

Users' Satisfaction in Using ChatGPT among University Students in UOW Glenmarie, Malaysia

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ABSTRACT

Generative AI applications like ChatGPT are transforming how university students conduct research, write, and study. However, because AI models occasionally generate unverified or inaccurate information, student adoption depends heavily on trust. This study evaluates how usefulness, ease of use, and perceived information reliability affect overall student satisfaction with ChatGPT. Surveying 385 undergraduate students at UOW Malaysia, the study applied an expanded Technology Acceptance Model (TAM). The statistical model accounted for 69.1% of the variance in user satisfaction. Results show that Perceived Usefulness is the strongest indicator of satisfaction ($\beta = 0.392$), followed closely by Information Reliability ($\beta = 0.348$), and Perceived Ease of Use ($\beta = 0.174$). While ease of navigation is appreciated, students prioritize functional utility and data accuracy when deciding whether an AI tool is genuinely valuable for their education. The study underscores the importance for educators and software developers to focus on factual accuracy and transparency to maximize the positive impact of AI in higher education.

Keywords: ChatGPT, Generative AI, Higher Education, Student Satisfaction, TAM, Information Accuracy.

INTRODUCTION

The widespread adoption of AI technologies triggers a fundamental shift across economics and social landscape, with one of the most impacted being education. The introduction of Generative artificial intelligence (GenAI), a type of AI like ChatGPT, has ushered a new era in higher education, reshaping instructional methods, enhancing education and redefining educational landscape. Its ability to generate human-like text, provide instant explanations, summarise complex information and support academic writing, has made it a valuable learning companion for university students. Unlike conventional search engines, ChatGPT offers interactive, personalized responses and feedback is tailored to individual learning needs. These capabilities enable students to complete academic tasks, improve learning experiences, stimulate critical thinking while facilitating self-directed learning. In some situations, this AI is even capable of making autonomous decisions that affect both physical and digital environments (Chen et al., 2024). Today ChatGPT has become one of the fastest-growing AI applications adopted in higher education, fundamentally transforming how students learn, conduct research, and complete academic assignments.

Malaysia has taken notable steps to embrace artificial intelligence (AI) as part of its national digital transformation agenda. Ranked 29th among 181 countries in the Oxford Insights Government AI Readiness Index 2022, the country has demonstrated considerable progress in strengthening its digital infrastructure, technological capabilities, and innovation ecosystem, thereby creating a favourable environment for AI adoption across various sectors (MIDA, 2026). This national commitment has encouraged the adoption of AI across multiple sectors, including higher education, where universities are increasingly integrating AI technologies into

teaching, learning, research, and administrative activities to support the development of a knowledge-based economy. However, the widespread use of generative AI tools among university students has raised important concerns regarding academic integrity, learning behaviour, assessment practices, and pedagogical effectiveness (Mat Yusoff et al., 2025). These issues may stem from the way generative AI systems produce information. Unlike a systematic conventional information retrieval method, generative AI produces responses probabilistically, as a result it may occasionally generate inaccurate information, fabricated references, outdated knowledge, or overly confident responses that appear credible. Concerns highlighted an important questions regarding students' trust in AI-generated information and whether perceived information reliability shapes their overall satisfaction with ChatGPT in academic settings. Consequently, students' satisfaction with generative AI is likely to depend not only on its perceived usefulness and ease of use but also on their confidence in the reliability and credibility of the information it provides.

Problem Statement and Literature Review

Problem Statement

Existing literature indicates that university students today increasingly recognize ChatGPT as a valuable learning assistant. However, concerns regarding the reliability of AI generated information still persist. Pallivathukal et al. (2024) reported that Malaysian undergraduate students frequently use ChatGPT for assignments and learning activities but continue to question the accuracy of its references and routinely verify its outputs. Similarly, Madihah and Abu Samah (2025) found that while students acknowledged ChatGPT's usefulness in enhancing academic performance, fewer than half expressed confidence in the accuracy of the information generated, highlighting an inherent tension between convenience and credibility. This study is supported by (Pine, 2024), who found over 40% of students expressing only moderate confidence, suggesting, while AI support academic work, it is not fully perceived as trustworthy source of information. Consequently, such negative users' experience with ChatGPT may affect user's satisfaction.

While students recognize its ability to streamline tasks like information retrieval and content simplification, concerns regarding reliability on information produce persist. Finding by (Nasho, 2024) highlights the dual role of AI as both a powerful tool and a potential disruptor in learning environments. Hence its long-term success in higher education depends on users' satisfaction. This paper posits that students who are dissatisfied with the technology may be less willing to continue using it. Consequently, low user satisfaction could hinder the sustained adoption of ChatGPT and limit its effectiveness as a learning tool. This has become the motivation of this research to understand how university students' satisfaction with ChatGPT for academic use is affected by their perceptions regarding the reliability, ease of use, and usefulness of the information. Insight into these relationships is critical to enhance the integration of AI into higher education and making sure that those tools enhance student learning experiences.

LITERATURE REVIEW

The aim of this research is to analyze the correlation of the factors influencing the UOW Malaysia students' ChatGPT usage and their satisfaction. Underpinned by Technology Acceptance Model (TAM) to establish a theoretical framework, this study focuses on assessing ChatGPT usage among UOW students and their satisfaction.

The Technology Acceptance Model (TAM) stems from the Theory of Reasoned Action (TRA). This theory provides a psychological framework for understanding and predicting individuals' acceptance and use of technology. TAM is adopted to examine UOW Glenmarie students' satisfaction in using ChatGPT for academic purposes. The theory focused on two core beliefs that explain why and how it affects users' intention to use a technology consequently influencing user satisfaction (Surendran, 2012). The variables are i. perceived usefulness (PU) define as the belief a technology increases one's effectiveness at work, ii. perceived ease of use (PEOU) explain the extent technology is easy to use. In this study, PU indicates students' belief that ChatGPT enhances academic effectiveness for research and writing corrections, and PEOU depicts its ease of use and accessibility, which contribute to satisfaction (Albayati, 2024; Shaengchart, 2023). This study extend TAM by including perceived reliability (PR), which is define as the degree of participant trust that a tool will provide

accurate and reliable results” (Shahzad et al., 2024). The justification of this additional variable is, in AI applications, reliability is crucial, because if the output is inaccurate, users will be unlikely to rely on the system (Lee et al. 2025). Hence and extended TAM model in this research proposed that high levels of PU, PEOU, and PR would contribute to high satisfaction with using ChatGPT and further stimulate its continuous usage in the educational setting. Utilizing this framework, the present study investigates the extent to which these variables influence students’ satisfaction with ChatGPT by revealing that the domain can effectively be used as a learning tool at UOW Glenmarie.

To directly target the specific context of ChatGPT, the study expands TAM by including perceived reliability, which is “the degree of participant trust that a tool will provide accurate and reliable results” (Shahzad et al., 2024). In AI applications, reliability is crucial, because if the output is inaccurate, users will be unlikely to rely on the system (Lee et al. 2025). Perceived reliability of information for UOW Glenmarie students also increases the confidence of using ChatGPT for academic-related tasks, in addition to PU and PEOU, to predict satisfaction. Such an expanded TAM model suggests that high levels of PU, PEOU, and reliability would contribute to high satisfaction with using ChatGPT and further stimulate its continuous usage in the educational setting. Utilising this framework, the present study investigates the extent to which these variables influence students’ satisfaction with ChatGPT by revealing that the domain can effectively be used as a learning tool at UOW Glenmarie.

Theoretical Framework

Number of studies can be found investigating the AI user satisfaction using TAM, Riady et. al (2025); Alshammari & Babu (2025). Almulla, M. A. (2024); Shokilah, 2021; Isaac, 2018. These researchers found, perceived ease of use, and perceived usefulness are the most significant factors affecting an intention to use AI and user-satisfaction. Satisfaction is defined as the difference between perceived performance of a service or product and the initial perceptions by the consumer. In Academic settings Satisfaction is valued as important (Almulla, 2024); hence it is vital to understand students’ satisfaction using ChatGPT for academic purposes.

Perceive Ease to Use (PEU)

PEU address questions of “is ChatGPT simple enough that I won't struggle to use it? Students are more likely to use ChatGPT if its application is simple and easy, consequently giving them more users satisfaction.

H1: Perceived ease of use is positively related to user satisfaction

Perceived usefulness (PU)

Davis (1989) explains perceived usefulness as a measure by which the use of technology is believed to assert benefits to the person using it and the perception of usefulness as the subjective ability of future users where using a specific application system will improve performance. In academia students are likely to regard the use of ChatGPT as favorable if they perceive it as boosting their capacity to accomplish academic tasks, thereby facilitating enhanced satisfaction (Muchran & Ahmar, 2019). Satisfaction will then support students’ inclination to accept and continue employing tools such as ChatGPT, which they consider beneficial for attaining their academic objectives.

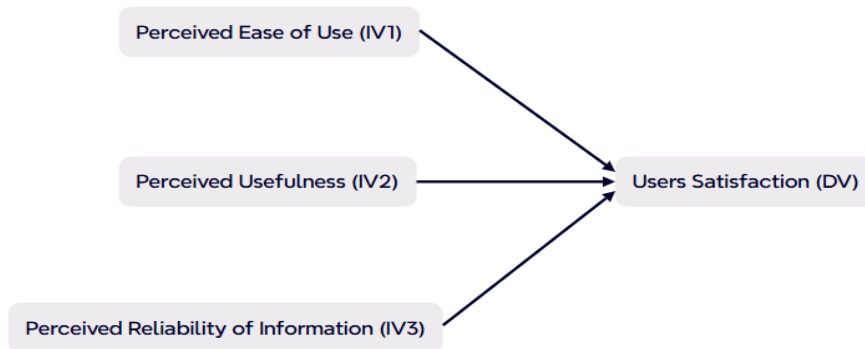
H2: Perceived usefulness is positively related to user satisfaction

Perceived Reliability (PR)

Reliability in this context refers to AI ability to deliver timely and accurate responses. Mogali (2023) found that ChatGPT did not consistently respond with accurate information when questioning about anatomical facts in its current version, hence this may jeopardize students interests and satisfaction un using ChatGPT. Students require AI tools that provide consistency, correct answers and credible sources for satisfaction (Lee et al., 2025). Hence students’ satisfaction will only increase if ChatGPT is reliable.

H3: Perceived Reliability of information is positively related to user satisfaction

Conceptual Framework



METHODOLOGY

This research uses a structured online questionnaire as a tool to collect data from undergraduate students of UOW Glenmarie, Malaysia. The questionnaire includes closed-ended questions and 5-point Likert-scale questions for ordinal data evaluating perceived ease of use, usefulness, reliability of the information, and overall satisfaction. The items of the questionnaire were pre-tested on a small group of students for clarity and reliability, and informed consent was stressed to maintain the ethical aspects. This strategy consists of good practice for quantitative research based on, Taherdoost (2021).

Analysis

A total of 385 data was collected from UOWM , from this 189 (49.1%) males, 162 (42.1%) and 34 (8.8%) choose not to declare. The age group is dominated by those aged 18 to 22 years, with students at undergraduate level dominating the responds followed by other academics. Surveyed was spread out from business students (68 or 17.7%), pre-university students (71 or 18.4%), and computing and creative media students (69 or 17.9%).

Descriptive Statistics

Descriptive statistics for the four study variables: User Satisfacion (US), Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Reliability of Information (R) is presented in Table 1. The results indicate that the mean scores ranged from 3.55 to 3.90, suggesting that respondents generally held favorable perceptions of ChatGPT for academic purposes. On the other hand PEOU recorded the highest mean score ($M = 3.90$, $SD = 0.71$), indicating that respondents generally found ChatGPT is easy to learn and use, followed by PU scored ($M = 3.77$, $SD = 0.75$) and User Satisfaction ($M = 3.68$, $SD = 0.78$), these results reflecting relatively positive perceptions of ChatGPT's usefulness and overall satisfaction. However, Reliability of Information record the lowest mean ($M = 3.55$, $SD = 0.77$), which may suggest, although respondents generally perceived the information generated by ChatGPT to be reliable, the comparatively lower mean suggests that concerns regarding the accuracy and trustworthiness of AI-generated information remain.

Overall, the standard deviations ranged from 0.71 to 0.78, indicating relatively low variability in respondents' responses and suggesting a reasonable level of consistency across the sample.

Table 1

Variable	Mean	SD	Skewness	Kurtosis
User Satisfaction	3.68	0.78	-0.801	0.867
Perceived Ease of Use	3.90	0.71	-1.178	1.655

Perceived Usefulness	3.77	0.75	-1.063	1.513
Reliability of Information	3.55	0.77	-0.752	0.859

Normality Test

The normality of the data was assessed using the skewness and kurtosis statistics. Based on Hair et al. (2019), data can generally be considered approximately normally distributed when skewness values fall within ± 2 and kurtosis values fall within ± 7 . In this study the skewness values ranged from -1.178 to -0.752 , while the kurtosis values ranged from 0.859 to 1.655 . These values as reported are well within the recommended thresholds, indicating that the distributions of all variables approximated normal.

As shown in Table 1, the skewness values ranged from -1.178 to -0.752 , while the kurtosis values ranged from 0.859 to 1.655 . All values were well within the recommended thresholds, indicating that the distributions of all variables approximated normality.

For detail, negative skewness values indicate that respondents tended to select the higher end of the Likert scale, reflecting generally favorable perceptions of ChatGPT. In addition, the positive kurtosis values suggest that the distributions were slightly more peaked than a normal distribution (leptokurtic); however, these values do not indicate a serious departure from normality.

Therefore, it can be concluded that the data satisfy the assumption of normality, supporting the use of subsequent parametric statistical analyses, such as Pearson correlation, multiple regression, or Structural Equation Modelling (SEM), where applicable.

Validity

Next, the researcher assessed construct validity using the Kaiser–Meyer–Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. KMO value of 0.848 in Table 2 indicated meritorious sampling adequacy, exceeding the recommended threshold of 0.60 (Kaiser, 1974). In addition, Bartlett's Test of Sphericity was significant ($\chi^2 = 1101.398$, $df = 6$, $p < .001$), confirming that the variables were sufficiently intercorrelated for factor analysis. These results support the adequacy of the data and provide evidence of satisfactory construct validity.

Table 2

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.848
Bartlett's Test of Sphericity	Approx. Chi-Square	1101.398
	df	6
	Sig.	.000

Reliability Analysis

Cronbach's alpha coefficient is used to checked instruments reliability, this is important as it helps to determine the internal consistency of the items measuring each construct. According to Hair et al. (2019), Cronbach's alpha values (0.70) or higher indicate acceptable reliability, while values above 0.80 demonstrate good internal consistency.

As presented in Table 3, all constructs exceeded the recommended threshold (0.70). Perceived Ease of Use recorded a Cronbach's alpha (0.821), indicating good internal consistency among its seven measurement items. Similarly, User Satisfaction demonstrated good reliability with Cronbach's alpha (0.830).

The constructs for Perceived Usefulness and Information Reliability demonstrated acceptable internal consistency, with Cronbach's alpha values of 0.785 and 0.795, respectively. These results confirm that the survey items consistently reflected their intended concepts.

Overall, the Cronbach's alpha coefficients ranged from 0.785 to 0.830, these value support that the research instrument possesses satisfactory internal consistency reliability. Therefore, all constructs were retained for subsequent statistical analyses.

Table 3

Construct	No. of Items	Cronbach's Alpha	Reliability Interpretation
Perceived Ease of Use (IV1)	7	0.821	Good
Perceived Usefulness (IV2)	5	0.785	Acceptable
Reliability of Information (IV3)	5	0.795	Acceptable
User Satisfaction (DV)	5	0.830	Good

Model Fitness

Table 4 confirmed that the model is statistically significant at $F(3, 381) = 283.439, p < .001$, indicating that the independent variables collectively explained a significant proportion of the variance in User Satisfaction. This the model produced a multiple correlation coefficient of $R = 0.831$ or 83%, suggesting a strong relationship between the independent variables and User Satisfaction.

The coefficient of determination ($R^2 = 0.691$) indicates that 69.1% of the variance in User Satisfaction can be explained by Perceived Ease of Use, Perceived Usefulness, and Reliability of Information. The remaining 30.9% of the variance may be attributed to other factors not included in the present study. Furthermore, the adjusted R^2 value of 0.688 indicates that the model retains substantial explanatory power after adjusting for the number of predictors.

Regression Coefficients

The regression coefficients revealed that all three independent variables significantly influenced User Satisfaction.

Perceived Ease of Use had a positive and significant effect on User Satisfaction ($\beta = 0.174, t = 3.823, p < .001$). This finding suggests that students who perceived ChatGPT as easier to use were more likely to report higher levels of satisfaction. Similarly, Perceived Usefulness exerted a positive and statistically significant influence on User Satisfaction ($\beta = 0.392, t = 7.936, p < .001$). Among the three predictors, Perceived Usefulness recorded the highest standardized beta coefficient, indicating that it was the strongest predictor of User Satisfaction. This finding implies that students' perceptions of ChatGPT's usefulness in supporting their academic activities play a critical role in determining their overall satisfaction.

In addition, Reliability of Information was found to have a positive and significant effect on User Satisfaction ($\beta = 0.348, t = 7.984, p < .001$). This result indicates that students who perceived the information generated by ChatGPT as reliable and trustworthy tended to report higher satisfaction levels.

Based on the standardized beta coefficients, the predictors can be ranked according to their relative influence on User Satisfaction as follows:

1. Perceived Usefulness ($\beta = 0.392$) – strongest predictor

2. Reliability of Information ($\beta = 0.348$) – second strongest predictor
3. Perceived Ease of Use ($\beta = 0.174$) – weakest, but still statistically significant predictor

Multicollinearity Assessment

Multicollinearity was assessed using the Tolerance and Variance Inflation Factor (VIF) statistics. The tolerance values ranged from 0.333 to 0.428, all exceeding the recommended threshold of 0.10. Likewise, the VIF values ranged from 2.335 to 3.003, well below the commonly accepted threshold of 5.0 (Hair et al., 2019). These results indicate that multicollinearity was not a concern, and the independent variables were sufficiently distinct to be included in the regression model.

Overall, the multiple regression analysis demonstrated that Perceived Ease of Use, Perceived Usefulness, and Reliability of Information significantly and positively influenced User Satisfaction with ChatGPT for academic purposes. The model explained 69.1% of the variance in User Satisfaction, with Perceived Usefulness emerging as the most influential predictor, followed by Reliability of Information and Perceived Ease of Use. These findings support the Technology Acceptance Model (TAM), which posits that users' perceptions of a technology's usefulness and ease of use are key determinants of favourable user outcomes. Furthermore, the significant contribution of Reliability of Information highlights the importance of information quality in shaping students' satisfaction with AI-powered educational tools.

Table 4

Model Summary					
R	R Square	Adjusted R Square	Std. Error of Estimate		
0.831	0.691	0.688	0.43655		
ANOVA	Sum of Squares	df	Mean Square	F	Sig.
Regression	162.047	3	54.016	283.439	< .001
Residual	72.608	381	0.191		
Total	234.656	384			
Coefficients	B	Std. Error	Beta	t	Sig.
(Constant)	0.138	0.128	—	1.075	0.283
Perceived Ease of Use	0.191	0.050	0.174	3.823	< .001
Perceived Usefulness	0.411	0.052	0.392	7.936	< .001
Reliability of Information	0.351	0.044	0.348	7.984	< .001
Collinearity Statistics	Tolerance	VIF			
Perceived Ease of Use	0.391	2.555			
Perceived Usefulness	0.333	3.003			
Reliability of Information	0.428	2.335			

Table 5 Hypothesis Testing Summary

Hypothesis	Relationship	β	t	p-value	Decision
H1	Perceived Ease of Use $\rightarrow$ User Satisfaction	0.174	3.823	< .001	Supported
H2	Perceived Usefulness $\rightarrow$ User Satisfaction	0.392	7.936	< .001	Supported
H3	Reliability of Information $\rightarrow$ User Satisfaction	0.348	7.984	< .001	Supported

CONCLUSION

This study examined the factors influencing students' satisfaction with using ChatGPT for academic purposes based on the Technology Acceptance Model (TAM). Three variables were found to have significant positive effects on user satisfaction. The variables are Perceived Ease of Use, Perceived Usefulness, and Reliability of Information all. Interestingly Perceived Usefulness emerged as the strongest predictor, followed by Reliability of Information and Perceived Ease of Use. These results suggest that students are more satisfied with ChatGPT when they perceive it as useful, reliable, and easy to use.

In short, TAM gives us a solid framework for understanding student acceptance of AI learning tools—especially when trust and accuracy are involved. While the study has its limits (namely, focusing on one school and relying on self-reported answers), it offers practical guidance for educators and developers. If we want AI tools to improve the learning experience, they need to be two things: reliable and easy to use.

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