 Previous Research

Table 1. Previous Research

No.	Title	Background	Variable	Explanation of the population	Data processing techniques and hypothesis testing	Result
1.	Insights into Student Perceptions: Investigating Artificial Intelligence (AI) Tool Usability in Irish Higher Education at the University of Limerick (Irfan et al., 2023).	Investigating the role of students in using ChatGPT and other AI tools in the classroom. This can provide a perception of the strengths and weaknesses of the tool from the user's perspective, which can help in its ongoing development and modification.	1. University of Limerick students' familiarity with AI tools 2. Use of AI tools by University of Limerick students for educational purposes 3. University of Limerick students' general perceptions on the use of AI tools 4. 4. University of Limerick students' opinions regarding the use of AI tools in the classroom and critical thinking. 5. The effectiveness of AI tools such as Chat GPT for students at the University of Limerick. 6. The extent to which University of Limerick students find AI tools useful. 7. Opinions on the use of Chat GPT in assisting the academic needs of students	Students from various departments and faculties at the University of Limerick participated in this project. A random selection procedure was used for the survey.	Describing, illustrating, or summarizing data in a meaningful way, descriptive statistical analysis is the process by which this study analyzed the data: The data provided provides an overview of the level of knowledge University of Limerick students have about AI tools. Frequency Distribution: The number of students in each group was counted, and the data was categorized according to various levels of experience with AI technology. This was done for each school.	AI can be leveraged to provide students with personalized feedback on their assignments, providing customized guidance and advice.
2.	Perceived Ease of Use, Perceived Usefulness, Perceived Security and Intention to Use E-Filing: The Role of Technology Readiness	This study examines data showing how people's intention to utilize electronic filing is influenced by their perceptions of the usefulness, security, and ease of use of e-Filing, with information technology readiness as an intervening variable.	1. Perceived ease of use, 2. perceived usefulness, and 3. perceived security	The survey was conducted between December 11, 2018 and January 18, 2019. Respondents received 150 copies of the questionnaire from the researcher. 131 questionnaires were returned by respondents; however, five people did not complete the personal information section of the questionnaire and its questions. As a result, 126 questionnaires were used in the analysis.	To evaluate the hypotheses, path analysis and multiple linear regression were used.	Perceived security and convenience of use were found to have a favorable impact on e-Filing adoption, but perceived usefulness did not have a significant effect. In addition, there is no mediating effect of information technology readiness on the

						relationship between perceived usefulness, security, and convenience of use of e-filing.
3.	Awareness and acceptance of ChatGPT as a generative conversational AI for transforming education by Ghanaian academics: A two-phase study (Adarkwah et al., 2023)	Using ChatGPT (an advanced chatbot) as a case scenario to explain why the digital transformation of education in Ghana is still slow.	1. Awareness 2. Job Relevance 3. Perceived usefulness 4. Perceived ease of use 5. Perceived enjoyment	There were 50 academics responding to the survey, of these 50 respondents 23 (46%) indicated they were over 45 years old, 43 (86%) were male and seven (14%) were female. 26 academics (56% of the total) were from the education sector; 84% used ChatGPT-3.5, and 16% used the plus version (GPT-4).	This research was organized in two stages, a qualitative stage and a quantitative stage. quantitative one. In Study 1, the qualitative phase explored academics' exposure to and broad understanding of ChatGPT within three months of its launch. The quantitative phase in Study 2 presents academics' use and acceptance of ChatGPT as an AI tool in education.	we provide a way to create technology trends awareness for academics from African countries such as Ghana to make the transition from "laggards" to "early adopters", as Rogers describes from "laggards" to "early adopters", as described by Rogers' theory of innovation diffusion. These findings require policy makers and educators to increase technology awareness.
4.	"Chatting with ChatGPT": Analyzing the factors influencing users' intention to Use the Open AI's ChatGPT using the UTAUT model (Menon & Shilpa, 2023)	ChatGPT Open AI has emerged as a popular AI language model that can engage in natural language conversations with users. Based on a qualitative research approach using semi-structured interviews with 32 ChatGPT users from India, this study examines the factors that influence user	-Performance Expentancy -Expenditure on Effort (Effort Expentancy) - Social Influence - Facilitating Conditions - Privacy Concerns - Perceived Interactivity - Perceived Human Touch - Moderating Factors	There were more than 50 respondents who expressed interest in in participating in the Study.	This research examines the factors that influence user acceptance and use of ChatGPT using the unified theory of technology acceptance and use (UTAUT) model. (UTAUT) model	Showed that the four factors of UTAUT, together with the two extended constructs, namely perceived interactivity and privacy concerns, can explain user interaction and engagement

		acceptance and usage of ChatGPT using the unified theory of technology acceptance and usage (UTAUT) model.				with ChatGPT.
5.	Exploring The Ethical Considerations Of Using Chat GPT In University Education (Huallpa et al., 2023)	This paper examines the ethical conundrum arising from the use of Chat GPT in higher education, concentrating on the situation in Latin American universities.	1. Perception of Accessibility 2. Social Attitude 3. Opinions and personal 4.Experience 5.Dependency on AI 6.Data Privacy and Security 7.Institutional Guidelines 8.Personalized Learning	Based on these findings, 97 (44.1%) and 123 (55.9%) of the 220 individuals were identified as male and female, respectively. In terms of age distribution, 59 individuals, or 26.8% of the total, were between 18 and 24 years old. With 55 participants (25.0%), the 25-34 age group was the next most represented age group, followed by 53 individuals (24.1%) in the 35-44 age group. 34 (15.5%) and 19 (8.6%) participants, respectively, came from the 45-54 years and over 55 years age groups (see figure 1 below).	The moral consequences of using Chat GPT are perceived differently by students in Latin American universities, as revealed by descriptive statistics.	The findings indicate that participants' social views are quite positive and they believe the integration of Chat GPT is reasonably accessible. They recognize the importance and duty of Chat GPT in providing a customized learning experience.

2.4 Research Flow

Chat GPT can be a very useful resource. The purpose of this study was to find out how often students use GPT chats and what motivates them to do so. The following illustrates an overview of how many students use GPT chats and what motivates them to do so:

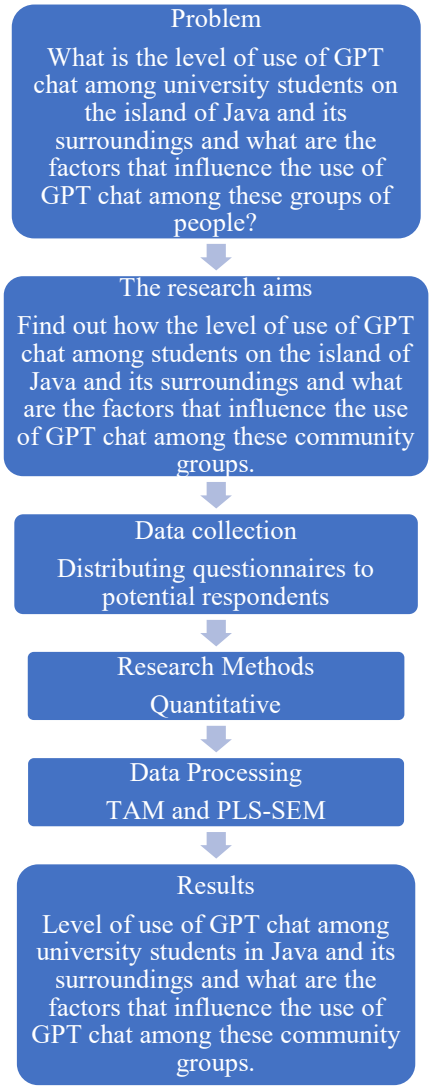

Figure 2. Research Flow

The figure above is a picture of the research flow analyzing the level of use of GPT chat among students and the biggest factor in the use of GPT chat.

3. RESEARCH METHODOLOGY

3.1 Research Strategy

The main objective of this study is to gather useful information that can be used to support the use of ChatGPT in education in the future. A quantitative research strategy will be used to assess the level of use and the biggest factors influencing the acceptance and use of ChatGPT by students within higher education.

The survey method will be used to obtain systematic data. This method is also suitable for research that requires in-depth data collection and analysis. In the field of information systems, surveys are also a popular and successful research method [22]. This research aims to gain a broad understanding of the main components regarding the level of use and the biggest factors that influence student acceptance and use of GPT chat in an academic context [22].

3.2 Data Collection Methods

Survey studies collect data by using and distributing questionnaires, which consist of a series of questions or statements arranged in a predetermined order. Using questionnaires saves time as many respondents can participate simultaneously. Questionnaire survey, it is expected to obtain valid information, so as to be able to answer research problems.

3.2.1 Questionnaire

The questionnaire contains statements about the level of use of gpt chat among students and the biggest factor in the use of gpt chat using a Likert scale: Scale 1: Strongly Disagree, Scale 2: Disagree, Scale 3: Undecided, Scale 4: Agree, and Scale 5: Strongly Agree).

3.2.2 Respondent selection

This research uses purposive sampling to determine respondents. the respondents selected are students from the education level (D3, S1, S2, and S3) who live in Java and its surroundings.

3.3 Data Analysis Methods

Structural equation modeling is used to investigate the relationships between variables, the data process is described, and statistical tests are used to find correlations.

3.3.1 Data Preparation

The data collected from the survey should be organized and will be systematically cleaned to ensure valid respondents to facilitate the separation and analysis, questions and statements to be given to potential respondents.

3.3.2 Research Model And Hypothesis

3.3.2.1 Partial Least Square-Structural Equation Model

Partial least square-structural equation model (PLS-SEM) is one of the common data analysis techniques used to test models with latent variables and enables a complex understanding of how different variables interact with each other [23]

3.3.2.2 PLS-SEM

The measurement model, divided into two namely the outer model, and the structural model, also known as the inner model [24].

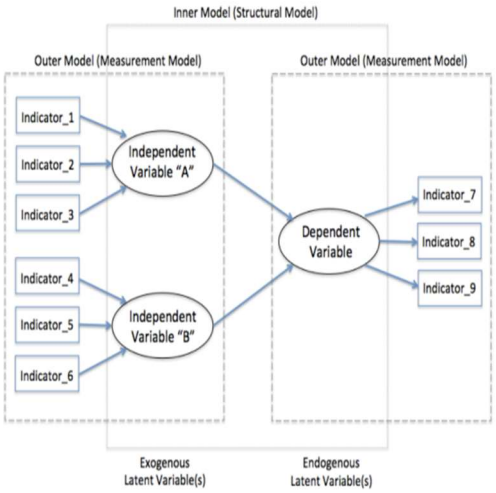

Figure 3. Inner Model dan Outer Model Structure

PLS-SEM diagram which shows two submodels, namely the submodel including the following:

1) Outer Model

The outer model, also known as the measurement model, describes how indicators and observed variables relate to each other [25]. Evaluation in the outer model uses the following method:

a) Validity test

Outer loading measures are used. Outer loading is a statistical measure to determine how well variable measurements are influenced by the indicators used. The recommended outer loading value is above 0.6 or 0.7 [24].

b) Reliability Test

The measure for evaluating the consistency of variable intervals using Cronbach's alpha. is a minimum Cronbach alpha value of 0.70 or 0.6 is considered acceptable [23]

c) Convergent Validity

Convergent validity indicates how well each indicator is positively correlated with other indicators. Convergent value is calculated using AVE, or Average Extracted Variance. The recommended AVE value is 0.50 [23]

d) Discriminant Validity

Discriminant validity indicates that PLS-SEM constructs are distinct and have the capacity to capture events that cannot be captured by other constructs. Discriminant validity is measured by Fornell lacker criterion and cross loading.

2) Inner Model

The inner model is defined to predict the relationship between independent variables and dependent variables [26]

3.3.2.3 Research Model

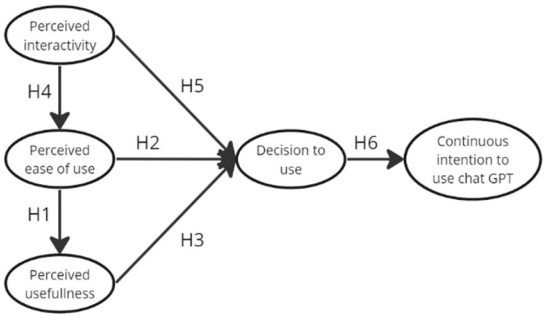

Figure 4 : Research Model

The figure above explains the model in this study, the final TAM model that will be used consists of several variables including perceived interactivity, perceived ease of use, perceived usefulness, decision to use and continuous intention to use Chat GPT, the following hypotheses and questions are given:

Hypothesis (H1). PEOU affects PU
Hypothesis (H2). PEOU has an effect on DTU
Hypothesis (H3). PU has an effect on DTU

There is one external variable integrated into the TAM model that impacts PU, PEOU and DTU. In an effort to improve understanding of usage behavior, Lee & Lee (2019) [18]provide evidence supporting perceived interactivity (PI) is applied as an external factor to understand usage behavior. PI fosters confidence in Chat GPT users to improve the TAM model.

Hypothesis (H4). PI affects PEOU
Hypothesis (H5). PI has an effect on DTU
Hypothesis (H6). DTU has an effect on CTU

4. RESULTS AND DISCUSSION

This study was analyzed using quantitative techniques utilizing Partial Least Square (PLS) for hypothesis testing. Perceived interaction, perceived ease of use, perceived usefulness, decision to use, and continuous intention to use chat GPT.

4.1 Respondent Demographics

131 respondents filled out the questionnaire survey but 31 respondents were declared invalid so that the remaining 100 respondents would be analyzed further.

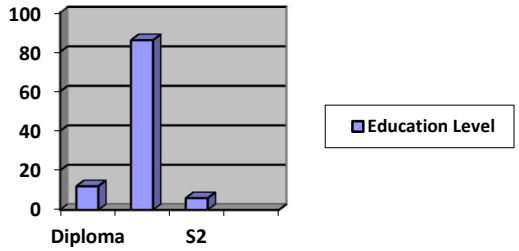

Figure 5 : Education Level

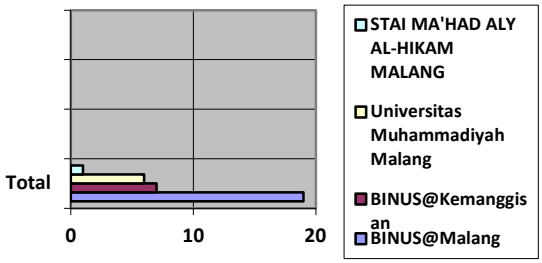

Figure 6 : University Origin

The figure above presents the education level and university origin of the respondents who participated in filling out the questionnaire. Figure 5 shows that most of the respondents are currently studying undergraduate degree 83%, diploma 3 11%, and postgraduate degree 6%. Figure 6 shows that the majority of respondents are from Bina Nusantara University Malang.

Table 2 : Gender of respondent

Gender (M/F)	Frequency
Male	26
Female	74
Total	100

Table 3 : Age of Respondent

Age	Frequency
17 – 20 years old	38
21-25 years old	60
26-30 years old	2

The table above shows the results of 100 respondents. There are 26 men and 74 women. Based on age, 60 respondents are 21-25 years old, 38 respondents are 17-20 years old, 2 respondents are 26-30 years old.

4.2 Construct

The following statements for each variable are presented in table.

Table 4 : Age of Respondent

Variables	Statement
Perceived Interactivity	1. Using GPT Chat allows for two-way communication.
	2. Using Chat GPT has a high interaction.
Perceived Ease of Use	1. Chat GPT is easy to use for learning
	2. Using Chat GPT can save time.
	3. By using Chat GPT the interaction process is easy.
	4. Chat GPT is easy to access.
Perceived Usefulness	1. Using ChatGPT has helped me to improve my learning performance.
	2. Using ChatGPT has enabled me to acquire academic knowledge.
	3. Using Chat GPT can provide relevant information.
	4. Using GPT Chat helps to understand concepts related to what we are working on.
	5. The more I use ChatGPT for my studies, the greater the opportunity to continue my development and acquire new knowledge.
Decision to Use	1. I believe that using gpt chat makes it easier to do the tasks and projects that I am working on.
	2. I think Chat GPT can fulfill the purpose of increasing knowledge insight.
	3. Using ChatGPT makes the information retrieval process more

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	efficient than the manual method.
Continuance Intention to Use ChatGpt	1. I plan to use Chat GPT in the future as a tool to improve my knowledge.
	2. I believe Chat GPT's ability will continue to improve and can provide accurate answers.
	3. The use of Chat GPT can have a positive impact not only in the world of education.
	4. I feel I will use gpt chat in the future.
	5. I am satisfied with chatgpt's performance and responsiveness.

4.3 Outer Model Measurement Assessment

4.3.1 Valdity Test

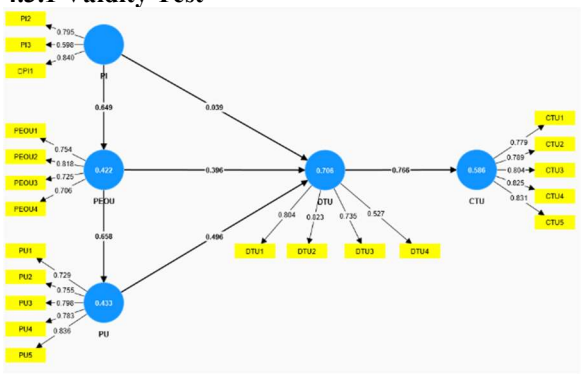

Figure 7 : Model PLS-SEM

Table 5 : Outer Loading

CTU2<-CTU	0.789	Valid
CTU3<-CTU	0.804	Valid
CTU4<-CTU	0.825	Valid
CTU5<-CTU	0.831	Valid
DTU1<-DTU	0.804	Valid
DTU2<-DTU	0.823	Valid
DTU3<-DTU	0.735	Valid
DTU4<-DTU	0.527	Invalid
PEOU1<-PEOU	0.754	Valid
PEOU2<-PEOU	0.818	Valid
PEOU3<-PEOU	0.725	Valid
PEOU4<-PEOU	0.706	Valid
PI2<-PI	0.795	Valid
PI3<-PI	0.598	Invalid
PU1<-PU	0.729	Valid
PU2<-PU	0.755	Valid
PU3<-PU	0.798	Valid
PU4<-PU	0.783	Valid
PU5<-PU	0.836	Valid
PI1<-PI	0.84	Valid

Figure 7 and table 4 show the value of the PLS-SEM model, there are two invalid indicators because the value of the indicator is below the minimum value of 0.6 or 0.7, namely indicator PI3 (0.598) and DTU4 (0.527) so that the indicator must be removed and recalculated. The recalculation is intended to verify the validity of each indicator. The following table and figure are the results of the recalculation.

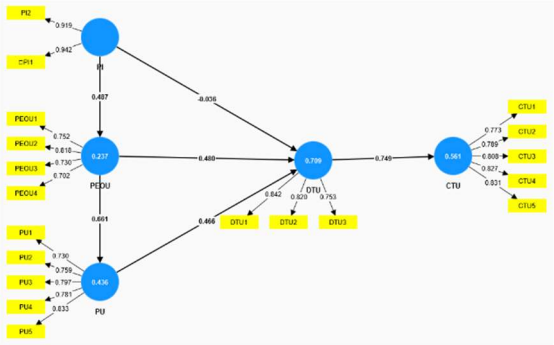

Figure 8 : Recalculation of PLS Model

Table 6 : Recalculation of Outer Loading

	Outer Loadings	Validitas Data
CTU1<-CTU	0.773	Valid
CTU2<-CTU	0.789	Valid
CTU3<-CTU	0.808	Valid
CTU4<-CTU	0.827	Valid
CTU5<-CTU	0.831	Valid
DTU1<-DTU	0.842	Valid
DTU2<-DTU	0.82	Valid
DTU3<-DTU	0.753	Valid
PEOU1<-PEOU	0.752	Valid
PEOU2<-PEOU	0.818	Valid
PEOU3<-PEOU	0.73	Valid
PEOU4<-PEOU	0.702	Valid
PI2<-PI	0.919	Valid
PU1<-PU	0.73	Valid
PU2<-PU	0.759	Valid
PU3<-PU	0.797	Valid
PU4<-PU	0.781	Valid
PU5<-PU	0.833	Valid
PI1<-PI	0.942	Valid

It is known that after recalculation testing, each indicator has a different outer loading value than before because some variables have been excluded. There is a positive correlation between each latent variable and its indicators, and components with a value higher than 0.5 are considered to have a high enough value to require further investigation.

4.3.2 Reliability Test

The reliability test is measured using the composite reliability criterion, namely Cronbach alpha, while the convergent test is measured using the average Extraction Variance (AVE) criterion which has a minimum value of 0.5. A construct is declared reliable if the composite reliability value, Cronbach alpha is above 0.6 or 0.7.

Table 7 : Reliability Test

Item	Cronbach's Alpha	Composite Realibity (rho_a)	Composite Realibity (rho_c)	Average Variance Extracted (AVE)	Reliability data
CTU	0.865	0.867	0.902	0.649	Reliabel
DTU	0.732	0.747	0.847	0.65	Reliabel
PEOU	0.745	0.752	0.838	0.565	Reliabel
PI	0.847	0.863	0.928	0.866	Reliabel
PU	0.84	0.841	0.886	0.61	Reliabel

The table above shows that each variable is more than 0.6 or 0.7, indicating that the survey data is reliable. The recommended AVE value is> 0.50 according to [24] then the data is reliable.

4.3.3 Cross Loading

Latent variables being measured, each indicator needs to have a greater loading than other indicators for other variables. Comparing the value of an indicator against the correlation with other variables, it can be determined that each indicator variable has a high level of discriminant validity.

Table 8 : Cross Loading

Variables	Item	Continuance Intention to Use	Decision to Use	Perceived Ease Of Use	Perceived Interactivity	Perceived Usefulness
Continuance Intention To Use	CTU1	0.773	0.566	0.416	0.457	0.53
	CTU2	0.789	0.608	0.54	0.523	0.606
	CTU3	0.808	0.563	0.571	0.469	0.546
	CTU4	0.827	0.643	0.58	0.453	0.548
	CTU5	0.831	0.633	0.613	0.46	0.589
Decision To Use	DTU1	0.69	0.842	0.653	0.289	0.667
	DTU2	0.626	0.82	0.611	0.514	0.704
	DTU3	0.47	0.753	0.601	0.31	0.44
Perceived Ease Of Use	PEOU1	0.639	0.651	0.752	0.334	0.544
	PEOU2	0.539	0.674	0.818	0.258	0.466
	PEOU3	0.477	0.512	0.73	0.578	0.581
	PEOU4	0.333	0.452	0.702	0.244	0.347
Perceived Interactivity	PI1	0.548	0.445	0.503	0.942	0.539
	PI2	0.543	0.413	0.395	0.919	0.515
Perceived Usefulness	PU1	0.492	0.545	0.522	0.363	0.73
	PU2	0.581	0.706	0.537	0.331	0.759
	PU3	0.557	0.55	0.499	0.524	0.797
	PU4	0.537	0.584	0.558	0.543	0.781
	PU5	0.555	0.565	0.447	0.461	0.833

Table above shows that the correlation between decision to use, perceived ease of use, perceived interactivity, and perceived usefulness is lower than the cross loading value (0.831) for the variable intention to continue using. The cross-loading value of the usage decision variable (0.842) is higher than the correlation between perceived utility, perceived interaction, perceived ease of use, and intention to use in the future. The relationship between perceived interactivity, perceived usefulness, decision to use, and intention to continue using is higher. lower than the cross loading value of the perceived ease of use variable (0.818).

Compared with the relationship, the cross-loading value of the variables perceived interactivity, perceived utility, perceived ease of use, choice of use, and desire to continue using (0.942) is greater. Compared to the correlation of perceived interactivity, perceived ease of use, choice of use, and continued use, the cross loading value of the perceived usability variable (0.833) is greater. When compared with other variables, the cross loading indicator value with several variables is greater. according to the statement above. Thus, it can be said that the research variables have a high level of discriminative validity.

4.3.4 R-Square Testing

R-squared analysis to assess how well a regression model fits the observed data. How successfully the independent variables—factors that influence the dependent variable explain the variance in the dependent variable is indicated by these statistics [23]. The r square value according to Sarstedt et al., (2022)is 0.19 low, 0.33 moderate, 0.67 high. The following is the r squared table :

Table 9 : R-Squared

	R-Square	R-Square Adjusted
PEOU	0.561	0.557
PU	0.709	0.699
DTU	0.237	0.229
CTU	0.436	0.431

Based on the table above, the results show that:

1) The magnitude of the effect of perceived interactivity on ease of use is 56%. In [23] including moderate influence.
2) The magnitude of the effect of perceived interactivity on perceived benefits is 71%. In [23]including high influence.
3) The magnitude of the influence of perceived interactivity on the decision to use is 23.7%. In [23]including low influence.
4) The magnitude of the influence of perceived interactivity on plans to use in the future is 43.6%. In [23] including moderate influence.

4.4 Structure Model (Inner Model)

Three stages of evaluation were carried out on the in-depth structural model to predict causal relationships between variables. First, there is no multicollinearity between variables and the inner VIF measure when the variance inflated factor (VIF) value is less than 5 [27]. The two hypothesis tests test the p-value or t-value statistic. These variables have a correlation that is worth paying attention to if the p value is less than 0.05 or the results of t statistical calculations (t-table) are greater than 1.96. Next, the resulting parameters of the prediction path coefficient and 95% confidence interval need to be changed. The influence of direct factors with criteria at the structural level is represented by the three f square values (f square 0.02 low, 0.15 medium and 0.35 high). [27].

4.4.1 Variace Inflated Factors

Before evaluating the structural model hypothesis, it is necessary to know whether there is multicollinearity between variables. A VIF with a value <5 indicates that there is no multicollinearity between variables.

Table 10 : Cross Loading

Item	VIF
DTU -> CTU	1.000
PEOU -> DTU	1.835
PEOU -> PU	1.000
PI -> DTU	1.524
PI -> PEOU	1.000
PU -> DTU	2.063

The table above presents results showing the low level of multicollinearity between variables, as evidenced by the inner VIF value below 5.

4.4.2 Hypothesis Test

Hypothesis testing is carried out to find out whether the results of observations or data obtained are in accordance with the hypothesis. The test results determine whether the hypothesis is rejected or accepted, which in turn will support or reject different hypotheses.

Table 11 : Hypothesis Test

Hipotesis	Path Coefficient	p-value	95% Interval Kepercayaan Path Coefficient		f-square
			Batas Bawah	Batas Atas	
(H1). PEOU berpengaruh terhadap PU	0.661	0	0.564	0.765	0.774
(H2). PEOU berpengaruh terhadap DTU	0.48	0	0.295	0.634	0.43
(H3). PU berpengaruh terhadap DTU	0.466	0	0.288	0.657	0.362
(H4). PI berpengaruh terhadap PEOU	0.487	0	0.316	0.634	0.311
(H5). PI berpengaruh terhadap DTU	-0.036	0.641	-0.187	0.12	0.003
(H6). DTU berpengaruh CTU C	0.749	0	0.636	0.847	1.28

Based on the table above, it can be seen that the results of testing the hypothesis above are as follows

1) **(H1)** shows that the hypothesis is accepted and has a significant influence, with a path coefficient value (0.661) and p-value (0.000<0.05). A positive value indicates a correlation between ease of use and the level of benefit felt by the user. The higher the ease of use, the higher the perceived benefits. The 95% confidence interval for the effect of ease of use of GPT chat on increasing the benefits of GPT chat is between 0.564 and 0.765, indicating that the effect of ease of use of GPT chat is very large (f square = 0.774). To maintain the ease of use of GPT chat and increase the benefits experienced by users, regular system maintenance and upgrades are required.
2) **(H2)** states that the hypothesis is accepted and has a significant influence, with a path coefficient value of (0.480) and p-value (0.000<0.05). Positive values indicate a correlation between ease of use and the level of decision to use. The higher the ease of use, the higher the level of decision to use. The 95% confidence interval for the effect of ease of use of GPT chat on increasing decisions using GPT chat is between 0.295 and 0.634. The 95% confidence interval for the effect of ease of use of GPT chat on increasing decisions using GPT chat is between 0.295 and 0.634. The effect of ease of use of GPT chat on increasing decisions using GPT chat is very large (f square=0.430). It is necessary to maintain and upgrade the system regularly to maintain ease of use of GPT chat and increase decisions using GPT chat by 0.634.
3) **(H3)** states that the hypothesis is accepted and has a significant influence, with a path coefficient value (0.466) and p-value (0.000<0.05). the benefits felt by users regarding the decision to use GPT chat. Every change in the benefits felt by GPT chat users will also result in a change in the decision to use GPT chat. The 95% confidence interval for the influence of perceived benefits when using GPT chat in improving decisions using GPT chat is between 0.288 and 0.657. The perceived benefits of using GPT chat in increasing the decision to use GPT chat have a high influence (f square = 0.362). There is a need for regular system maintenance and upgrades to ensure that GPT chat users can experience the benefits provided and can increase the decision to use GPT chat by 0.657.
4) **(H4)** states that the hypothesis is accepted and has a significant influence, the interaction felt by users on the ease of using GPT chat with a path coefficient value (0.487) and p-value (0.000<0.05). Positive values indicate a correlation between the user's perceived benefits and the level of decision to use. The higher the benefits felt by the user, the higher the level of decision to use. GPT chat users can

feel the benefits of the interaction provided and can increase the ease of use of GPT chat with system changes and improvements (f square = 0.311). The 95% confidence interval for the influence of the perceived benefits of interaction with GPT chat in increasing the ease of use of GPT chat is between 0.316 and 0.634.

5) **(H5)** The results of the hypothesis show that a path coefficient of -0.036 connects the perceived interaction variable with the user's decision to use ChatGPT. These negative numbers indicate an inverse relationship between perceived interactions and user decisions; thus, the higher the engagement a user perceives, the less likely they are to use ChatGPT. The results showed that the relationship between perceived interaction and a user's decision to use ChatGPT was not statistically significant. A p-value greater than 0.05 indicates that, although there is an indication of a negative relationship, the difference is not large enough to be considered statistically significant.
6) **(H6)** states that the hypothesis is accepted and has a significant influence, with a path coefficient value (0.749) and p-value (0.000<0.05). Positive values indicate a correlation between the decision to use and plans to use GPT chat in the future. The higher the decision to use, the higher the plan to use GPT chat. To ensure that the decision to use GPT chat can improve plans for using GPT chat in the future, improvements and updates to the GPT chat system are needed. The 95% confidence interval for the influence of the decision to use GPT chat on increasing plans to use GPT chat in the future lies between 0.636 to 0.847. The influence of the decision to use GPT chat is currently very large (f square = 1.280).

5. CONCLUSION

In this study, we used the variables of perceived interactivity, perceived ease of use, perceived usefulness, consideration of use, and continued use of GPT Chat. The results of our analysis increase our understanding of how this technology is used in the academic world. This study shows that the factors that influence students' decision to use GPT chat are perceived interactivity, ease of use, and usefulness. The perception that the platform was interactive, easy to use, and useful had a positive impact on their initial decision to use it. Furthermore, their initial decision to use GPT Chat also had a positive impact on their decision to continue using it after some time.

The results of our analysis showed no significant correlation between perceptions of interaction and the decision to use GPT chat, suggesting that there may be more variables not considered in this research model and that the factors influencing the adoption of this technology are quite complex. Students' use of GPT Chat is influenced by factors such as perceived usefulness, perceived ease of use, and usage considerations. These findings can serve as a foundation for developing more effective strategies to persuade students to use this technology, taking into account factors such as usability and comfort of use of the platform.

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