

Feelings, Attitudes, and Knowledge in the Learning Method Using Chatgpt among Students in Higher Education Institutions

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Abstract

This research examines the use of artificial intelligence (AI), which is ChatGPT, as a learning method. The aim of this study is to measure the level of feelings, attitudes and knowledge in learning using ChatGPT among higher education institution students. The theory that researchers use is the ABC Model by Eagle & Chaiken (1998), which measures affection, behaviour, and cognition of ChatGPT as a learning method. The research was conducted among the Edu Hub Pagoh population, which uses Kulliyah Sustainable Tourism and Contemporary Language (KSTCL) students as their sample, consisting of 42 respondents, which include 34 females (81%) and 8 males (19%). The method of this study quantitative method, which is cluster sampling. The findings confirm that all three variables show a positive response toward using ChatGPT as one of the learning methods, and the mean of the variables, which are affection, behavioural and cognitive, is 2.958, 2.852, and 2.924, respectively, and overall, the results are moderate. The positive response towards using ChatGPT as a learning method suggests the potential for its wider application in educational settings. The moderate mean values indicate room for improvement and optimization of the AI tool for better learning outcomes. The study also highlights the importance of considering students' feelings, attitudes, and knowledge when implementing AI tools in learning, which could guide future research and development in this area. Furthermore, the gender disparity in the sample (81% females and 19% males) might suggest a need for further research to understand if gender influences the response to AI learning methods. Overall, the study underscores the potential of AI, like ChatGPT, in transforming learning experiences in higher education institutions.

Keywords: Artificial Intelligent, ChatGPT, Mean, Learning Method

INTRODUCTION

The rapid development of technology in the digital era has influenced daily life, including education. Technological advancements have brought innovations to learning. Along with technological progress, it can be realised that not only can teachers be a source of knowledge, but media can also be used to acquire information. This can make the learning process more engaging and enjoyable. Technology-based learning media facilitate teachers and students in enhancing their creativity in creating digitally oriented teaching and learning activities. The teaching and learning environment has become more flexible in terms of space and time with various types of technology and learning media that are easily accessible today. Using learning media brings good benefits to the relationship between teachers and students. This is said so because teachers and students can interact with each other directly. This can also motivate students to explore the learning media to enhance their knowledge.

One of the technology-based learning media is ChatGPT (Generative Pre-trained Transformer). ChatGPT is a robot or chatbot that utilises Artificial Intelligence (AI) capable of interacting and assisting humans in various tasks. The use of ChatGPT learning media can enhance motivation for students to learn because the application provides convenience in searching for information on various subjects and learning various disciplines (Maulana, 2023). ChatGPT is able to answer human questions in text form typed into the application and can help students understand complex matters, bridge gaps in understanding, and improve learning effectiveness. This application is highly sought after by teachers and students because the provided answers are well-organised and capable of generating scholarly articles in a short time. Learning using ChatGPT media is an alternative for teachers to act as facilitators who can facilitate students in learning activities.

Although the use of ChatGPT has attractive advantages, there are several challenges to be faced in its implementation, namely concerns about the reliability and accuracy of information generated by ChatGPT. Security and privacy aspects are major concerns because interactions between students and ChatGPT can expose personal or sensitive information, and limitations in understanding context and the lack of knowledge in specific domains of ChatGPT may restrict its effectiveness in providing relevant assistance in learning (Nailus, 2023). Overall, the implementation of ChatGPT in learning offers promising opportunities to enhance interaction between students and technology but also faces various challenges that need to be addressed. With reference to related research, the potential and limitations of implementing ChatGPT can be understood by integrating technology effectively and beneficially in learning activities. Therefore, this writing aims to examine the feelings, attitudes, and knowledge of students in Higher Education Institutions (HEIs) regarding the learning method using ChatGPT.

The issue that concerns ChatGPT is that it will be misused for wrongful purposes. For example, students use it to finish their assignments and copy a whole text without adding their own ideas. It also limits student thinking, which leads to critical thinking, because students depend entirely on ChatGPT. Other than that, ChatGPT is inaccurate and unreliable as a source because there is no citation or reference.

According to a study by Reena Malik, Ambuj Sharma, Sonal Trivedi, and Rikkee Mishra (2021) titled "Adoption of Chatbots for Learning Among University Students: Role of Perceived Convenience and Enhanced Performance," the use of software solutions or computer-based systems, also known as Chatbots, is becoming increasingly popular in all sectors, including education. Therefore, the researchers aimed to examine the use of Chatbots among university students for learning purposes using the Technology Acceptance Model (TAM). A total of 768 individuals were sampled, with only 372 respondents participating in the study. These respondents were gathered through the distribution of survey forms on the Facebook application to receive feedback from students worldwide. The survey

consisted of demographic information and included six variables: perceived usefulness, perceived ease of use, perceived convenience, adoption intensity, performance enhancement, and student attitudes. The study found that Google Assistant Chatbot was the most commonly used by students. Additionally, the technology's acceptance in the education field received positive responses from the respondents. This study is crucial for researchers, policymakers, system designers for e-learning platforms, teachers, and students to make learning more effective.

Furthermore, a study titled "Students' Attitudes Towards Using ChatGPT as A Learning Tool: The Case of the University" by Aseel O. Ajlouni, Fatima Abd-alkareem, Wahba, and Abdallah Salem Almahaireh (2023) investigated students' behaviours regarding the use of ChatGPT as a learning aid. This study utilised the ABC Model, which stands for Affective, Behavioural, and Cognitive aspects. A total of 623 individuals, including 476 females and 147 males from the University of Jordan, were sampled for the study. The research found a high positive attitude towards the use of ChatGPT as a student learning tool, with moderate scores for feelings and high scores for attitudes and knowledge. The majority of respondents, accounting for 73.2%, agreed that ChatGPT has the potential for use in learning, while 20.7% of respondents remained sceptical about the information provided by ChatGPT. Additionally, some respondents found it difficult to use ChatGPT for learning purposes (20.7%), while others experienced anxiety when unable to access ChatGPT (14.6%). Therefore, the researchers recommended that educators at the University of Jordan incorporate ChatGPT into the curriculum while considering the risks of misuse among students.

Another study titled "University Students as Early Adopters of ChatGPT Innovation Diffusion Study" by Raghu Raman, Santanu Mandal, Payel Das, Tavleen Kaur, Sanjanasri JP, and Prema Nedungadi (2023) aimed to identify factors influencing student acceptance of ChatGPT at higher education institutions using Roger's Theory (2003), known as the Diffusion of Innovations Theory. The study population consisted of students from 288 universities. This study examined five factors influencing ChatGPT usage: relative advantage, compatibility, ease of use, observability, and trialability. The analysis based on gender in this study indicated that male students prioritised compatibility, ease of use, and observability, while female students preferred ease of use, compatibility, relative advantage, and trialability in ChatGPT acceptance. This study used the Research Analysis Framework method, divided into three parts: positive, neutral, and negative, using the K-Means clustering algorithm. Innovations attracted early adopters who recognized the benefits of ChatGPT and were willing to try new communication and information-sharing methods. As social media platforms become more widely accepted and used, they transitioned from early adopters to early majority and beyond. Researchers can identify the potential for ChatGPT acceptance by analysing the factors involved.

Mohammad Hosseini et al., (2023) examined the use of ChatGPT from various perspectives, including education, research, and healthcare. This study utilised the BERT Model, one of the Artificial Intelligence (AI) systems capable of understanding humans by processing large amounts of data in various forms, such as text, code generation, language translation, and many other conveniences. The study employed a mixed-method approach, combining quantitative and qualitative methods. Quantitative methods were conducted through face-to-face and online surveys using the Slido platform, while qualitative methods involved interviews with 18 selected senior respondents, which were then transcribed and adapted according to codes. The results revealed various perspectives on ChatGPT in the three sectors of education, healthcare, and research. Additionally, there was still a significant difference between proficient and non-proficient individuals in using technology. The researchers suggested conducting further transparency, equity, and reliability studies.

This study will measure KLM students' feelings, attitudes and knowledge regarding the learning method using ChatGPT and assess the relationship between the feelings, attitudes, and knowledge of KLM students regarding the learning method using ChatGPT among students in IPTA. The quantitative probability sampling method was used in this study.

RESEARCH METHOD

The methodology of the study encompasses the methods and techniques designed to design, collect, and analyse data to produce evidence that can support a particular study. The methodology explains how a particular problem is studied and why certain methods and techniques are used. Therefore, this study utilises a quantitative probability sampling method. It employs a questionnaire to gather respondent data online using Google Forms and distributed within WhatsApp groups, which serves as the distribution medium for the Google Form.

RESULT AND DISCUSSION

Based on the discussion of the findings of both study objectives, feelings, attitudes, and knowledge play a significant role in learning using ChatGPT. Without these three elements, it would be impossible for a student to use ChatGPT in learning. The intelligence of AI technology is not intended to hinder human intelligence, but the primary purpose of AI technology is to assist humans in daily tasks. Therefore, knowledge about AI, especially its strengths and weaknesses and the proper usage methods, is crucial to avoid any adverse implications.

POPULATION AND SAMPLE OF STUDY

The population is a set of individuals that cause a particular problem, a group of individuals or objects that are studied and must have similar characteristics or traits despite differences in other aspects. Conversely, the sample is a small subset of the population targeted by researchers for investigation. The sampling technique used is cluster probability sampling. Therefore, the population of this study is the students of the Higher Education Institution (IPT) Edu Hub, Pagoh. In contrast, the sample of the study is the students of the Faculty of Sustainable Tourism and Contemporary Languages (KSTCL), International Islamic University Malaysia, Pagoh.

Respondent Profile

The respondents are 42 students from the Faculty of Language and Management (KLM) at the Higher Education Institution (IPT) Edu Hub, Pagoh. These respondents comprise both males and females from four study programs: Malay Language for International Communication (MLCOM), English Language for International Communication (ENCOM), Arabic Language for International Communication (ARCOM), and Tourism Management (TMGT). Additionally, the distributed questionnaire instrument aims to determine the respondents' technology skills, whether they are not skilled, less skilled, or highly skilled. The following data have been collected from the distribution of the online questionnaire using Google Forms.

Table 1. Respondent Background

Background	Frequency/Percentage	
Sex	Male	8 person (19%)
	Female	34 person (81%)
Age	19 year old	5 person (11.9%)
	20 year old	2 person (4.8%)

	21 year old	20 person (47.6%)
	22 year old	13 person (31%)
	23 year old	1 person (2.4%)
	24 year old	1 person (2.4%)
Major	MLCOM	28 person (66.7%)
	ENCOM	10 person (23.8%)
	ARCOM	3 person (7.1%)
	TMGT	1 person (2.4%)
Year of Study	Year 1	6 person (14.3%)
	Year 2	3 person (7.1%)
	Year 3	32 person (76.2%)
	Year 4	1 person (2.4%)
Technological Skills	Not Skilled	1 person (2.4%)
	Less skilled	12 person (28.6%)
	Skilled	23 person (54.8%)
	Highly Skilled	6 person (14.3%)

Table 1 shows that female respondents are higher, with a total of 34 individuals compared to male respondents, totaling 8 individuals, accounting for 81% and 19%, respectively. Additionally, most respondents are aged 21 years, with a total of 20 individuals (47.6%), while the least are respondents aged 23 years and 24 years, both total 1 individual (2.4%). The rest consist of 5 individuals (11.9%) aged 19 years, 2 individuals (4.8%) aged 20 years, and 13 individuals (31%) aged 22 years.

Furthermore, respondents consisting of students enrolled in the MLCOM study program recorded the highest value, with a total of 28 individuals, equivalent to 66.7%, followed by ENCOM with 10 individuals (23.8%), ARCOM with 3 individuals (7.1%), and the least are students enrolled in the TMGT study program, with only 1 individual (2.4%). This is because language students often use ChatGPT to carry out assignments compared to TMGT students who have many tasks that require them to engage in outdoor activities such as site visits.

The most crowded study year is Year 3, which represents the majority of respondents, totaling 32 individuals, equivalent to 76.2%. This is because the researcher is a Year 3 student and has many Year 3 contacts on the WhatsApp application, which is the distribution medium for the Google Form.

Finally, this instrument also records data for respondents' technology skills. As seen in Table 1, a total of 23 individuals, equivalent to 54.8% of respondents, are skilled in technology. Meanwhile, 12 individuals (28.6%) are less skilled, 6 individuals (14.3%) are highly skilled, and the lowest is only 1 individual respondent who is not skilled in technology, totaling 2.4%.

RESEARCH INSTRUMENT

The research instrument is a tool, method, or technique used to obtain and collect information. This study utilises a questionnaire instrument to gather information. The questionnaire has been distributed online using Google Forms. Subsequently, this Google Form was distributed via the WhatsApp application and disseminated in WhatsApp groups, hostel blocks, and so on. The Google Form consists of five sections. Section A comprises background questions about gender, age, study program, study year, and technology skills. Then, section B is the dependent variable, which is the learning method using ChatGPT, followed by independent variables in sections C, D, and E, which are students' feelings, attitudes, and knowledge towards ChatGPT.

Learning Method Using ChatGPT

This section contains five questions related to the use of ChatGPT in learning. This instrument is based on the study conducted by Mohammad Hosseini, Catherine A. Gao, and David Liebovitz et al. (2023), which examines the use of ChatGPT in the education, healthcare, and research sectors. Therefore, using a five-point Likert scale, this instrument aims to determine the number of students who agree with the learning method using ChatGPT.

Feelings

The research instrument in section C, feelings, is to determine whether KLM students prefer using ChatGPT when completing assignments using a one to five Likert scale. Words highlighted by the researcher for questions related to feelings. For example, words like very interested, prefer more, more comfortable, feel effortless, and feel annoyed have been highlighted to indicate students' feelings when using ChatGPT. This instrument refers to the study by Adinda Arly, Nanda Dwi, and Rea Andini (2023), which examines the effects of using artificial intelligence (AI) or ChatGPT on student learning.

Attitudes

The research instrument for section D is attitudes. Questions about attitudes are asked to determine students' attitudes towards using ChatGPT using a one to five Likert scale. This instrument is based on a study written by Aseel O. Ajlouni, Fatima Abd-alkareem, Wahba, and Abdallah Salem Almahaireh (2023). The study examines student behaviour towards using ChatGPT as a learning tool.

Knowledge

The research instrument in section E, which is knowledge, is to assess whether ChatGPT can be considered as the primary reference material or not by using a one to five Likert scale as well. This instrument refers to a study by Konstantis, K., Georgas, A., Faras, A et al. (2023), which examines the quality of work and unemployment resulting from artificial intelligence (AI), namely ChatGPT.

RELIABILITY TEST (CRONBACH ALPHA COEFFICIENT)

Table 2. Cronbach Alpha Coefficient Values

Section	Cronbach Alpha Coefficient Values
Section B	0.868
Section C	0.913
Section D	0.866
Section E	0.792

After the pilot study was conducted on 42 respondent individuals, data cleaning was performed. After the data was cleaned, all research instruments consisting of Part B, Part C, Part D, and Part E underwent a reliability test using IBM SPSS. This reliability test was conducted to ensure that the research instruments could be used and could measure what was intended to be measured, namely the variables. Part B represents the dependent variable, which is the learning method using ChatGPT, while Part C, Part D, and Part E represent the independent variables, namely feelings, attitudes, and knowledge. It was found that all Cronbach Alpha values exceeded 0.7. This indicates that this research instrument can be used and can measure all variables of feelings, attitudes, and knowledge regarding the use of ChatGPT in the learning method.

Table 3. Measurement Scale for Cronbach Alpha Coefficient

Cronbach Alpha Coefficient Values	Level
>0.90	Very High
0.70-0.89	High
0.30-0.69	Moderate
<0.30	Low

Source: (Sekaran, 1992; Mohd Majid, 2005; Creswell, 2009; Pallant, 2010)

Through the George and Mallery (2001) measurement scale, Section B and Section D indicate a high level because the Alpha values exceed 0.8, namely 0.868 and 0.866 respectively. Furthermore, Section C is at a very high level because the Alpha value exceeds 0.9, which is 0.913. This indicates that students have positive feelings that encourage them to use ChatGPT in their learning methods. Section E records the lowest level, but still remains at a high level as it exceeds 0.7, with an Alpha value of 0.792. This indicates that the research instrument is less effective in assessing students' knowledge about the use of ChatGPT in learning methods, or that students have less knowledge about the correct use of ChatGPT. All Sections record good Alpha values, meaning that the instrument tests all variables of this study. However, Section C initially had five questions. However, when reliability testing was conducted, the Alpha value of this Section was below 0.7. Therefore, question C5 had to be removed to ensure that the alpha value exceeded 0.7. This proves that question C5 is not effective in identifying students' feelings about the use of ChatGPT in learning.

Data Analysis

This study conducts two types of analysis, namely descriptive analysis and inferential analysis. Descriptive analysis measures the mean value within the first objective, while inferential analysis, which uses Pearson correlation, is conducted within the second objective of this study.

Descriptive Analysis

The method of descriptive analysis is employed in this study to calculate the mean score within each variable, both between the dependent and independent variables. This descriptive analysis is carried out for objective 1, which aims to measure the level of feelings, attitudes, and knowledge of KLM students regarding the use of ChatGPT in learning among IPTA students. Through descriptive analysis, the minimum scores are interpreted based on Riduwan's article (2012). The following is the interpretation table for minimum scores:

Table 4. Interpretation of Likert Scale

Mean Score	Mean Interpretation
1.00 - 1.50	Very Low
1.51 - 2.50	Low
2.51 - 3.50	Moderate
3.51 - 4.00	High

Source: (Riduwan, 2012)

Table 5. Descriptive Analysis of Minimum Mean Values for Variables

Variables	Mean	Level
Learning Method Using ChatGPT	2.990	Moderate

Feelings	2.958	Moderate
Attitudes	2.852	Moderate
Knowledge	2.924	Moderate

Based on Table 5, the following are the minimum mean values recorded for all dependent and independent variables in this study. A minimum mean value of 2.99 is recorded for the dependent variable, which is the method of learning using ChatGPT. Meanwhile, the independent variable regarding feelings recorded a high minimum mean value of 2.958. The study results show that all variables recorded moderate minimum mean values.

Inferential Analysis

Furthermore, inferential analysis is used for the second objective, which is to measure the relationship between the feelings, attitudes, and knowledge of KLM students regarding the use of ChatGPT in learning among IPTA students. This objective employs inferential analysis, where Pearson correlation is used to measure the relationship between all variables in this study.

Table 6. Inferential Analysis of Pearson Correlation Analysis

Variable	TOTC	TOTD	TOTE
TOTB	<0.001	<0.001	<0.001
Hypothesis	Rejected	Rejected	Rejected

Table 6 shows that all three independent variables have a positive relationship with the dependent variable of this study. All three relationships have significant values lower than the Alpha value. All independent variables, namely Section C (TOTC), Section D (TOTD), and Section E (TOTE), recorded a value of 0.001, which is lower than the Alpha value of 0.005. Therefore, the hypothesis is rejected, and all variables positively correlate with the dependent variable, namely Section B (TOTB). The findings of this study indicate that the method of learning using ChatGPT is influenced by these three aspects: feelings, attitudes, and students' knowledge.

DISCUSSION

Referring to the findings of the first objective, the study's results indicate that the variable of feelings shows the highest value, at 2.958. This situation indicates that respondents are more inclined to provide perceptions or feelings compared to attitudes and knowledge in the method of learning using ChatGPT. Undoubtedly, there are many controversies and positive and negative perceptions regarding ChatGPT. This is because some parties express negative perceptions about ChatGPT, such as its misuse. According to Adawiah Hosni et al. (2023), concerns about the misuse of ChatGPT have negative consequences such as plagiarism and fraud. For instance, the New York Department of Education took precautionary measures by limiting the use of ChatGPT in public schools to avoid plagiarism. Additionally, the use of ChatGPT at the university level is controversial because of concerns about students' misuse of ChatGPT, which violates ethics and trust as students (Muhammad et al. et al., 2023).

However, the majority of society today holds a positive perception of AI. The research findings show that all respondents have a positive perception of the method of learning using ChatGPT. For example, on average, respondents agree with the statement "I am very interested in ChatGPT," recording the highest percentage of 16 individuals (38.1%) compared to other Likert scale statements. Additionally, 15 individuals (35.7%) of respondents also feel comfortable using ChatGPT when completing tasks. This

situation indicates that the community is more aware of the convenience of ChatGPT in facilitating learning. The findings of this study are consistent with a study titled "Students' Attitudes Towards Using ChatGPT as a Learning Tool: The Case of the University of Jordan" by Aseel O. Ajlouni et al. (2023), which states that 73.2% of students agree with ChatGPT's ability to facilitate the learning process in the classroom. Therefore, it is clear that students are more sensitive to the proper use of ChatGPT without violating any student ethics in the learning process.

Furthermore, the second objective uses inferential analysis, where Pearson correlation analysis is used to measure the relationship between all variables of this study. The findings of the inferential analysis of the second objective show a positive relationship between the dependent variable, namely the method of learning using ChatGPT, and the three independent variables, namely feelings, attitudes, and knowledge. Undoubtedly, the use of ChatGPT in learning encompasses feelings, attitudes, and students' knowledge of ChatGPT. Regarding feelings, a positive perception is a significant factor in the use of ChatGPT in learning. This is because when a person has a positive perception of ChatGPT, it will instil confidence in them to use ChatGPT in learning. According to Timothy Gould (2021), there is a positive relationship between students' confidence and excellent learning performance.

Moreover, knowledge also has a positive relationship with the method of learning using ChatGPT. Based on the research findings, 12 individuals (28.6%) of respondents agree with statement E1, "ChatGPT generates desired answers more quickly." This can be further evidenced by ChatGPT's ability to produce various types of writing quickly, such as generating papers, poems, resumes, and so on (Samir A. El-Seoud et al., 2023). Therefore, this situation clearly indicates that respondents have knowledge and skills in using ChatGPT. Thus, knowledge is one of the significant factors in the method of learning using ChatGPT.

Additionally, attitude also plays a crucial role in the method of learning using ChatGPT. According to the Dewan Edisi Keempat (2018) dictionary, an attitude is the regulation and action taken to address something. Based on the research findings, the majority of respondents take action in using ChatGPT. For example, 17 individuals (40.5%) of respondents agree with statement D3, "I will use ChatGPT to summarise and analyse educational materials." This situation clearly indicates that respondents have been using ChatGPT to facilitate daily tasks. According to Samir A. El-Seoud and Shehab Eldeen Ayman (2023), ChatGPT can be used as a guide to improve the quality of students' academic writing, such as reviewing students' paper information. Therefore, it is evident that attitude is an essential element in the method of learning using ChatGPT.

CONCLUSION

In conclusion, the study shows that the level of all three elements which is feelings, attitudes and knowledge towards KLM students in learning method using ChatGPT are same which is moderate. But the mean score of feeling are higher than attitudes and knowledge which is 2.958. Also, the hypothesis is rejected because all the variable have a positive relationship with dependent variable which is below 0.01. it is suggested that in the future there will be a study about why variable feelings are higher than attitudes and knowledge in learning method using ChatGPT.

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