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Behavioral Intention and Actual Use of ChatGPT in Higher Education: A Correlational Study

Brandon Hester
University of Louisiana Monroe, United States
https://orcid.org/0009-0008-0777-3694

ABSTRACT

Generative artificial intelligence (AI) tools such as ChatGPT are increasingly integrated into higher education, yet research emphasizes students' intentions to adopt these tools rather than their actual use. This study examined whether behavioral intention predicts self-reported usage frequency. Using secondary survey data from higher-education participants (N = 751), a three-item behavioral intention composite and a 0–7 usage-frequency index were analyzed using descriptive statistics, Pearson correlation, and simple linear regression. Mean intention was M = 3.35 (SD = 0.91) and mean frequency was M = 3.22 (SD = 2.10). Behavioral intention correlated positively with usage frequency, r = .49, p < .001, and significantly predicted use, B = 1.12, SE = 0.07, β = .49, R^2 = .239, F (1, 748) = 235.04, p < .001. Findings support TAM and UTAUT while suggesting that institutional supports are needed to translate intention into sustained and responsible AI use in higher education.

Keywords: Actual use; behavioral intention; ChatGPT; higher education; STEM education; Technology Acceptance Model; UTAUT

INTRODUCTION

Artificial intelligence (AI) tools have rapidly become embedded within higher education, transforming how students access information, complete assignments, and interact with course content. Generative AI platforms such as ChatGPT, Google Gemini, and Microsoft Copilot provide immediate feedback, support brainstorming, and streamline academic tasks, making them attractive resources for both students and faculty. Advocates of AI integration argue that these tools can enhance learning efficiency, personalize educational experiences, and support administrative processes such as grading and assessment. At the same time, concerns persist about accuracy, ethical use, and the potential for overreliance on automated systems. This tension between opportunity and challenge highlights the importance of understanding how students engage with AI in educational contexts.

Research has documented widespread student engagement with ChatGPT in higher education. Students commonly use the tool for academic tasks such as brainstorming and summarizing while also expressing concerns about cheating, plagiarism, and the need for clear institutional guidance. Students also tend to support limited forms of AI assistance more strongly than using ChatGPT to produce entire assignments (Johnston et al., 2024; Ravšelj et al., 2025). Together, these findings suggest that students' engagement with ChatGPT is shaped by both its perceived academic benefits and their ethical boundaries regarding acceptable use.

Beyond adoption rates, scholars have examined the factors shaping students' intentions to use ChatGPT. UTAUT2-based research has identified performance expectancy, social influence, and habit as predictors of behavioral intention, while facilitating conditions and habit may also influence students' reported use of ChatGPT (Moradi, 2025; Strzelecki, 2024). Related research has identified satisfaction as a mechanism linking perceived usefulness and perceived ease of use to behavioral intention (Alshammari & Babu, 2025). Collectively, this research provides insight into the factors associated with intention and use; however, fewer studies have directly quantified the extent to which behavioral intention predicts students' self-reported frequency of ChatGPT use.

This gap holds both theoretical and practical importance. Theoretically, it tests the predictive validity of intention-based models of technology adoption within the unique context of generative AI. Practically, it helps determine whether educational initiatives designed to strengthen intention—such as AI training, institutional policy support, or faculty encouragement—translate into measurable adoption. Addressing this gap requires research that explicitly compares students' stated intentions with their observed or self-reported behaviors.

Accordingly, the present study examined the extent to which students' stated intentions to use ChatGPT predicted their actual frequency of use in higher education. The overarching research question guiding this study was:
RQ1: To what extent does students' behavioral intention to use ChatGPT predict their actual frequency of use in higher education?

Two sub-questions were developed to provide a more specific focus:
RQ1a: Is there a statistically significant relationship between students' behavioral intention to use ChatGPT and their self-reported frequency of use?

RQ1b: To what extent does behavioral intention predict frequency of ChatGPT use when examined through regression analysis?

Understanding the relationship between students' behavioral intentions and their actual use of ChatGPT requires grounding the study in prior research on AI adoption and technology acceptance in higher education. Existing literature provides valuable insight into how students perceive and interact with generative AI tools, yet it has predominantly centered on perceptions and predictors of intention rather than demonstrated behavioral outcomes. A review of this scholarship highlights key trends, theoretical frameworks, and gaps that inform the present study's focus on the intention–behavior relationship.

LITERATURE REVIEW

The following literature review synthesizes empirical and theoretical studies related to AI use in higher education, with particular emphasis on generative tools such as ChatGPT. It is organized into four major sections: (1) the integration of AI tools in higher education, (2) students' perceptions of ChatGPT, (3) predictors of behavioral intention identified in technology acceptance research, and (4) the intention–behavior gap that remains underexplored. Together, these areas provide the theoretical foundation for investigating whether students' stated intentions to use ChatGPT accurately predict their actual usage behaviors.

AI Tools in Higher Education

The integration of artificial intelligence into higher education has become increasingly prominent, and researchers have begun documenting how tools such as ChatGPT are being used across student learning environments. Much of this work shows that students report clear benefits from using ChatGPT but remain cautious about its long-term implications for learning and academic integrity.

Ravšelj et al. (2025) provided one of the earliest broad surveys of ChatGPT use, finding that more than 70 percent of higher education students had

experimented with the tool. Students most frequently relied on ChatGPT for brainstorming, summarizing, and drafting tasks that emphasize efficiency and productivity. At the same time, participants often expressed concerns about plagiarism and ethical misuse. This combination of widespread use and persistent unease highlights the tension between embracing a new academic support system and safeguarding academic honesty.

Beyond patterns of adoption, research has identified a tension between the efficiency offered by generative AI and the potential cognitive risks associated with overreliance. Although AI dialogue systems can provide rapid assistance with academic research and learning, excessive dependence on these tools may encourage cognitive shortcuts and negatively affect students' decision-making, critical thinking, and analytical reasoning (Zhai et al., 2024). These findings suggest that the academic value of generative AI may depend on whether it supplements rather than replaces students' independent cognitive engagement.

Empirical research also suggests that frequent ChatGPT use does not necessarily produce positive academic outcomes. In a time-lagged study of university students, greater ChatGPT use was associated with increased procrastination and memory loss, as well as lower academic performance (Abbas et al., 2024). These findings reinforce the importance of distinguishing students' perceptions of ChatGPT's usefulness from measurable academic outcomes and considering how patterns of use may influence its effects.

Collectively, these studies highlight both the promise and limitations of ChatGPT in higher education, pointing to the need for closer examination of how students themselves weigh its advantages and drawbacks in their learning.

Student Perceptions of ChatGPT

While research has established ChatGPT's growing presence in higher education, less is known about how students themselves evaluate its role in their learning. Studies that focus specifically on students' viewpoints reveal that their attitudes are shaped by a tension between practical benefits and ethical concerns, with differences emerging based on prior use of the tool.

Students' perceptions of ChatGPT reflect both its practical value and concerns about its integration into academic work. Large-scale evidence indicates that students commonly use ChatGPT for tasks such as brainstorming and summarizing while also expressing concerns about cheating and plagiarism. Research comparing users and non-users further suggests that prior experience shapes these evaluations: users tend to view ChatGPT more favorably and support its integration into higher education, whereas non-users are more likely to oppose its integration or favor restrictions on its use (Blahopoulou & Ortiz-Bonnin, 2025; Ravšelj et al., 2025). These differences indicate that students' experiences with ChatGPT may influence how they weigh its academic benefits and potential risks.

Students' evaluations of generative AI reflect both recognition of its academic benefits and clear boundaries regarding acceptable use. Students tend to express greater support for limited applications, such as grammar assistance and conceptual clarification, than for using AI to produce entire assignments. They also emphasize the need for clear institutional guidance to distinguish appropriate from inappropriate uses of generative AI (Johnston et al., 2024). Collectively, these findings suggest that favorable perceptions of generative AI often coexist with concerns about academic integrity and responsible use.

Collectively, these studies reveal that student perspectives are complex rather than uniform, shaped by both adoption status and ethical awareness. This nuance highlights why researchers have increasingly turned to technology acceptance models to identify the specific factors that drive students' intentions to adopt ChatGPT.

Predictors of Behavioral Intention to Use ChatGPT

Students' attitudes toward ChatGPT form the foundation of adoption. Scholars have increasingly turned to technology acceptance models to explain the factors that predict behavioral intention. Much of this research draws on the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), both of which emphasize factors such as perceived usefulness, ease of use, and social influence. Studies applying these frameworks to higher education consistently demonstrate that a combination of practical functionality, user experience, and contextual factors shapes intention.

The Unified Theory of Acceptance and Use of Technology (UTAUT) provides an important framework for understanding technology adoption. Originally developed by Venkatesh et al. (2003), the model proposes that performance expectancy, effort expectancy, social influence, and facilitating conditions influence behavioral intention and technology use. A later extension of the model, UTAUT2 (Venkatesh et al., 2012), expanded the framework to better capture consumer technology adoption by introducing additional constructs such as hedonic motivation, price value, and habit. Recent research examining generative AI adoption in higher education has applied UTAUT2 to account for factors associated with voluntary technology use, including habit, hedonic motivation, and facilitating conditions (Strzelecki, 2024). While UTAUT2 expands the original framework, the present study focuses on the core relationship between behavioral intention and self-reported use that is common across both models.

Research applying technology acceptance frameworks has identified perceived usefulness and ease of use as important influences on students' adoption of ChatGPT. Trust and social influence also contribute to behavioral intention, indicating that adoption is shaped by both students' evaluations of the technology

and the expectations of individuals within their social environment (Zogheib & Zogheib, 2024).

UTAUT2-based research further indicates that habit, performance expectancy, and hedonic motivation contribute to behavioral intention, while facilitating conditions and habit also influence students' reported use of ChatGPT (Strzelecki, 2024). These findings demonstrate that adoption is shaped by both students' expectations of the technology and the conditions that support its continued use.

Satisfaction may also mediate the effects of perceived usefulness and perceived ease of use on behavioral intention, suggesting that positive evaluations of ChatGPT may strengthen adoption intentions partly by increasing satisfaction with the tool (Alshammari & Babu, 2025).

Collectively, this research shows that intention to use ChatGPT is shaped by a mix of functional, social, and experiential factors, highlighting the complexity of adoption in higher education. Although some studies have examined use behavior, the specific relationship between behavioral intention and students' self-reported usage frequency remains less fully examined.

Recent research across diverse educational contexts has identified cross-cultural variation in ChatGPT adoption and highlighted the roles of hedonic motivation, facilitating conditions, perceived usefulness, habit, and behavioral intention in shaping intention and use. Systematic reviews have also documented the rapid growth of AI-assisted learning while emphasizing the need for further examination of how intention translates into patterns of academic use (Faraon et al., 2025; Korchak et al., 2025; Sergeeva et al., 2025).

The Intention–Behavior Gap in AI Adoption

Across the existing literature, scholars have provided valuable insights into ChatGPT in higher education by documenting its adoption, exploring student viewpoints, and identifying predictors of behavioral intention. Collectively, these studies show that students evaluate ChatGPT in terms of both advantages and risks, and that intention to use the tool is consistently shaped by factors such as usefulness, ease of use, trust, social influence, and satisfaction. While this body of work advanced understanding of the psychological and contextual drivers of adoption, it remained focused primarily on stated intention rather than observable behavior.

Much of the existing literature has emphasized the factors associated with behavioral intention, including perceived usefulness, perceived ease of use, trust, social influence, satisfaction, performance expectancy, and habit (Alshammari & Babu, 2025; Moradi, 2025; Strzelecki, 2024; Zogheib & Zogheib, 2024). Although some studies have also examined use behavior, fewer have directly isolated and quantified the extent to which behavioral intention predicts students' self-reported frequency of ChatGPT use. This distinction is important because intention may be

associated with adoption without fully explaining how frequently students engage with the tool.

The present study addresses this more specific gap by examining the relationship between behavioral intention and self-reported frequency of ChatGPT use.

RESEARCH METHOD

Research Design

This study employed a quantitative, correlational research design to investigate the relationship between students' behavioral intention to use ChatGPT and their actual frequency of use in higher education. Correlational designs were well-suited for examining the degree of association between variables without manipulation or intervention, making them appropriate for secondary data analysis such as this study. In this design, behavioral intention served as the independent variable (IV), while frequency of ChatGPT use functioned as the dependent variable (DV). The purpose of this approach was to determine whether students' stated intentions to use ChatGPT were predictive of their self-reported use of the tool in practice.

Participants

The dataset consisted of responses from 751 participants in higher education. These individuals voluntarily completed an online survey distributed during the semester as part of a larger research initiative on the adoption of AI. Since this was a secondary dataset, participants were not directly recruited by the researcher; instead, they represented individuals who chose to respond to the survey.

The sample reflected a diverse demographic composition. Participants reported their gender (woman, man, non-binary) and academic role (undergraduate, graduate, faculty, staff, or other affiliates). Age categories ranged from 18 to 24 years to 75 years or older, with most respondents falling within the younger ranges (18–34), typically associated with college enrollment. Participants represented a range of academic disciplines, including business and management, humanities, social sciences, STEM and engineering, and health sciences. Their educational levels spanned from high school completion to doctoral study, and some identified as international students or scholars, which added a global dimension to the sample. Finally, participants reported their institutional type, most often four-year colleges and universities, though community colleges and other institution types were also represented.

Data Collection

The data for this study were obtained from a preexisting survey dataset developed as part of a broader investigation of artificial intelligence adoption in higher education. The survey was administered online and included items related to participant demographics, experiences with AI tools, and constructs grounded in established technology acceptance frameworks, including the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). Because the present study involved secondary data analysis, participants were not recruited directly by the researcher. For this analysis, only the items measuring behavioral intention and frequency of ChatGPT use were selected and analyzed.

The behavioral intention to use ChatGPT was measured using three Likert-scale items: *"I intend to continue using ChatGPT in the future," "I will always try to use ChatGPT in my studies,"* and *"I plan to continue to use ChatGPT frequently."* Each item was rated on a five-point scale, ranging from *"Strongly Disagree*" (1) to *"Strongly Agree*" (5), and the scores were averaged to create a composite score, with higher scores indicating stronger intentions.

The frequency of ChatGPT use was measured using a single categorical item that asked participants how often they used the tool, with response options ranging from *"Never*" to *"Several times a day.*" These responses were coded numerically on a 0-7 scale in the dataset, which allowed the variable to be treated as continuous for correlation and regression analyses.

Demographic items—including gender, age, academic role, field of study, level of education, international student status, and institutional type—were also collected and summarized descriptively to provide context for the sample but were not included in the main analyses.

Data Analysis

All analyses were conducted using IBM SPSS Statistics. The analysis began with descriptive statistics, which provided means and standard deviations for the composite behavioral intention scores and the frequency of ChatGPT use, as well as frequencies for demographic variables. To create a single measure of behavioral intention, the three intention items were averaged into a composite score, with higher values indicating stronger intentions to use ChatGPT.

To address RQ1a, a Pearson correlation was computed to examine the bivariate association between behavioral intention and frequency of ChatGPT use. This test assessed whether students who reported stronger intentions also reported a higher frequency of use. To address RQ1b, a simple linear regression was conducted with behavioral intention entered as the predictor variable and frequency of ChatGPT use as the outcome variable. This analysis provided

information on the strength and predictive power of intention in explaining actual use.

RESULTS

The purpose of this study was to examine whether students' stated behavioral intention to use ChatGPT predicted their self-reported frequency of use. To address the research questions, analyses were conducted in three stages: (a) descriptive statistics to summarize the key study variables, (b) a Pearson correlation to test the bivariate association between behavioral intention and frequency of ChatGPT use (RQ1a) and (c) a simple linear regression to evaluate the predictive power of behavioral intention on usage behavior (RQ1b).

Descriptive Statistics

Descriptive statistics were first calculated for the behavioral intention composite and the frequency of ChatGPT use. The behavioral intention variable was created by averaging three Likert-scale items ("I intend to continue using ChatGPT in the future", "I will always try to use ChatGPT in my studies," and "I plan to continue to use ChatGPT frequently"), each rated on a five-point scale ranging from Strongly Disagree (1) to Strongly Agree (5). The resulting composite produced a mean score of 3.35 (SD = 0.91), suggesting that participants reported moderately strong intentions to use ChatGPT.

The frequency of ChatGPT use was measured with a single categorical item that asked participants how often they used the tool. Response options ranged from "Never" to "Several times a day" and were coded numerically on a 0-7 scale, with higher values representing more frequent use. The mean frequency score was 3.22 (SD = 2.10), suggesting that, on average, students reported using ChatGPT between "once a month" and "once a week." The relatively large standard deviation reflects considerable variability in usage, with some participants reporting no use and others reporting daily or multiple daily use. Descriptive statistics for the behavioral intention composite and frequency of ChatGPT use are presented in Table 1.

Table 1

Descriptive Statistics for Key Study Variables (N = 751)

Variable	M	SD	Minimum	Maximum
Behavioral Intention	*3.35*	*0.91*	*1.00*	*5.00*
Frequency of ChatGPT Use	*3.22*	*2.10*	*0.00*	*7.00*

Note. Behavioral intention was rated on a 5-point scale from 1 = Strongly Disagree to 5 = Strongly Agree. Frequency of use was coded from 0 = Never to 7 = Several times a day.

Research Question 1a: Correlation Between Intention and Use

A Pearson product-moment correlation was conducted to assess the relationship between students' behavioral intention to use ChatGPT and their reported frequency of use. Results indicated a moderate, positive correlation, $r(748) = .49$, $p < .001$. This finding suggests that students with stronger intentions to use ChatGPT were more likely to report higher frequencies of actual use. The correlation was statistically significant at the .05 alpha level, providing evidence that the association was unlikely to have occurred by chance. The strength and direction of the relationship between behavioral intention and frequency of ChatGPT use are displayed in Table 2.

Table 2

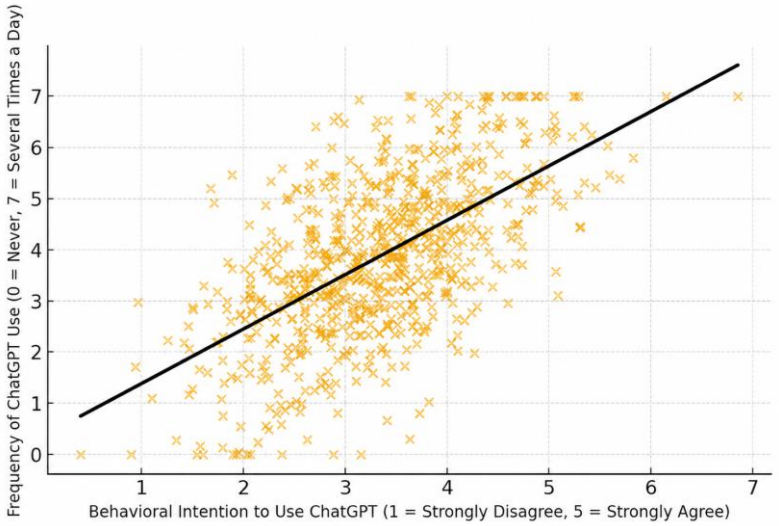
Correlation Between Behavioral Intention and Frequency of ChatGPT Use (N = 750)

Variables	1	2
1. Behavioral Intention	—	*.49***
2. Frequency of ChatGPT Use	*.49***	—

Note. Pearson's r correlation was computed to assess the relationship between students' behavioral intention to use ChatGPT and their self-reported frequency of use. ***p < .001.

A visual inspection of the relationship between behavioral intention and frequency of ChatGPT use further supported the statistical results. As shown in *Figure 1*, the scatterplot displays a clear positive linear trend, indicating that higher behavioral intention scores were associated with higher reported frequencies of ChatGPT use. This pattern is consistent with the significant, moderate correlation found in the analysis.

Figure 1
Scatterplot of Behavioral Intention and ChatGPT Use



Research Question 1b: Regression Analysis

To further assess the predictive value of behavioral intention, a simple linear regression was conducted with behavioral intention as the independent variable and frequency of ChatGPT use as the dependent variable.

The regression model was statistically significant, $F(1, 748) = 235.04$, $p < .001$, and explained 23.9% of the variance in ChatGPT usage ($R^2 = .239$). The unstandardized regression coefficient ($B = 1.12$, $SE = 0.07$) indicated that for every one-unit increase in behavioral intention, the frequency of ChatGPT use increased by approximately 1.12 units on the 0-7 scale. The standardized coefficient ($\beta = .49$) confirmed a moderate effect size, consistent with the correlation results. A simple linear regression analysis was conducted to assess the predictive relationship between behavioral intention and ChatGPT use, as summarized in Table 3.

Table 3
Simple Linear Regression Predicting Frequency of ChatGPT Use from Behavioral Intention (N = 750)

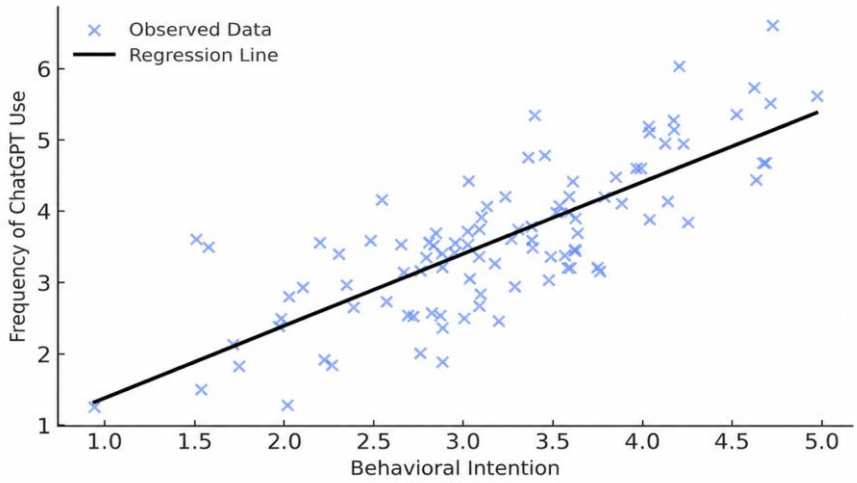
Predictor	B	SE B	β	t	p	R^2	F (1, 748)
Behavioral Intention	*1.12*	*0.07*	*.49*	*15.33*	*< .001*	*.239*	*235.04****

Note. Dependent variable: Frequency of ChatGPT Use. Model summary: F (1, 748) = 235.04, $p < .001$. All coefficients are unstandardized except β.

A visual representation of this relationship is displayed in **Figure 2**, which illustrates the positive linear association between behavioral intention and frequency of ChatGPT use. The scatterplot shows that as students' behavioral intention scores increased, their reported frequency of ChatGPT use also rose, confirming the strength and direction of the relationship identified in the regression analysis.

Figure 2

Relationship Between Behavioral Intention and Frequency of ChatGPT Use



Summary of Findings

The results provide clear support for both research questions. First, behavioral intention was significantly and positively correlated with frequency of ChatGPT use (RQ1a). Second, regression analysis demonstrated that behavioral intention significantly predicted frequency of use (RQ1b). These findings suggest that students' stated intentions are closely linked to their actual usage behaviors, with intention explaining nearly one-quarter of the variance in use.

DISCUSSION & CONCLUSIONS

The purpose of this study was to examine whether students' stated behavioral intention to use ChatGPT predicted their actual frequency of use in higher

education. Prior research has primarily focused on student perceptions and predictors of intention, drawing on frameworks such as the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and its extension UTAUT2. While these models have consistently identified factors such as perceived usefulness, ease of use, trust, and social influence as significant predictors of behavioral intention, they have generally stopped short of testing whether intention translates into real usage behavior. This gap left unanswered whether students' intentions to use ChatGPT reflected their actual adoption patterns in practice.

To address this problem, the present study aimed to answer the following research question: To what extent does behavioral intention to use ChatGPT predict students' frequency of use? Two sub-questions were developed to guide the analysis: 1) Is there a significant correlation between behavioral intention and self-reported frequency of ChatGPT use? and 2) Does behavioral intention significantly predict frequency of ChatGPT use when tested through regression analysis? By focusing on the intention-behavior relationship, this study sought to move beyond descriptive accounts of perception and intention to test whether intention serves as a reliable predictor of real-world adoption.

Summary of Key Findings

To address the research questions, this study analyzed survey data from 751 participants in higher education. Descriptive statistics revealed that students reported moderately strong behavioral intentions to use ChatGPT ($M = 3.35$, $SD = 0.91$) and moderate levels of actual use ($M = 3.22$, $SD = 2.10$). These averages suggest that, although students generally intended to use ChatGPT, their reported frequency of use varied significantly, ranging from never using the tool to multiple daily uses.

Regarding the first research question, a Pearson correlation analysis revealed a statistically significant, moderate, and positive relationship between behavioral intention and frequency of use, $r(748) = .49$, $p < .001$. Students who expressed stronger intentions to use ChatGPT were more likely to report higher levels of actual usage.

To address the second research question, a simple linear regression analysis demonstrated that behavioral intention significantly predicted the frequency of ChatGPT use, $F(1, 748) = 235.04$, $p < .001$. Behavioral intention accounted for 23.9% of the variance in usage behavior ($R^2 = .239$). The regression coefficient indicated that for every one-unit increase in intention, reported frequency of use increased by approximately 1.12 units.

Together, these findings confirm that students' stated behavioral intentions were both positively associated with and predictive of their self-reported use of

ChatGPT. However, the relationship left a substantial portion of variance unexplained, suggesting the influence of other factors not examined in this study.

Interpretation of Findings

These findings align with and extend previous research in meaningful ways. Prior research has identified perceived usefulness, perceived ease of use, trust, social influence, performance expectancy, and habit as factors associated with students' behavioral intention to adopt ChatGPT (Moradi, 2025; Strzelecki, 2024; Zogheib & Zogheib, 2024). The present study provides additional support for a central assumption of TAM and UTAUT: psychological and contextual factors shape behavioral intention, which is meaningfully associated with students' self-reported use of technology.

At the same time, this study extends earlier work by demonstrating that behavioral intention is not only a theoretical construct but also a measurable predictor of self-reported use. Prior studies have documented widespread ChatGPT adoption and examined factors such as satisfaction that shape behavioral intention, but fewer have directly quantified the relationship between intention and reported usage frequency (Alshammari & Babu, 2025; Ravšelj et al., 2025). By showing that intention explained nearly one-quarter of the variance in use, the present study provides empirical evidence that students' stated intentions meaningfully predict their self-reported ChatGPT usage patterns.

However, the finding that intention accounted for only 23.9% of the variance also highlights the limitations of intention-based models. This suggests that other influences—such as institutional policies, peer norms, or academic discipline requirements—may shape adoption in ways not captured by intention alone. This interpretation is consistent with evidence that ChatGPT adoption is influenced by ethical judgments, institutional guidance, technological access, and broader institutional conditions (Ahmed et al., 2025; Johnston et al., 2024). In this sense, the results confirm that while intention matters, it does not operate in isolation; contextual and ethical considerations may act as additional drivers of or barriers to reported use.

By directly testing the relationship between behavioral intention and self-reported usage frequency, the present study advances the literature beyond describing intention toward evaluating its predictive value for behavior. These findings contribute to the ongoing refinement of technology-adoption theories by demonstrating both the strengths and limitations of intention as a predictor.

Implications

The findings of this study carry both theoretical and practical implications for research on technology adoption in higher education. Theoretically, the results

extend the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) frameworks by demonstrating that behavioral intention is not only a significant predictor of planned adoption but also translates into observable usage behaviors. While prior studies primarily emphasized predictors of intention (e.g., perceived usefulness, ease of use, trust, and social influence), the current results show that intention itself accounted for nearly one-quarter of the variance in self-reported ChatGPT use. This provides empirical support for the assumption embedded within these frameworks that intention is a meaningful precursor to actual behavior.

Practically, these results highlight the importance of addressing students' intentions as a strategy for promoting responsible AI adoption. Because intention significantly predicted usage, interventions that strengthen positive intentions—such as targeted training, ethical guidelines, and demonstrations of practical usefulness—may foster greater integration of generative AI tools into learning environments. At the same time, the unexplained variance indicates that intention is not the sole driver of behavior, underscoring the need for institutional policies that consider contextual factors such as access, norms, and course design.

Limitations

Several limitations should be acknowledged when interpreting these results. First, the study relied on secondary data collected through self-report survey items. Although self-reports are commonly used in adoption research, they may be subject to recall bias or social desirability effects, which potentially inflate the association between intention and use. Second, the frequency of ChatGPT use was measured with a single categorical item. While this allowed for recoding into a usable continuous variable, it limited the precision of measurement. It may not have captured nuanced differences in how often or in what contexts students engaged with the tool. Third, the cross-sectional design prevented analysis of causality or changes over time, leaving it unclear whether intention consistently predicts sustained use across semesters or academic experiences. Finally, while the sample was large and diverse, it was drawn from a single survey administration and may not fully represent the broader population of higher education students.

Despite these limitations, the study offers valuable insights into the relationship between behavioral intention and the actual adoption of ChatGPT. Acknowledging these constraints not only frames the boundaries of interpretation but also points to important directions for future research, such as incorporating longitudinal designs, multi-item behavioral measures, and broader sampling strategies.

Recommendations for Future Research

This study demonstrated that behavioral intention significantly predicts the use of ChatGPT, but several areas warrant further investigation. First, future research should employ longitudinal designs to determine whether intention predicts sustained adoption over time, rather than short-term use. Second, more robust measures of actual use are needed; multi-item scales or digital trace data would capture not only frequency but also contexts and purposes of engagement.

Third, studies should explore additional predictors beyond intention, such as institutional policies, disciplinary norms, and ethical considerations, which may explain variance not captured in this study. Finally, cross-cultural and cross-institutional comparisons enhance generalizability by illustrating how adoption patterns vary across different educational systems and technological environments. Together, these directions build on the present findings by clarifying the durability, complexity, and contextual influences of AI adoption in higher education.

Conclusion

The purpose of this study was to examine whether students' stated behavioral intention to use ChatGPT predicted their actual frequency of use in higher education. Guided by two research questions, the study tested (1) the correlation between intention and use and (2) the predictive power of intention on reported usage frequency.

The findings revealed that behavioral intention was significantly and positively associated with ChatGPT use, accounting for nearly one-quarter of the variance in self-reported frequency. These results provide empirical support for a central assumption of technology adoption frameworks such as TAM and UTAUT: that intention is not only a psychological precursor but also a meaningful predictor of observable behavior. At the same time, the unexplained variance highlights that intention does not act alone and that contextual, institutional, and ethical factors likely contribute to students' adoption patterns.

This study advances the literature by moving beyond descriptive accounts of perceptions and predictors of intention to test the intention–behavior link empirically. The results hold both theoretical and practical implications for higher education. This study highlights the need to refine models of AI adoption by integrating additional behavioral and contextual variables. For practitioners, they suggest that interventions that strengthen positive intentions—through training, policy, and responsible-use guidelines—can foster more effective integration of AI tools in learning environments.

In conclusion, while students' intentions strongly shape their adoption of ChatGPT, intention alone does not fully explain behavior. The significance of this study lies in demonstrating both the promise and the limits of intention as a

predictor, thereby pointing the way toward more comprehensive approaches to understanding and supporting AI integration in higher education.

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Bio

BRANDON HESTER, M.A., is a health, wellness, and physical education instructor and a doctoral student in Curriculum and Instruction at the University of Louisiana Monroe. His research focuses on health and physical education, student health and wellness behaviors, physical activity engagement, movement skill development, and the integration of emerging technologies in educational settings. Email: hesterbt@warhawks.ulm.edu