

Factors Influencing the Attitudes Towards Using ChatGPT for Learning Among Marketing Students at Politeknik Sultan Abdul Halim Mu'adzam Shah

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Received 1 Oktober 2025, Accepted 28 Oktober 2025, Available Online 17 November 2025

Abstract. Technology integration is now essential for maintaining global competitiveness in education, especially in higher education. ChatGPT is increasingly being utilized to enhance learning among students. Despite growing interest in ChatGPT, research indicates inconsistent student attitudes toward its use, largely due to concerns about accuracy, ethics, and academic value. However, limited studies have explored these attitudes among Polytechnic students. This study investigates the influence of perceived usefulness, ease of use, credibility, and social influence on marketing students' attitudes toward using ChatGPT for learning at Politeknik Sultan Abdul Halim Mu'adzam Shah (POLIMAS). This study utilized quantitative methods, employing a nineteen-item questionnaire. A random sampling method was used, with a sample of 250 marketing students at POLIMAS. The data collected were analyzed using the Statistical Package for Social Sciences (SPSS) Version 29. Perceived usefulness, ease of use, and social influence are found to positively impact attitudes toward using ChatGPT for academic purposes, with perceived social influence having the strongest influence. However, the perceived credibility of ChatGPT does not significantly influence attitudes towards its use. This study enriches the existing literature on student attitudes toward ChatGPT. The results offer valuable insights for educators, program heads, and POLIMAS, guiding their decisions on incorporating ChatGPT into teaching and learning practices to improve academic outcomes. In conclusion, to encourage students to utilize ChatGPT, workshops should emphasize practical and user-friendly applications that demonstrate its relevance in academic settings. Institutions may also promote peer learning and create a supportive environment that fosters students' use of ChatGPT. Future research may involve a larger and more diverse sample to enhance generalizability. Longitudinal and qualitative approaches also help explore changes in attitudes and provide deeper insights into student experiences. Given that perceived credibility was not a significant factor in this study, future research could investigate students' perceptions of the reliability of AI-generated content and its potential impact on learning.

Keywords: chatgpt, perceived ease of use, perceived usefulness, perceived credibility, perceived social influence

INTRODUCTION

Generative Artificial Intelligence (GenAI) is becoming an increasingly important topic in education. The Minister of Higher Education, Datuk Seri Mohamed Khaled Nordin, emphasizes that technology adoption, especially in higher education is crucial for global competitiveness and is no longer an option (The Sun, 2023). This initiative aligns with the Malaysia Higher Education Blueprint 2015-2025, which advocates for globalized online learning to enhance educational accessibility and personalize learning experiences for students. The integration of artificial intelligence (AI) driven technology can significantly benefit the learning process when utilized as a tool.

Generative Artificial Intelligence (GenAI) technology, such as ChatGPT, developed by OpenAI, is increasingly adopted to improve learning and teaching (Chen et al., 2023). It is built on advanced large language model technology. The ability to generate human-like text has made it a transformative tool in many fields, driven by innovations in deep learning and reinforcement learning (Brown et al., 2020). Unlike traditional search engines, ChatGPT was able to remember information from earlier parts of the dialogue for later questions.

According to Altarawneh (2023) and Zahara et al. (2024), ChatGPT can improve student learning in various disciplines to a significant extent. AI provides tailored assistance, instant responses, and breaks down complex concepts into easy-to-understand explanations, all of which foster better educational results. For this reason, students perform various tasks using ChatGPT, such as writing papers, translating languages, and getting factual responses (Mitra & Chitra, 2024). Approximately 180 million people use ChatGPT, which has been popular due to its user-friendly design and capacity to reinforce learning from human feedback (Aydın & Karaarslan, 2023).

Furthermore, Malaysian Qualification Agency (MQA) through Advisory Note No. 2/23 "Generative Artificial Intelligence in Higher Education" mentions that GenAI applications able to support teaching and learning (T&L) as follows; (1) support self-learning through the generation of answers (responses) based on student's needs, interests, and level of understanding; (2) improves the quality of student assignments by doing curation, adaptation and optimization of information resources; (3) foster an interactive, immersive, and authentic learning environment for academic staff and students to conduct T&L processes; and (4) equip students with technology skills relevant to current needs and desires, especially taking into account technological development in the career field (MQA, 2023). Hence, Jabatan Pendidikan Politeknik dan Kolej komuniti (JPPKK), in an official circular dated 17 April 2023, urged the polytechnics and community colleges to utilize GenAI technologies, such as ChatGPT, to enhance T&L implementation, as it can optimize student learning outcomes.

PROBLEM STATEMENT

In the digital learning era, generative AI (GenAI) tools, such as ChatGPT, have gained increasing attention as supportive learning aids among higher education students. Students generally perceive ChatGPT positively, citing its benefits, including saving time, providing personalized tutoring, and aiding in idea generation (Ngo, 2023). Polytechnics in Malaysia, as Technical and Vocational Education and Training (TVET) institutions, are exploring ChatGPT's potential to improve the student learning experience.

Recent studies have highlighted encouraging trends in ChatGPT usage among polytechnic students. Mahmood et al. (2024) reported that students at Kota Kinabalu Polytechnic demonstrated a willingness to use ChatGPT for learning purposes. Meanwhile, a study by Kamaruddin et al. (2023) involving ten Malaysian polytechnics found that Digital Technology students benefited from using ChatGPT to improve their understanding of concepts, programming tasks, and assignment quality. Despite the growing interest and usage, other research has pointed out inconsistencies in students' acceptance and attitude towards ChatGPT. Kasneci et al. (2023) observed that while some students actively embrace the tool, others remain hesitant due to concerns regarding information accuracy, ethical implications, and its academic relevance.

These mixed responses highlight the importance of examining what shapes students' attitudes toward ChatGPT. Additionally, there is a limited research exploring the factors influencing attitudes toward ChatGPT for educational purposes among polytechnic students. To address this gap, this study investigated factors influencing students' attitudes toward the use of ChatGPT among marketing students at Politeknik Sultan Abdul Halim Mu'adzam Shah (POLIMAS), focusing on perceived social influence, usefulness, ease of use, and credibility.

RESEARCH QUESTIONS

1. Is there a positive influence between perceived usefulness (PU) and attitudes towards the use of ChatGPT among marketing students at POLIMAS?
2. Is there a positive influence between perceived ease of use (PEOU) and attitudes towards the use of ChatGPT among marketing students at POLIMAS?
3. Is there a positive influence between perceived credibility (PC) and attitudes towards the use of ChatGPT among marketing students at POLIMAS?
4. Is there a positive influence between perceived social influence (PSI) and attitudes towards the use of ChatGPT among marketing students at POLIMAS?

RESEARCH OBJECTIVES

1. To investigate the influence of perceived usefulness (PU) on attitudes toward the use of ChatGPT among marketing students at POLIMAS.

2. To investigate the influence of perceived ease of use (PEOU) on attitudes toward the use of ChatGPT among marketing students at POLIMAS.
3. To investigate the influence of perceived credibility (PC) on attitudes toward the use of ChatGPT among marketing students at POLIMAS.
4. To investigate the influence of perceived social influence (PSI) on attitudes toward the use of ChatGPT among marketing students at POLIMAS.

SCOPE OF RESEARCH

This study was limited to marketing students at POLIMAS who were on campus during academic session 1, 2024/2025. Therefore, its findings cannot be generalized to marketing students at other polytechnics or students in different disciplines. Furthermore, the study exclusively examined four variables: PU, PSI, PEOU, and PC that influence attitudes towards ChatGPT for learning purposes.

SIGNIFICANCE OF RESEARCH

The existing body of knowledge is enriched by this study, which provides empirical evidence on the factors that influence students' attitudes toward using ChatGPT in academic settings. For POLIMAS educators, these findings are relevant, as they provide enhanced insight into student perceptions and interactions with ChatGPT. By identifying factors such as PU, PEOU, PC, and PSI, the study helps programme heads design programmes that align with students' technological preferences. Ultimately, understanding these factors can help institutions integrate tools like ChatGPT more effectively to enhance student academic performance.

LITERATURE REVIEW

Students' Attitude Towards Use of ChatGPT

Attitude refers to the psychological state of preparedness toward a subject or person. This attitude can result in either positive or negative feelings, depending on how the person or issue has been previously interacted with (Bain, 1928). Students generally hold favourable views regarding the use of ChatGPT as a learning tool, according to recent studies. A high percentage of students view ChatGPT as a valuable learning tool that can facilitate academic writing and enhance the learning process (Ajlouni et al., 2023; Hidayat & Sujarwati, 2024). Undergraduate students at the University of Jordan demonstrate a highly positive attitude toward ChatGPT as a learning tool, with 73.2% acknowledging its potential to facilitate learning (Ajlouni et al., 2023). In contrast to student perspectives, faculty members at a Pakistani university expressed more negative attitudes, citing concerns about cheating and plagiarism (Iqbal et al., 2022).

Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)

Davis (1989) defined PU as the extent to which an individual believes technology will improve their job performance, while PEOU refers to the belief that using a technology will require minimal effort. The Technology Acceptance Model (TAM) is a prominent framework for analyzing the adoption and utilization of new technologies (Silva, 2015). According to TAM, PEOU and PU are critical determinants of user acceptance of information systems (Davis, 1993). Empirical studies have consistently shown that TAM possesses high validity and explains a substantial amount of the variance in usage behavior (Davis, 1993). Furthermore, research consistently shows that PEOU and PU influence attitude toward using (ATU) the technology (Or, 2024; Harnida & Mardah, 2023). Or (2024) also found that including ATU in TAM offers a more thorough insight into user behaviour, especially in situations where use is voluntary.

Prior studies indicate that users are more likely to adopt technology positively if they perceive it as easy to learn and use (Granić Marangunić, 2019). Alzoubi (2024) specifically notes that PEOU and PU positively influence users' attitudes toward using ChatGPT. Users are more inclined to embrace ChatGPT when they find it valuable for achieving their educational objectives, such as improving comprehension, retention, and application of course content. Similarly, research by Rudolph et al. (2023b) and Alzoubi (2024) indicates that ChatGPT's perceived usefulness fosters student collaboration in learning. Their findings suggest that students appreciate ChatGPT's capacity to offer explanations, facilitate discussions, and contribute to problem-solving, which in turn boosts their engagement and acceptance of the technology. Meanwhile, PEOU can evoke positive emotional responses, which contribute to a positive overall assessment of the technology (Verkijika, 2020). For

students, PEOU in the context of ChatGPT indicates a belief that its use for learning requires little effort, marked by clarity, easy-to-use navigation, and minimal effort. Thus, the following assumptions are consequently formulated:

Hypothesis 1: Perceived Usefulness (PU) has a positive influence on the attitude toward using ChatGPT for learning among marketing students at POLIMAS.

Hypothesis 2: Perceived Ease of Use (PEOU) has a positive influence on the attitude toward using ChatGPT for learning among marketing students at POLIMAS.

Perceived Credibility (PC)

Regarding the use of ChatGPT, PC denotes the degree to which users deem information from ChatGPT as trustworthy and reliable. PC directly impacts user trust in ChatGPT, subsequently influencing their inclination to use it for various tasks (Ali et al., 2023). While PC is essential for fostering trust and encouraging usage, it is also crucial to acknowledge that scepticism towards AI-generated content remains prevalent. Therefore, critically evaluating information from ChatGPT, while maintaining a balance of trust and caution, is encouraged (Huschens et al., 2023). Based on this, the following hypothesis is formulated:

Hypothesis 3: Perceived Credibility (PC) has a positive influence on the attitude toward using ChatGPT for learning among marketing students at POLIMAS.

Perceived Social Influence (PSI)

An individual's evaluation of how others influence their thoughts and behaviours is known as PSI. In the context of ChatGPT, PSI specifically examines how social elements like peer endorsements and prevailing societal standards shape individual attitudes toward its adoption. A study by Timilsena and Ghimire (2024) found that PSI has a negative influence on attitudes towards ChatGPT usage. However, another study has shown that PSI is a significant factor in ChatGPT adoption intention among IT students (Sabeh, 2024b). Despite the mixed influence of PSI on students' attitudes toward using ChatGPT, the following hypothesis is developed:

Hypothesis 4: Perceived social influence (PSI) has a positive influence on the attitude toward using ChatGPT for learning among marketing students at POLIMAS.

METHODOLOGY

Research Framework

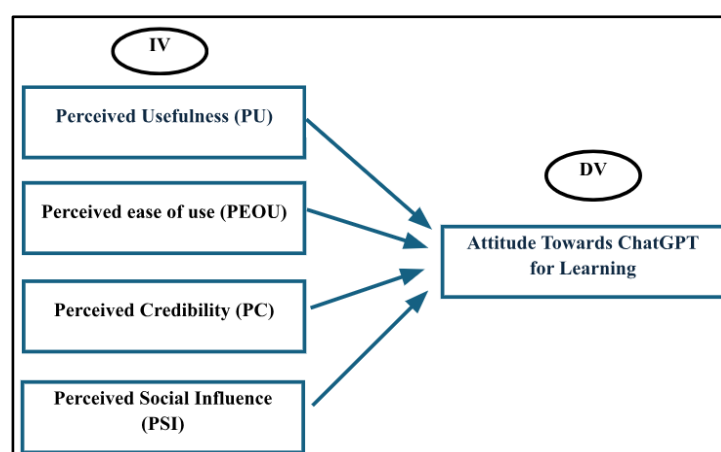


FIGURE 1-Research Framework

As shown in Figure 1, this study aims to investigate the factors influencing marketing students' attitudes towards using ChatGPT for learning at POLIMAS. The independent variables examined are PSI, PC, PEOU, and PU.

Data Collection

TABLE 1-The Population

Semester of Study	No. of students
1	203
2	42
3	152
4	46
5	111
Total	554

Source: Sistem Pengurusan Maklumat Politeknik (SPMP)

TABLE 2-Measurement

Variables	No. of Items	Sources	Scale
PU	6	(31)	1= Strongly Disagree
PEOU	4		2= Disagree
PC	3	(32)	3= Uncertain
PSI	3		4= Agree
Attitudes Towards Using ChatGPT for Learning	3	(31)	5= Strongly Agree

This study utilized quantitative research methods. The questionnaire was disseminated to the respondents using a Google Form. This research utilized the simple random sampling method. The respondents are Diploma in Marketing (DPR) Programme students in academic session 1, 2024/2025 at POLIMAS. However, this study's population excludes Semester 6 students who are attending their internships. The study's total population consists of 554 marketing students, as shown in Table 1. For this study, a minimum sample size of 226 respondents is needed, according to Krejcie and Morgan (1970).

The questionnaire comprised two sections. The initial section aimed to collect demographic details, including gender and the total number of semesters completed, as well as the frequency of ChatGPT usage per month for learning. The second section contained closed-ended questions designed to assess participants' PU, PEOU, PC, PSI, and their attitudes towards using ChatGPT for learning. This study adapted its instruments from prior research, employing a 5-point Likert scale and scoring methodology, as detailed in Table 2.

Data Analysis

SPSS Version 29 was used for data analysis. Analysis of descriptive statistics was utilized to assess respondent demographics and monthly ChatGPT usage frequency. Multiple linear regression analysis was applied to determine the significant relationships between the dependent and independent variables. The traditional p-value threshold of 0.05 for statistical significance has been widely used but is increasingly scrutinized. Some researchers propose lowering this threshold to 0.005 or even 0.001 to reduce false positives (Ioannidis, 2018; Miller & Ulrich, 2019). However, this study used a significance value of 0.05, which is the accepted threshold for the research hypothesis. The result is considered significant, and the hypothesis is accepted if the value is equal to or less than 0.05. Conversely, if the value is greater than 0.05, the hypothesis is rejected.

RESULTS

Descriptive Analysis

TABLE 3-Respondents

Demographic Profile		(N=250)	(%)
Gender	Male	76	30.4%
	Female	174	69.6%
Semester of Study	1	108	43.2%
	2	29	11.6%
	3	41	16.4%
	4	25	10.0%
	5	47	18.8%
How often do you use ChatGPT per month in the context of your studies?	Never	9	3.6%
	1-2 a month	55	22%
	Weekly	135	54%
	Almost Daily	51	20.4%

Table 3 illustrates that 250 respondents participated in this study, exceeding the minimum sample size of 226 respondents required by Krejcie and Morgan's sampling table. Out of these, 174 (69.6%) were female, and 76 (30.4%) were male. The distribution of respondents according to their semester of study showed that the majority were from Semester 1 (108 respondents, 43.2%), followed by Semester 5 (47 respondents, 18.8%), Semester 3 (41 respondents, 16.4%), Semester 2 (29 respondents, 11.6%), and Semester 4 (25 respondents, 10.0%). In terms of ChatGPT usage in the context of their studies, 135 respondents (54%) reported using ChatGPT weekly, 51 respondents (20.4%) used it almost daily, and 55 respondents (22%) used it 1–2 times per month. In comparison, only nine respondents (3.6%) reported never using ChatGPT.

Multiple Linear Regression Analysis

TABLE 4-Multiple Linear Regression Analysis

Variables	Beta	t	Sig.
PU	.272	3.471	<.001
PEOU	.237	3.208	.002
PC	.068	1.361	.175
PSI	.375	7.154	<.001

TABLE 5-Hypotheses Result

Hypothesis	Beta	Sig.	p-value	Results
H1	.272	<.001	<0.05	Accepted
H2	.237	.002	<0.05	Accepted
H3	.068	.175	>0.05	Rejected
H4	.375	<.001	<0.05	Accepted

To evaluate the influence of PSI, PC, PU, and PEOU on students' attitudes towards using (ATU) of ChatGPT, a multiple linear regression analysis was conducted. The analysis indicated that PU positively influenced students' attitudes toward ChatGPT, with ($\beta = 0.272$, t -value = 3.471, Sig. = < 0.001, p -value = <0.05). Therefore, Hypothesis 1 (H1) was supported. Similarly, PEOU also showed a significant positive influence, with ($\beta = 0.237$, t -value = 3.208, Sig. = 0.002, p -value = <0.05), thus supporting Hypothesis 2 (H2). However, the result for PC ($\beta = 0.068$, t = 1.361, Sig. = 0.175, p -value = >0.05) showed no significant influence on students' attitudes toward using ChatGPT for learning. Therefore, Hypothesis 3 (H3) was rejected. The PSI showed a significant and positive effect on students' attitudes toward ChatGPT usage for learning, with ($\beta = 0.375$, t -value = 7.154, Sig. = < .001, p -value = <0.05). Therefore, Hypothesis 4 (H4) was supported. Among the four independent variables, PSI had the highest beta coefficient, making it the most influential factor in shaping students' attitudes toward using ChatGPT for academic purposes.

DISCUSSION

The finding that PU significantly influenced students' attitudes toward using ChatGPT for learning supported the first research objective. This suggests that students are more inclined to use ChatGPT when they believe it enhances their learning effectiveness. This aligns with research by Radyta (2024), Timilsena and Ghimire (2024), Almogren et al. (2024), and Alshurideh et al. (2024), all of whom found a positive impact of PU on students' attitudes toward ChatGPT. Therefore, when students perceive ChatGPT as a beneficial tool that improves their understanding, their attitude becomes more favourable, increasing the likelihood of its use. H1 is supported by the positive influence observed between PU and students' attitudes toward using ChatGPT for learning.

The second research objective explored how PEOU affects attitudes toward learning with ChatGPT. The findings indicate that PEOU significantly influences students' attitudes, suggesting that students are more inclined to integrate ChatGPT into their learning process if they perceive it as easy to use and navigate. This was supported by research that also found PEOU to have a positive impact on students' attitudes towards ChatGPT (Radyta, 2024; Timilsena & Ghimire, 2024; Almogren et al., 2024; Alshurideh et al., 2024). This supports Hypothesis 2 (H2), which posits that PEOU positively influences students' attitudes towards integrating ChatGPT into their learning.

For the third research objective, this study found that PC had no significant influence on students' attitudes toward using ChatGPT for educational purposes. This suggests that students may not place substantial emphasis on the trustworthiness of ChatGPT's content when forming their attitudes. However, this finding contrasts with previous research by Masa'deh et al. (2024) and Timilsena et al. (2024), which highlighted PC as a significant factor in user attitudes. Wang and Fan (2025b) suggest that the influence of PC may vary depending on contextual variables, such as course type, exposure duration, and pedagogical environment. One plausible explanation is that students may view ChatGPT primarily as a brainstorming or drafting assistant, rather than a definitive source of knowledge. Consequently, Hypothesis 3 (H3), which proposed that PC would positively influence students' attitudes towards using ChatGPT was rejected.

PSI was identified as a factor that positively influences attitudes towards using ChatGPT for learning, fulfilling the fourth research objective. This suggests that students' attitudes toward ChatGPT are strongly influenced by the encouragement of peers or instructors to use it. A similar result was found by Abdaljaleel et al. (2024), who reported that PSI influences the attitudes of university students towards ChatGPT. The results provided evidence to support Hypothesis 4 (H4), which stated that PSI has a positive influence on attitudes towards ChatGPT for learning among marketing students at POLIMAS. Furthermore, with the highest beta value among all variables, PSI emerged as the most influential factor, indicating that students are more likely to adopt ChatGPT when encouraged by their peers, lecturers, or social circles.

CONCLUSION

The objective of this study was to examine the factors that influence the attitudes of POLIMAS marketing students towards the use of ChatGPT for learning. It specifically examined the influence of PC, PSI, PU, and PEOU on ChatGPT usage. Data from 250 respondents was utilised to assess the hypotheses using a quantitative approach, specifically multiple linear regression analysis.

Students' adoption of ChatGPT for learning appears to be primarily driven by its perceived usefulness, ease of use, and the influence of peers or instructors. PSI was identified as the most significant factor in shaping students' attitudes towards using ChatGPT for educational objectives. Conversely, the perceived accuracy of the information presented by ChatGPT did not impact on their attitude.

Therefore, workshops or training regarding ChatGPT should be delivered in a simplified and accessible manner, emphasizing the practical usefulness of ChatGPT to encourage attention to use (ATU) among students. Institutions should also cultivate a supportive learning environment that promotes peer-to-peer knowledge sharing about the use of ChatGPT-generated information.

This study significantly enriches the current understanding of attitude to use (ATU) ChatGPT. By identifying the key factors of PU, PEOU, PC, and PSI, this research provides empirical evidence that supports further exploration of attitude towards ChatGPT in educational settings. Furthermore, understanding how students perceive and respond to tools like ChatGPT enables more informed and strategic decisions regarding the

integration of AI into T&L activities. This study provides valuable insights that can guide programme heads in planning targeted activities aimed at enhancing students' attitudes towards adopting ChatGPT, thereby improving their academic outcomes. By aligning instructional approaches with students' technological preferences, institutions can enhance students' academic performance.

This study has several limitations. Firstly, focusing solely on marketing students at one polytechnic (POLIMAS) may limit the generalizability of the results. Secondly, the use of cross-sectional data means the results might change over semesters or after training. To address these limitations, future research could expand the sample to include students from diverse programs and institutions, thereby enhancing generalizability. Longitudinal studies would also be beneficial to observe how students' attitudes evolve. Additionally, qualitative research could offer deeper insights into students' experiences and concerns when utilizing ChatGPT for academic purposes. Finally, it is suggested that future research examine the impact of students' perceptions of the reliability of AI-generated content on their learning.

As technology increasingly influences the learning experience, it becomes crucial to examine how students adapt to such advancements. Therefore, this study significantly enhances the understanding of student attitudes towards ChatGPT in educational contexts by examining PU, PC, PEOU, and PSI.

ACKNOWLEDGMENTS

I would like to sincerely thank Jabatan Pendidikan Politeknik & Kolej Komuniti (JPPKK), Politeknik Ungku Omar (PUO) and Politeknik Sultan Abdul Halim Mu'adzam Shah (POLIMAS) for their support and guidance during this study. I am also grateful to the students who took part in the study and shared their insights. Their help was essential to the success of this work. I truly appreciate everyone whose encouragement and expertise made this study possible.

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