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# Factors Influencing Students' Attitude Towards Using ChatGPT for Educational and Learning Purpose

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## Abstract

This study investigates the factors influencing students' attitudes toward using ChatGPT for educational and learning purposes, following the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB). The primary objective is to understand how perceived usefulness, perceived ease of use, perceived credibility, and perceived social influence affect students' attitudes and behavioral intentions to adopt ChatGPT on a demographic basis. The study employed a quantitative research method to analyze the data gathered through a cross-sectional survey using a purposive sampling technique. A total of 431 students from educational institutions in the Kathmandu district were targeted, yielding 397 valid responses and reflecting a high engagement rate of 92.1%. Data were collected using validated structured questionnaires and analyzed using IBM SPSS Statistics 25, employing descriptive statistics, reliability testing, correlation analysis, and multiple regression analysis. The results indicate that perceived usefulness, perceived ease of use, and perceived credibility significantly impact students' attitudes towards ChatGPT, while perceived social influence significantly affects attitudes in a negative direction. Additionally, attitude significantly impacts the behavioral intention to use ChatGPT. The study also reveals significant differences across demographic variables, with females showing more positive attitudes but males having higher behavioral intentions. Younger students and those at lower education levels exhibited more favorable attitudes and higher intentions, and students in the Education specialization showed less favorable attitudes compared to those in Science, Management, Humanities, and other streams. The findings of this study suggest that educational institutions should enhance the use of ChatGPT by focusing on the relevancy of practical benefits, ease of use, and credibility while also addressing social pressures and tailoring strategies to different demographic groups so that a supportive and inclusive environment for technology adoption could be fostered.

*Keywords: ChatGPT, AI in Education, Perceived Credibility, Perceived Social Influence, Attitude, Behavioral Intentions, Nepal*

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## Introduction

What is the most prominent buzzword of our time? Many would argue it's Artificial Intelligence (AI), as its rapid adoption and integration across various sectors is reshaping industries worldwide. This is particularly evident in education (Duong et al., 2023), where AI technologies are transforming the teaching and learning landscape (Swargiary & Roy, 2023). Among these technologies, Chat Generative Pre-Trained Transformers (ChatGPT) has emerged as a powerful tool with the potential to enhance the educational experience (Demirci, 2022; Almogren, et al.,2024). Built on advanced natural language processing, ChatGPT can provide real-time responses, explanations, and support to students' inquiries (Ray,2024), making it a valuable resource for both educational institutions and learners (Javaid et al., 2023).

ChatGPT addresses various challenges faced by educators and students by offering personalized assistance, promptly answering students' questions, and providing explanations on complex topics (Mosaiyebzadeh et al.,2023), thus fostering a more interactive and engaging learning environment (Goli et al., 2023; Baidoo-Anu & Ansah, 2023). Additionally, it can help bridge the gap in access to educational resources, particularly in regions with limited access to quality education (Goli et al., 2023). However, several challenges must be addressed to ensure its effectiveness, including the generation of incorrect information, biases in data training, and privacy concerns (Baidoo-Anu & Ansah, 2023; Filieri & McLeay, 2014). The reliability of the information supplied by ChatGPT remains a critical issue, with Opara et al., (2023) emphasizing the importance of verifying information from trusted sources.

Understanding students' attitudes towards using ChatGPT is crucial for its successful integration (Yilmaz et al., 2023), as these attitudes can significantly impact the effectiveness of ChatGPT as an educational tool (Shen et al., 2022; Rudhumbu, 2022; Tiwari et al.,2024). While ChatGPT offers significant benefits, such as supporting personalized feedback and advancing human-machine interactions (Mosaiyebzadeh et al.,2023), it also presents challenges related to academic integrity and the potential for misinformation (Prananta et al.,2023; Rasul et al., 2023). Existing studies on ChatGPT in Nepal have predominantly focused on general user behavior, qualitative insights, and the application of various adoption models like HMSAM and UTAUT (Ghimire et al., 2024; Yadav & Pokhrel, 2023; Budhathoki et al., 2024). However, these studies have not sufficiently explored demographic influences or the specific impacts of perceived usefulness, ease of use, credibility, and social influence on student attitudes and behavioral intentions regarding ChatGPT.

To address these gaps, this study raises several critical questions: How do perceived usefulness, ease of use, social influence, and credibility shape students' attitudes towards ChatGPT in educational contexts? Furthermore, how do these attitudes influence students' behavioral intentions to adopt ChatGPT as a learning tool? Additionally, what role do demographic factors such as gender, age, educational level, and specialization play in shaping these attitudes and intentions? By exploring these questions, this research aims to provide a nuanced understanding of the factors driving ChatGPT adoption among students in Nepal, ultimately contributing to the effective integration of AI technologies in education.

## Framework of the Study

The adoption of ChatGPT for educational purposes is influenced by several critical factors, as established by prior research on technology acceptance models (Davis, 1989; Venkatesh et al., 2003), with perceived usefulness shown to positively affect student attitudes by enhancing learning experiences and improving digital competencies (Duong et al., 2024; Al-Qaysi et al., 2024; Sah et al., 2024). Perceived ease of use also plays a significant role in technology adoption, as technologies that are easier to use are more likely to be accepted by users (Alshurideh et al., 2024), particularly in shaping students' attitudes towards ChatGPT (Duong et al., 2024; Khan et al., 2024). Social influence, including peer and societal expectations, significantly impacts students' behavioral intentions toward ChatGPT adoption (Noor & Mostafa, 2024),

reinforcing the relevance of social factors in shaping attitudes (Raman et al., 2023; Venkatesh et al., 2003). Similarly, perceived credibility, encompassing users' trust in the reliability and security of the technology, has emerged as a key determinant in fostering positive attitudes toward ChatGPT (Camilleri, 2024; Sah et al., 2024), with trust directly influencing behavioral intentions (Shi et al., 2024).

Additionally, demographic factors such as gender, age, educational level, and specialization have been shown to influence technology adoption behaviors significantly (Venkatesh & Morris, 2000; Igbaria et al., 1997; Cigdem & Yildirim, 2014), where studies highlight that gender and age can lead to variations in how users perceive and adopt technology (Morris & Venkatesh, 2000; Selwyn, 2008; Teo, 2011). Educational attainment and field of specialization also contribute to differences in attitudes and intentions to use ChatGPT, with certain fields demonstrating higher acceptance rates than others (Sahin & Thompson, 2007; Cigdem & Yildirim, 2014). Altogether, these factors—perceived usefulness, ease of use, social influence, credibility, and demographic variables—form the foundation of this study's conceptual framework examining students' attitudes and intentions toward adopting ChatGPT for educational purposes (Venkatesh & Morris, 2000; Cigdem & Yildirim, 2014; Igbaria et al., 1997). Drawing from the literature review, the following conceptual framework is developed to examine the key factors influencing students' attitudes and intentions towards using ChatGPT.

## Objectives of the Study

The main objectives of this research are:

1. To examine the influence of Perceived Usefulness, Perceived Ease of Use, Perceived Social Influence, and Perceived Credibility on students' Attitudes towards ChatGPT in educational and learning contexts.
2. To analyze the impact of students' Attitude towards ChatGPT on their Behavioral Intention to adopt ChatGPT for educational and learning purposes.
3. To explore whether there are significant differences in students' attitudes and behavioral intentions towards ChatGPT based on demographic variables, including gender, age, educational level, and specialization.

## Methodology

This study employed a causal-comparative survey research design to explore the factors influencing students' attitudes towards using ChatGPT for educational purposes. Data were collected from a total of 431 students in the Kathmandu Valley, with 397 valid responses retained for analysis. The cross-sectional survey approach was deemed most appropriate for capturing the necessary data within a defined time frame. Students across various educational levels in the Kathmandu Valley, including +2, Bachelor, Master, MPhil/PhD, and other categories are referred as the population of this study. A purposive sampling technique was utilized to effectively target these specific educational groups (Subedi et al., 2023). Quotas were established to ensure balanced representation, with 200 students sampled from below the Master's level and 200 from the Master's level and above. The final sample included 45 respondents from the +2

level, 97 from Bachelor's programs, 220 from Master's programs, 11 from MPhil/PhD programs, and 24 from other categories. The sample size exceeded the required 384 respondents, as determined by a 95% confidence level and a 5% margin of error (Hair et al., 2016), thus ensuring the statistical validity and reliability of the study.

Data were collected using a structured questionnaire grounded in the extended Technology Acceptance Model (TAM) as proposed by Davis (1989), and further developed by Tiwari et al. (2023), Yilmaz et al. (2023), and Shen et al. (2022). The questionnaire consisted of 24 items, with 4 items for each variable designed to measure perceived usefulness, perceived ease of use, perceived credibility, perceived social influence, attitude, and behavioral intention. Responses were recorded on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The survey was administered electronically via Google Forms, disseminated through social media and other communication platforms, between March 25, 2023, and June 10, 2023. Of the 450 questionnaires distributed, 431 were returned, and following the exclusion of 34 responses with no use of ChatGPT, 397 were deemed valid for inclusion in the analysis. Data were meticulously reviewed for accuracy and completeness before being coded and entered into IBM SPSS Statistics 25 for analysis. The study employed a variety of statistical techniques, including descriptive statistics, reliability testing via Cronbach's alpha, correlation analysis, multiple regression analysis, t-tests, and the Kruskal-Wallis test. The Kruskal-Wallis test, a non-parametric method, was specifically selected due to the data's non-normal distribution and the lack of homogeneity of variances among the groups.

## Results and Discussion

### 1. Influence of Perceived Usefulness, Perceived Ease of Use, Perceived Social Influence, Perceived Credibility on students' Attitudes, and Impact of Student Attitudes on Behavioral Intentions towards ChatGPT in educational and learning contexts

#### 1.1. Descriptive Analysis

**Table 1**
*Frequency of Variables*

| Statistics | N Valid | Mean | Std. Deviation |
|---|---|---|---|
| Perceived Usefulness | 397 | 3.7154 | 0.74083 |
| Perceived Ease of Use | 397 | 3.5699 | 0.92181 |
| Perceived Credibility | 397 | 3.1385 | 0.92182 |
| Perceived Social Influence | 397 | 3.4559 | 0.79432 |
| Attitude | 397 | 3.6083 | 0.86470 |
| Behavioral Intention | 397 | 3.5932 | 0.96945 |

Out of 431 collected responses, 397 were valid, indicating a high engagement rate of 92.1% among ChatGPT users. The sample consisted of 62.2% male and 37.8% female respondents, primarily aged 23 to 27 (63%). Educationally, 55.4% were at the Master's level, with significant representation from Bachelor's (24.4%) and +2 levels (11.3%). The majority of respondents specialized in Management (59.4%), followed by Humanities (17.1%), providing diverse perspectives on ChatGPT's utility.

The mean score for perceived usefulness is tend to be 3.72 with a standard deviation of 0.74, indicating a generally positive perception of ChatGPT's usefulness. Perceived ease of use shows a mean of

3.57 and a standard deviation of 0.92, suggesting that respondents found ChatGPT moderately easy to use. Perceived credibility scored a mean of 3.14 with a standard deviation of 0.92, reflecting neutral perceptions of the tool's credibility. Perceived social influence scored a mean score of 3.46 and a standard deviation of 0.79, indicating a moderate influence of social factors on ChatGPT usage. The attitude towards ChatGPT showed a mean of 3.61 with a standard deviation of 0.86, suggesting a generally favorable attitude. Lastly, behavioral intention to use ChatGPT scored a mean score of 3.59 and a standard deviation of 0.97, showing a moderate to high intention to continue using the tool.

### 1.2. Reliability Testing

**Table 2**
*Reliability Test*

| Construct | No. of items | Cronbach's Alpha |
|---|---|---|
| Perceived Usefulness | 4 | 0.818 |
| Perceived Ease of Use | 4 | 0.880 |
| Perceived Credibility | 4 | 0.870 |
| Perceived Social Influence | 4 | 0.754 |
| Attitude | 4 | 0.903 |
| Behavioral Intention | 4 | 0.925 |
| Overall Reliability | 24 | 0.953 |

Reliability, as measured by Cronbach's alpha, assesses how well a set of items measures a single unidimensional latent construct (Hwang, 2013). Cronbach's alpha values above 0.70 are generally considered acceptable, with values above 0.80 indicating good reliability, and values above 0.90 considered excellent (Hair et al., 2014). The reliability analysis of the constructs, measured using Cronbach's Alpha, indicates high internal consistency across all items. perceived usefulness ($\alpha = 0.818$), perceived ease of use ($\alpha = 0.880$), perceived credibility ($\alpha = 0.870$), perceived social influence ($\alpha = 0.754$), attitude ($\alpha = 0.903$), and behavioral intention ($\alpha = 0.925$) all show strong reliability. The overall reliability for all 24 items is excellent, with a Cronbach's Alpha of 0.953, confirming that the constructs are reliably measured in this study.

### 1.3.Correlation Analysis

Perceived usefulness (pu) strongly correlates with perceived ease of use (peou) ($r = 0.816$), perceived social influence (psi) ($r = 0.735$), and attitude (att) ($r = 0.797$). This suggests that when users find ChatGPT useful, they also perceive it as easy to use and socially endorsed, leading to positive attitudes. Perceived Ease of Use (PEOU) strongly correlates with PSI ($r = 0.661$) and ATT ($r = 0.742$), underscoring the importance of usability in shaping social perceptions and attitudes. Behavioral Intention (BI) shows moderate correlations with PEOU ($r = 0.663$) and ATT ($r = 0.745$), indicating that ease of use and positive attitudes are primary drivers of users' intentions to use ChatGPT.

The correlation matrix shows significant relationships (**$p < 0.01$, 2-tailed**) between the variables studied

**Table 3**
*Correlation Matrix*

| Variable | Usefulness | Ease of Use | Credibility | Social Influence | Attitude | Behavioral |
|---|---|---|---|---|---|---|
| Usefulness | 1 | - | - | - | - | - |
| Ease of Use | 0.816** | 1 | - | - | - | - |
| Credibility | 0.573** | 0.406** | 1 | - | - | - |
| Social Influence | 0.735** | 0.661** | 0.674** | 1 | - | - |
| Attitude | 0.797** | 0.742** | 0.622** | 0.644** | 1 | - |
| Intention | 0.546** | 0.663** | 0.353** | 0.302** | 0.745** | 1 |

**Correlation is significant at the 0.01 level (2-tailed)

## 1.4. Multiple Regression Analysis

**Table 4**
*Model Summary*

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .845[a] | .714 | .711 | .46493 |
| 2 | .745[a] | .556 | .554 | .64712 |

a. Predictors:(Constant), Perceived Social Influence, Perceived Ease of Use, Perceived Credibility, Perceived Usefulness
b. Predictors: (Constant), Attitude

The model summary as in table 4 reveals a strong relationship between the predictors (perceived usefulness, perceived ease of use, perceived credibility, and perceived social influence) and attitude, with an R value of 0.845 and an R-squared value of 0.714, indicating that 71.4% of the variability in Attitude is explained by these factors. The Adjusted R-squared of 0.711 confirms the model's robustness (Cohen, 1988). The standard error of 0.46493 suggests a good fit of the model to the data (Field, 2013). For behavioral intention, attitude as a predictor shows a moderate positive relationship with an R value of 0.745 and an R-squared value of 0.556, explaining 55.6% of the variance. The adjusted R-squared of 0.554 and a standard error of 0.64712 further support the model's reliability (Cohen, 1988; Field, 2013).

**Table 5**
*ANOVA Results*

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 211.358 | 4 | 52.839 | 244.446 | .000[b] |
| | Residual | 84.735 | 392 | .216 | | |
| | Total | 296.093 | 396 | | | |
| 2 | Regression | 206.765 | 1 | 206.765 | 493.751 | .000[b] |
| | Residual | 165.412 | 395 | .419 | | |
| | Total | 372.177 | 396 | | | |

1.
a. Dependent Variable: Attitude
b. Predictors: (Constant), Perceived Social Influence, Perceived Ease of Use, Perceived Credibility, Perceived Usefulness
2.
a. Dependent Variable: Behavioral Intention
b. Predictors: (Constant), Attitude

The table 5 shows that the regression model for Attitude is highly significant, with an F-statistic of 244.446 ($p < 0.001$), indicating that the predictors (Perceived Social Influence, Perceived Ease of Use, Perceived Credibility, Perceived Usefulness) explain a significant portion of the variance in Attitude (Tabachnick & Fidell, 2013). Similarly, for Behavioral Intention, the model is significant with an F-statistic of 493.751 ($p < 0.001$), showing that Attitude as a predictor explains a substantial portion of the variance. The high sum of squares for the regression compared to the residuals in both models confirms their robustness and explanatory power (Tabachnick & Fidell, 2013).

**Table 6**
*Multiple regression results coefficients*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | .127 | .122 | | 1.037 | .300 | | |
| | Perceived Usefulness | .466 | .063 | .399 | 7.352 | .000 | .248 | 4.039 |
| | Perceived Ease of Use | .328 | .046 | .350 | 7.197 | .000 | .309 | 3.236 |
| | Perceived Credibility | .294 | .036 | .313 | 8.223 | .000 | .504 | 1.983 |
| | Perceived Social Influence | -.099 | .050 | -.091 | -1.971 | .049 | .343 | 2.917 |
| 2 | (Constant) | .578 | .140 | | 4.142 | .000 | | |
| | Attitude | .836 | .038 | .745 | 22.221 | .000 | 1.000 | 1.000 |

1-a. Dependent Variable: attitude
2- a Dependent Variable: Behavioral Intention

The multiple regression analysis in table 6 reveals that perceived usefulness (beta = 0.399, b = 0.466, $p < 0.001$), perceived ease of use (beta = 0.350, b = 0.328, $p < 0.001$), and perceived credibility (beta = 0.313, b = 0.294, $p < 0.001$) significantly positively influence attitude, indicating these factors are crucial for developing favorable attitudes towards ChatGPT. Interestingly, Perceived Social Influence has a small but significant negative effect on Attitude (Beta = -0.091, B = -0.099, $p = 0.049$), suggesting that social pressures might slightly deter positive attitudes. For Behavioral Intention, Attitude is a strong predictor (Beta = 0.745, B = 0.836, $p < 0.001$), confirming its significant influence on users' intentions to use ChatGPT. The collinearity statistics show that multicollinearity is not a concern, with VIF values ranging from 1.983 to 4.039 and tolerance values above 0.2, ensuring reliable interpretation of the predictors' impacts (O'Brien, 2007; Menard, 1995). These findings highlight the importance of perceived usefulness, ease of use, and credibility in shaping positive attitudes and behavioral intentions towards ChatGPT (Davis, 1989; Venkatesh & Davis, 2000).

## 2. Demographic Variables Differences in Attitude and Behavioral Intention

### 1.4. Gender

The independent samples t-test in table 7 revealed a significant difference in attitudes towards ChatGPT use between males and females, t(394.997) = -2.053, p = .041. Females (M = 3.71, SD = 0.60) reported significantly more positive attitudes towards ChatGPT compared to males (M = 3.55, SD = 0.99). Therefore, the hypothesis that gender influences attitudes towards ChatGPT use is supported.

Similarly, a significant difference was found in behavioral intentions to use ChatGPT between males and females, t(278.844) = 2.433, p = .016. Males (M = 3.69, SD = 0.90) exhibited significantly higher behavioral intentions to use ChatGPT compared to females (M = 3.44, SD = 1.05). Thus, the hypothesis that gender affects behavioral intentions to use ChatGPT is also supported. The interesting finding is that female have greater positive attitude towards ChatGPT but males are using more of it in comparison to female.

**Table 7**
*Difference in Attitude and Behavioral Intention between Male and Female*

| Dependent Variable | Gender | N | Mean | SD | t | Df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval |
|---|---|---|---|---|---|---|---|---|---|
| Attitude Towards ChatGPT | Male | 247 | 3.55 | 0.99 | 2.053 | 394.997 | .041 | -0.163 | -0.320 to -0.007 |
| | Female | 150 | 3.71 | 0.60 | | | | | |
| Behavioral Intention to Use | Male | 247 | 3.69 | 0.90 | 2.433 | 278.844 | .016 | 0.252 | 0.048 to 0.455 |
| | Female | 150 | 3.44 | 1.05 | | | | | |

### 1.5. Age

**Table 8**
*Kruskal-Wallis Test Results*

| Dependent Variable | Age Group | Mean Rank | Test Statistic (H) | df | p-value |
|---|---|---|---|---|---|
| Attitude | Under 18 | 291.68 | 48.115 | 4 | < .001 |
| | 18 to 22 | 200.15 | | | |
| | 23 to 27 | 196.22 | | | |
| | 28 to 32 | 64.00 | | | |
| | Above 32 | 139.54 | | | |
| Behavioral Intention | Under 18 | 250.50 | 44.372 | 4 | < .001 |
| | 18 to 22 | 197.65 | | | |
| | 23 to 27 | 184.78 | | | |
| | 28 to 32 | 85.50 | | | |
| | Above 32 | 139.64 | | | |

The Kruskal-Wallis test in table 8 revealed significant differences in attitudes towards ChatGPT among age groups, H(4) = 48.115, p < .001. Dunn's post-hoc test indicated that participants under 18 had significantly more positive attitudes compared to those aged 18 to 22 (Test Statistic = 91.527, p < .001), 23 to 27 (Test Statistic = 105.462, p < .001), and 28 to 32 (Test Statistic = 227.682, p < .001). Conversely, participants aged 28 to 32 had significantly more negative attitudes compared to those aged 18 to 22 (Test Statistic = 136.154, p = .003), 23 to 27 (Test Statistic = 122.220, p = .007), and above 32 (Test Statistic = -150.540, p = .003). However, no significant differences were found between the age groups 23 to 27 and above 32, and between 18 to 22 and above 32.

Similarly, significant differences were found in behavioral intentions to use ChatGPT, H(4) = 44.372, p < .001. Participants under 18 had significantly higher behavioral intentions compared to those aged 23 to 27 (Test Statistic = 65.722, p = .003), 28 to 32 (Test Statistic = 165.000, p < .001), and above 32 (Test Statistic = -49.140, p = .779, though not significant after correction). Conversely, participants aged 28 to 32 had significantly lower behavioral intentions compared to those aged 18 to 22 (Test Statistic = 112.154, p = .029), 23 to 27 (Test Statistic = 99.278, p = .057), and under 18 (Test Statistic = -214.140, p < .001). No significant differences were observed between the age groups 18 to 22 and under 18, and between 23 to 27 and above 32.

## 1.6. Educational Level

**Table 9**
*Kruskal-Wallis Test Results*

| Dependent Variable | Educational Level | Mean Rank | Test Statistic (H) | df | p-value |
|---|---|---|---|---|---|
| Attitude | +2 | 288.92 | 49.045 | 4 | < .001 |
| | Bachelor | 204.24 | | | |
| | Master | 183.98 | | | |
| | MPhil/PhD | 64.00 | | | |
| | Others | 98.75 | | | |
| Behavioral Intention | +2 | 247.58 | 44.589 | 4 | < .001 |
| | Bachelor | 203.67 | | | |
| | Master | 182.02 | | | |
| | MPhil/PhD | 83.64 | | | |
| | Others | 197.75 | | | |

The Kruskal-Wallis test in table 9 revealed significant differences in attitudes towards ChatGPT across educational levels, H(4) = 49.045, p < .001. Dunn's post-hoc test showed that participants with an MPhil/PhD had significantly more negative attitudes compared to those with a Master's degree (Test Statistic = 119.982, p = .005), a Bachelor's degree (Test Statistic = 140.242, p = .001), and those classified as "Others" (Test Statistic = -144.750, p = .004). Participants with an MPhil/PhD also had significantly more negative attitudes compared to those with +2 level education (Test Statistic = 224.922, p < .001).

However, no significant differences were found between Master's and Bachelor's degrees, and between Bachelor's degree and the "Others" group.

Similarly, significant differences were found in behavioral intentions to use ChatGPT across educational levels, H(4) = 44.589, p < .001. Dunn's posthoc test revealed that participants with an MPhil/PhD had significantly lower behavioral intentions compared to those with a Master's degree (Test Statistic = 98.386, p = .042), a Bachelor's degree (Test Statistic = 119.982, p = .007), and those with +2 level education (Test Statistic = 163.941, p < .001). Additionally, participants with a Master's degree has significantly lower behavioral intentions compared to those classified as "Others" (Test Statistic = -115.727, p < .001). However, no significant differences were found between Bachelor's degree and +2 level, and between +2 level and the "Others" group.

### 1.7. Specialization

The Kruskal-Wallis test in table 9 revealed significant differences in attitudes towards ChatGPT across different specializations, H(4) = 41.114, p < .001. Dunn's post-hoc test showed that participants specializing in education have significantly more negative attitudes compared to those in humanities (test statistic = 84.132, p = .004), others (test statistic = -115.076, p = .001), science (test statistic = -119.365, p < .001), and management (test statistic = 126.249, p < .001). However, no significant differences are found between humanities and others, humanities and science, humanities and management, others and science, others and management, and science and management.

**Table 9**
*Kruskal-Wallis Test Results*

| Dependent Variable | Specialization | Mean Rank | Test Statistic (H) | df | p-value |
|---|---|---|---|---|---|
| Attitude | Management | 218.85 | 41.114 | 4 | < .001 |
| | Humanities | 176.24 | | | |
| | Education | 99.10 | | | |
| | Science | 211.47 | | | |
| | Others | 207.18 | | | |
| Behavioral Intention | Management | 208.87 | 35.622 | 4 | < .001 |
| | Humanities | 207.57 | | | |
| | Education | 99.25 | | | |
| | Science | 240.08 | | | |
| | Others | 190.66 | | | |

Similarly, significant differences were found in behavioral intentions to use ChatGPT across specializations, H(4) = 35.622, p < .001. Dunn's post-hoc test revealed that participants specializing in Education had significantly lower behavioral intentions compared to those in humanities (test statistic = 108.324, p < .001), management (test statistic = 109.617, p < .001), and science (test statistic = -140.831, p < .001). however, the difference between participants in education and others are not found to be significant. Additionally, no significant differences are found between humanities and others, humanities and

management, humanities and science, others and management, others and science, and management and science.

**Table 10**
*Independent Variables Hypothesis Testing Summary*

| Hypothesis | Beta | t Value | Sig. | Result |
|---|---|---|---|---|
| Usefulness positively affects attitude | 0.466 | 7.352 | $p < 0.001$ | Accepted |
| Ease positively affects attitude | 0.328 | 7.197 | $p < 0.001$ | Accepted |
| Credibility positively affects attitude | 0.294 | 8.223 | $p < 0.001$ | Accepted |
| Influence positively affects attitude | -0.099 | -1.971 | $p = 0.049$ | Rejected |
| Attitude positively affects behavioral intention | 0.836 | 22.221 | $p < 0.001$ | Accepted |

The analysis confirmed that perceived usefulness significantly influences attitudes towards ChatGPT, supporting the technology acceptance model (TAM) as established by Davis (1989) and further validated by Venkatesh et al. (2012) and Al-Mashari et al. (2024). Perceived ease of use also positively impacted attitudes, aligning with findings by Davis (1989), Venkatesh et al. (2003), Camilleri (2024), and Shi et al. (2024). Perceived credibility is found as a significant factor, with users who viewed ChatGPT as reliable showing more favorable attitudes, consistent with Gefen et al. (2003), Al-Qaysi et al. (2024), and Noor Al-Qaysi and Al-Emran (2024). However, perceived social influence is found to have a small negative effect on attitudes, contrasting with the unified theory of acceptance and use of technology (UTAUT) by Venkatesh et al. (2003) but supported by Shi et al. (2024), indicating the context-specific nature of social influence. The strong influence of attitude on behavioral intention to use ChatGPT is consistent with TAM and the theory of planned behavior (TPB), as noted by Ajzen (1991), Davis (1989), Duong et al. (2024), and Lee et al. (2024).

**Table 11**
*Demographic Variables Hypothesis Testing Summary*

| Hypothesis | Test Statistic | p-value | Result |
|---|---|---|---|
| There is a significant difference in attitudes towards ChatGPT based on gender. | $t = 2.053$ | $p = 0.041$ | Accepted |
| There is a significant difference in behavioral intentions to use ChatGPT based on gender. | $t = 2.433$ | $p = 0.016$ | Accepted |
| There is a significant difference in attitudes towards ChatGPT across age categories. | $H(4) = 48.115$ | $p < 0.001$ | Accepted |
| There is a significant difference in behavioral intentions to use ChatGPT across age categories. | $H(4) = 44.372$ | $p < 0.001$ | Accepted |
| There is a significant difference in attitudes towards ChatGPT across educational levels. | $H(4) = 49.045$ | $p < 0.001$ | Accepted |
| There is a significant difference in behavioral intentions to use ChatGPT across educational levels. | $H(4) = 44.589$ | $p < 0.001$ | Accepted |
| There is a significant difference in attitudes towards ChatGPT across different specializations. | $H(4) = 41.114$ | $p < 0.001$ | Accepted |
| There is a significant difference in behavioral intentions to use ChatGPT across different specializations. | $H(4) = 35.622$ | $p < 0.001$ | Accepted |

Demographic factors also played a significant role. Gender differences are observed, with females showing more positive attitudes and males' higher behavioral intentions, supported by Venkatesh and Morris (2000). Age differences are found to be significant, with younger users showing more positive attitudes and intentions, in line with Morris and Venkatesh (2000). Educational Level influenced both attitudes and intentions, with students at the +2-level showing more positive attitudes compared to those with higher qualifications, supported by Igbaria et al. (1997). Specialization differences are also found to be significant, with students in education showing lower attitudes and intentions compared to those in science, management, and humanities, consistent with findings by Cigdem and Yildirim (2014), Teo (2011), Selwyn (2008), and Sahin and Thompson (2007).

## Conclusion

Study concludes that usefulness, ease of use, and credibility are critical factors in shaping students' positive attitudes towards ChatGPT for educational purposes. The findings reveal that these factors significantly influence students' acceptance and intended use of ChatGPT, suggesting that students highly value the practical benefits, ease of interaction, and trustworthiness of the information provided by the system. Conversely, perceived social influence negatively affects students' attitudes, indicating that peer pressure or societal expectations might hinder the adoption of ChatGPT. The strong positive impact of attitudes on behavioral intentions underscores the importance of fostering favorable perceptions to ensure successful technology adoption. Furthermore, demographic factors such as gender, age, educational level, and specialization significantly impact students' attitudes and behavioral intentions, highlighting the need for tailored strategies to address diverse user groups. These insights emphasize the necessity of addressing key user perceptions and demographic differences to facilitate the effective integration of AI tools like ChatGPT in educational settings, ultimately enhancing learning experiences and outcomes. Policymakers, government, and relevant stakeholders should work in an integrated manner to ensure that more students and faculty benefit from advanced technology in education. Educational institutions should collaborate with technology institutions to provide a better platform for students and faculty, allowing them to benefit from research insights. However, misuse of technology could lead to adverse situations, so educational institutions must remain vigilant and implement preventive measures.

## Recommendation

For the advocacy of ChatGPT adoption in educational contexts, educational institutions should enhance the usefulness, ease of use, and credibility of the tool. Demonstrating the practical benefits of ChatGPT in improving learning outcomes through real-world applications and success stories can significantly boost its perceived usefulness. Improving the user interface to be intuitive and user-friendly, alongside providing training sessions or tutorials, can facilitate ease of use and encourage widespread adoption. To strengthen credibility, efforts should be made to ensure the reliability and accuracy of the information provided by ChatGPT through regular updates, content verification, and collaboration with credible educational content providers. Addressing social pressures is also crucial; institutions should create a supportive environment that encourages voluntary adoption of ChatGPT, potentially by reducing stigma or misconceptions and promoting the benefits through peer testimonials and endorsements from trusted

educational figures. Furthermore, strategies should be tailored to different demographic groups, recognizing that various groups may have unique concerns and acceptance levels. Customizing communication and support, particularly for younger students or those at lower educational levels, can enhance overall adoption rates. Future research could explore cultural and contextual factors that impact the adoption of AI technologies in education. By understanding these factors, targeted strategies can be developed for broader acceptance and integration, ensuring that ChatGPT and similar tools are effectively utilized to enhance educational experiences. Implementing these recommendations can foster a more interactive, engaging, and effective learning environment, ultimately supporting the successful integration of ChatGPT in educational context. Structural Equation modeling can be used for further research as well and other various models can be incorporated in order to get depth insight into this sector.

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