Behavioural intentions to use ChatGPT: A case of pre-service teachers in colleges of education in Ghana

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Recommended Reference: Dangor, K. F., & Edjah, J. O. (2026). Behavioural intentions to use ChatGPT: A case of pre-service teachers in colleges of education in Ghana. African Quarterly Social Science Review, 3(4), 364–374. https://doi.org/10.51867/AQSSR.3.4.78

ABSTRACT

Even though research on integration of Artificial Intelligence (AI) in higher education is promising, it appears pre-service teachers in Ghanaian colleges of education are not well represented. Using the Unified Theory of Acceptance and Use of Technology (UTAUT) model, this study sought to explore ChatGPT acceptance and use among pre-service teachers in colleges of education in Ghana. The study adopted the descriptive cross-sectional design. Data were collected from a sample of 462 respondents using an online questionnaire. The data were analysed using SPSS and SmartPLS-SEM. Results of the study show no statistically significant differences in pre-service teachers' views on performance expectancy (PE), effort expectancy (EE), facilitating conditions (FC), and social influence (SI) based on sex. The results however show statistically significant sex difference in their behavioural intention to use ChatGPT in favour of males. Also, the study found that EE, FC, and SI predicted behavioural intention to use ChatGPT whilst PE did not. The study recommends to colleges of education to develop AI policies, modify curricular, and eliminate systemic barriers to ensure ethical integration and use of ChatGPT as a pedagogical tool.

Keywords: Artificial Intelligence (AI), Colleges of Education, ChatGPT, Pre-Service Teachers, Teacher Education

I. INTRODUCTION

AI is bringing significant revolution to education across the world (Arthur et al., 2026; Bahroun et al., 2023; Ebrahimi et al., 2025; Kaur, 2026; Nyaaba & Zhai, 2024). Pioneering studies on the impact of ChatGPT on teacher education in particular are giving commendable results. For instance, pre-service teachers who use AI in preparing lesson plans demonstrate better insights in certain domains (Agormedah, 2025; Kaur, 2026). It also leads to better teaching outcomes, learner participation and understanding (Egara & Mosimege, 2024). Recognising its promise in impacting educational delivery in Africa (Apata et al., 2026) nations on the continent are rising to formally embrace it through formulation of policies. Ghana for instance developed and launched an AI policy in 2026 to leverage on the potentials of AI in human capital development. These steps are however not without challenges.

Even though there appears to be awareness and commitment by countries to harness the vast opportunities of AI in higher institutions of learning, empirical evidence presents glaring challenges that confront African countries in their resolve to integrate it into their educational programmes. These include, lack of required infrastructure, and regulations as reported in Tanzania (Ponera & Madila, 2024); lack of preparedness among stakeholders in Egypt and other countries (Apata et al., 2026); lack of curricular modifications in Nigeria (Egara & Mosimege, 2024); worries over limited pedagogical knowledge, ethical concerns, and lack of network availability in South Africa (Manzi & Modise, 2026). In Kenya as well, there are sustained fears about ethical safeguards (Wainaina & Sun, 2025). In Ghana, concerns about poor internet infrastructure, and lack of capacity building programmes for teachers are part of the challenges that have been reported (Atuahene & Boateng, 2026). These are obvious issues that undermine AI acceptance and use in teacher preparation.

In the digital age, teacher education locates itself at the nexus of AI policy and integration. This means that efforts at adopting AI models such as ChatGPT in educational programmes need to address issues concerning its acceptance by pre-service teachers who will be implementers of these programmes to drive the needed change. The OECD (2024) observed that dealing with teacher supply is no longer just about numbers but also encompasses preparing teachers to be competent in digital pedagogies such as AI integration to be able to teach. Some review studies (including Aravantinos et al., 2026) have shown that the complexities of the classroom today make pedagogical competencies in AI a fundamental requirement in the training of teachers. Their competencies in AI have consequences on the attitudes of their learners towards digital literacy (Pu et al., 2021). Wainaina and Sun (2025) described teachers as "gatekeepers"

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of AI integration which calls for curricular modifications in pre-service teacher education (Kohnke et al., 2025) through scientific investigations to identify the drivers of AI use.

Research on AI integration in the training of teachers is now emerging globally (Costache et al., 2026). In the context of Ghana, studies on the phenomenon are promising (Apata et al., 2026) yet uneven. Most of these studies appear to be concentrated on students in universities (example, Amponsah et al., 2026; Arthur et al., 2026; Gormedah, 2025; Partey et al., 2026) and in-service teachers at the pre-tertiary levels of education (see Atuahene & Boateng, 2026; Iddrisu & Iddrisu, 2025). This leaves pre-service teachers in colleges of education underrepresented in this novel area of study. Researchers (such as Arthur et al., 2026; Soko et al., 2025) have proposed the need for studies across various types of educational institutions in Africa to clarify factors affecting AI acceptance.

1.1 Research Objectives

i. To determine if there are statistically significant differences in pre-service teachers' behavioural intention to use ChatGPT base on sex.
ii. To find out if performance expectancy, social influence, effort expectancy, and facilitating conditions are predictors of pre-service teachers' behavioural intentions to use ChatGPT.

II. LITERATURE REVIEW

2.1 Theoretical Review

2..1.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

This study is underpinned by the Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. (2003). The theory is said to explain about 70 percent of users' acceptance of technology. UTAUT assumes that four variables directly impact technology acceptance and application. These are social influence, performance expectation, facilitating conditions, and effort expectancy. The theory describes social influences as how the user of technology believes significant others trust their ability to use the technology or new model. Performance expectancy is an individual's belief in the extent of benefit they will drive from using the technology whilst facilitating conditions describes the institutional and infrastructural support that exist to help the individual use the model. Lastly, the theory conceives effort expectancy as the level of simplicity that is associated with using the technology.

A number of studies have examined acceptance of AI models in education including ChatGPT by adapting the UTAUT framework. These empirical studies (Adam et al., 2025; Chen et al., 2026; Köse, 2025; Köse & Kudratovna, 2026; Manzi et al., 2026) have reported good outcomes. In the context of Ghana, Arthur et al. (2026) relied on the theory to investigate pre-service teachers' acceptance of ChatGPT. Therefore, this study finds the theory suitable.

2.2 Empirical Review

2.2.1 Sex Differences in the Use of ChatGPT

Empirical studies have explored how sex differences impacted AI use with conflicting reports. Whilst some studies have reported that sex differences do not exist, other studies have offered contrary results. In Nigeria, Nja et al. (2023) studied AI integration among science teachers using the Technology Acceptance Model (TAM). Data was collected from 170 respondents and analysed using correlation techniques. The study concluded that sex did not determine their behavioural intention to use AI. Also, Eleje et al. (2025) interrogated the topic by adopting a descriptive survey design where data was collected from 64 lecturers using questionnaires. It was found that male teachers demonstrated more positive attitudes towards AI integration. Even though these studies contributed significantly to our understanding of how sex impacted AI use, their findings were obtained based on the views of in-service teachers and lecturers. This leaves a gap in our understanding of the phenomenon in the case of pre-service teachers.

In Ghana, Nyaaba et al. (2024) also carried out a descriptive survey by collecting data from pre-service teachers using online questionnaires. The data showed that male participants exhibited more favourable attitudes towards the use of ChatGPT compared to females. Soko et al. (2026) affirmed these findings after conducting a cross-cultural study in Sub-Saharan African involving Nigeria, Malawi, Kenya, among others. The study examined data collected from 314 respondents and reported that male participants demonstrated better attitudes towards AI use. Even though these studies have yielded consistent findings, their generalisations are limited to university students where curricular content and delivery vary from what pertains in the colleges of education.

Some studies conducted in Europe appear to corroborate the findings reported among African samples. Zhang et al. (2023) who examined the topic among 452 pre-service teachers in Germany indicated that sex differences existed among pre-service teachers' AI anxiety which eventually determine differences in AI acceptance. Contrary, studies in Asia and Eastern countries appear to be inconsistent with findings from Africa. Köse and Kudratovan (2026) explored the predictors of ChatGPT use among pre-service teachers in Uzbekistan among a sample of 456 pre-service teachers. The data was analysed using PLS-SEM. Among other findings, the study found that sex did not significantly moderate

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their acceptance of ChatGPT. Similar findings were reported earlier by Köse and Kudratovna (2025) that there are no significant sex differences in pre-service teachers' ChatGPT use in Uzbekistan. Devanadera (2025) also investigated pre-service teachers' perceptions towards the use of AI based on their demographic characteristics. Data was collected from 150 respondents through online surveys. The data was analysed using descriptive statistics and Pearson correlations. Among other things, the study found that there were no significant differences in respondents' perceptions of AI based on sex.

The empirical review appears to show variations across countries and cultures. As stated earlier, it is evident that whilst studies conducted in African and European cultures appear to show that sex has a statistically significant effect on pre-service teachers AI use, reports from Eastern and Asian countries are yielding contradictory findings. This could be justified by cultural differences. It also demonstrates the fact that studies on AI use, particularly in Africa are still emerging and inconclusive.

2.2.2 Behavioural Intentions to Use ChatGPT

A number of empirical studies have been conducted on pre-service teachers' AI use and the factors that influence their behavioural intentions to use ChatGPT underpinned by the UTAUT model. For instance, Köse and Kudratovna (2025) relied on cross-sectional design to collect data from 456 student teachers using online forms to investigate how the UTAUT framework determined their ChatGPT use. The data was analysed using PLS-SEM. It emerged from the study that performance expectancy, effort expectancy, among others determined their intentions to use ChatGPT whilst social influence and facilitating conditions were not significant predictors. Similar findings were given by Adam et al. (2025) who carried out a cross-sectional study by gathering data from 221 pre-service teachers using an online questionnaire which were analysed using t-tests, ANOVA, and Pearson correlations. The study reported that facilitating conditions significantly predicted the use of ChatGPT among participants. Also, Zhang et al (2023) who examined the intention of pre-service teachers to use AI among 325 respondents from a German University indicated that perceived ease significantly predicted respondents' intention to use AI.

These findings were refuted by Örnek et al. (2026) after examining pre-service teachers' intentions to use ChatGPT by collecting data from 67 respondents in a university in Behrain based on the UTAUT model. The data was analysed using PLS-SEM. It was discovered that social influence, performance expectancy, facilitating conditions, and effort expectancy did not predict behavioural intentions to use ChatGPT. Similarly, Chen et al. (2026) also investigated the topic by investigating pre-service teachers' latent profiles in ChatGPT use. Data was collected from a sample of 128 pre-service teachers in Taiwan. The study reported that a category of respondents indicated high perceived ease of use which however did not predict their intention to use ChatGPT. Data collected from respondents was analysed using PLS-SEM. Among other things cultural differences between countries could account for the different results.

Other researchers have also investigated the topic by using different models. Indasari (2026) used the Technology Acceptance Model (TAM) in a mixed methods study to collect data from 152 pre-service teachers using questionnaires and interviews. The study concluded that the acceptance of AI was influenced by benefits, social factors, and perceived ease in terms of using AI. Demir (2026) also relied on the same model to conduct a cross-sectional study among pre-service teachers by collecting data from a total of 167 respondents which were analysed using PLS-SEM. Among other things, the study found that performance expectancy determined their actual use of ChatGPT. These studies corroborate the results given by Wainaina and Sun (2025) among Kenyan participants based on the TAM model.

In Ghana, some empirical studies have been conducted among pre-service teachers pursuing programmes in various universities. Arthur et al. (2026) for instance carried out a descriptive cross-sectional study by gathering data from 783 student teachers using questionnaires. PLS-SEM was used for data analysis. Findings of the study indicated that social influence, trust, perceived usefulness significantly predicted their AI use. Also, Abdul-Gafaar et al. (2024) examined the topic among university using TAM. The study collected data from a total of 377 respondents using a mixed methods approach. The study reported that social influence determined the acceptance of given technology. Based on the literature, it is evident that there is no consensus on the predictors of AI acceptance and use. This could be attributed to cross-cultural differences.

III. METHODOLOGY

3.1 Research Design

This study was conducted using descriptive cross-sectional design. Data was collected from respondents across different demographic characteristics including sex and level of study to have a snapshot (Cohen et al., 2007) insight into how various factors influence ChatGPT acceptance and use among students in colleges of education. This was necessary to obtain data from pre-service teachers who were pursuing their programmes of study in different colleges of education.

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3.2 Study Area

The study was conducted from pre-service teachers in the three public colleges of education in the Upper West Region of Ghana. The colleges included the Tumu College of Education in Tumu, N.J.A College of Education in Wa, and McCoy College of Education in Nadowli.

3.3 Target Population

The target population of the study comprised of about 3,500 pre-service teachers who were pursuing various Bachelor of Education programmes across the three public colleges of education in the Upper West Region of Ghana.

3.4 Sampling and Sample Size

Participants of the study involved a total sample size of 462 pre-service teachers (Krejcie & Morgan, 1970). This is composed of 215 (46.50%) male and 247 (53.50) female respondents. Convenience sampling was used to select respondents by distributing an online questionnaire through official social media platforms (WhatsApp) of pre-service teachers in Colleges of Education in the region.

3.5 Data Collection Instrument and Procedures

The study adapted the User Acceptance of Information Technology scale (Venkatesh et al., 2003) for data collection. The original instrument has eight dimensions. However, this study adapted only five of the dimensions; facilitating conditions (FC), effort expectancy (EE), performance expectancy (PE), social influence (SI), and behavioural intention to use technology (BIU). A google form was developed and the link was shared on official social media platforms of pre-service teachers to respond to. The data collection lasted for approximately two weeks. Responses were coded and cleaned on excel before analyses.

3.5.1 Assessment of Instrument Reliability and Validity

Validity and reliability assessment of the instrument was done by importing responses from excel sheet into SmartPLS (v. 4.1.1.6) for analysis. The internal reliability of the instrument was assessed using Cronbach's alpha and Composite reliability (CR) values (Table 1). The alpha and CR values were compared against the preferred value of 0.70 for reliability assessment. Also, the convergent validity of the instrument was assessed using Average Variance Extracted (AVE) by comparing them against the acceptable criterion of greater than or equal to 0.50. The discriminant validity of the instrument was also determined using Heterotrait-Monotrait values (HTMT) and Fornell-Larcker Criterion Discriminant Validity as presented in Table 2 and Table 3 respectively. The HTMT outputs between respective dimensions were measured against the preferred value of less than 0.90. The measurement model is presented in Figure 1.

Table 1

Internal Reliability and Convergent Validity of Instrument

Dimension	Items	Loading	Alpha	CR	AVE
BIU	BIU1	0.949	0.942	0.943	0.895
	BIU2	0.943			
	BIU3	0.947			
EE	EE1	0.797	0.851	0.855	0.691
	EE2	0.841			
	EE3	0.842			
	EE4	0.844			
FC	FC1	0.793	0.805	0.816	0.632
	FC2	0.860			
	FC3	0.795			
	FC4	0.727			
PE	PE1	0.839	0.885	0.889	0.744
	PE2	0.885			
	PE3	0.872			
	PE4	0.854			
SI	SI1	0.807	0.779	0.804	0.602
	SI2	0.857			
	SI3	0.678			
	SI4	0.749			

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Results from Table 1 show that all items yielded the preferred outer loadings of 0.708 on their respective dimensions apart from SI3 (0.678) which also loaded above the minimum considerable value of 0.40 (Hair et al. 2017). The Cronbach's alpha values of the dimensions are given as BIU = 0.942, EE = 0.851, FC = 0.805, PE = 0.885, and SI = 0.779 whereas the CR values are also given as EE = 0.943, EE = 0.855, FC = 0.816, PE = 0.889, and SI = 0.804. The values for each of the dimensions exceeded the minimum acceptable value of 0.70 indicating the instrument has internal consistency (Hair et al., 2017). Also, the AVE values for BIU, EE, FC, PE, and SI are given as 0.895, 0.691, 0.632, 0.744, 0.602 respectively which also exceeded the minimum value of 0.50 suggesting that the instrument has convergent validity (Hair et al., 2017).

Also, the results indicate that the instrument satisfied the condition of discriminant validity. Results in Table 2 show that the HTMT values are below 0.90 apart from EE and PE. This is also seen in Table 3 where the square root of the AVE value of each dimension is greater than their corresponding correlation with other dimensions (Hair et al., 2017) suggesting that discriminant validity is met.

Table 2

Discriminant Validity – Heterotrait-Monotrait Ration (HTMT)

Dimension	BIU	EE	FC	PE	SI
BIU					
EE	0.692				
FC	0.743	0.836			
PE	0.600	0.942	0.727		
SI	0.691	0.739	0.822	0.667	

Table 3

Fornell-Larcker Criterion Discriminant Validity

Dimension	BIU	EE	FC	PE	SI
BIU	0.946				
EE	0.622	0.831			
FC	0.650	0.696	0.795		
PE	0.552	0.818	0.616	0.863	
SI	0.601	0.608	0.641	0.558	0.776

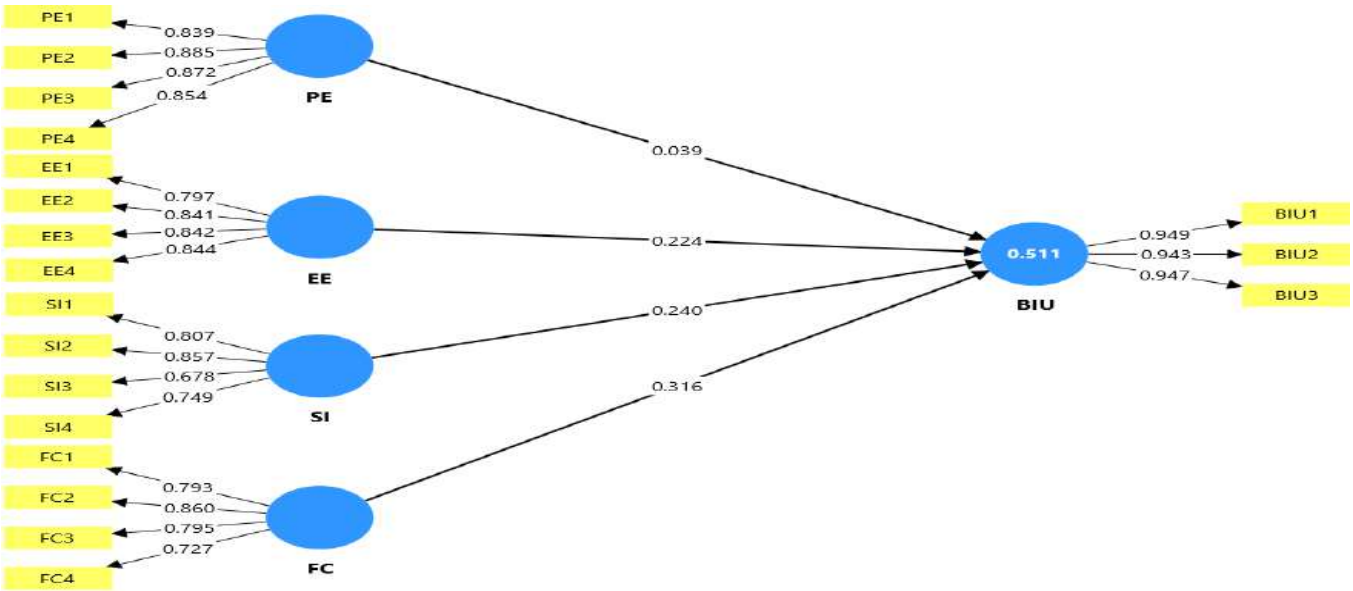


Figure 1

PLS-SEM Measurement Model

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3.5.2 Measurement Model Fit Assessment

A model fit assessment was done on the measurement model using Covariance Based Structural Equation Modeling (CB-SEM). The indices presented in Table 4 suggest that the model is fit based on the indices for RMSEA (less than 0.08), SRMSR (less than 0.08), NFI (greater than 0.90), TLI (greater than 0.923), and CFI (greater than 0.90).

Table 4

Model Fit Indices

Indices	Estimated model
ChiSqr/df	3.630
RMSEA	0.075
SRMR	0.047
NFI	0.915
TLI	0.923
CFI	0.936

3.6 Data Analysis

Analysis of results of the study was done by importing the data into SPSS (version 27) and SmartPLS (v.4.1.1.6). This was done by first processing data from respondents into Excel which was then imported into SPSS and SmartPLS-SEM software for analyses.

3.7 Ethical Considerations

Data collection and the conduct of the entire study was guided by ethical protocols provided by the American Psychological Association (APA). For instance, consent of respondents was sought by informing them that participation in the study was voluntary. Respondents were also assured that their responses shall be confidential, and the anonymity of their responses is also guaranteed.

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Sex difference in pre-service teachers' behavioural intentions to use ChatGPT

This objective was analysed using independent sample t-test. The results are presented in Table 6. Also, descriptive statistics were calculated for each of the dimensions of the scale using SPSS (Table 5). The output was interpreted guided by the following range of means: 1.0–2.49 = Low, 2.50–3.49 = Moderate, and 3.50–5.0 = High.

Table 5

Descriptive Statistics of Constructs

Construct	N	Mean	Std. Deviation	Interpretation
SI	462	2.99	.913	Moderate
BIU	462	3.24	1.175	Moderate
FC	462	3.45	.842	Moderate
EE	462	3.76	.880	High
PE	462	3.95	.913	High
Valid N (listwise)	462			

The results in Table 5 indicate moderate views reported by respondents for SI (M = 2.99, SD = .9130, BIU (M = 3.24, SD = 1.175), and FC (3.45, SD = .842). Respondents also reported high views for EE (M = 3.76, SD = .880), and PE (M = 3.95, SD = .913). Overall, even though respondents indicated highest mean value for PE and lowest mean value for SI, they indicated moderate views for their intention to use ChatGPT (BIU).

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Table 6
Sex Difference in Behavioural Intention to Use ChatGPT

Dimension	Male		Female		*T*	*P*		
	M	SD	M	SD			Cohen's d	Decision
PE	4.00	0.928	3.92	0.90	0.932	0.352	0.913	Not supported
EE	3.79	0.913	3.74	0.85	0.625	0.532	0.881	Not supported
SI	3.00	0.972	2.99	0.86	0.040	0.968	0.913	Not supported
FC	3.47	0.876	3.43	0.81	0.512	0.609	0.842	Not supported
BIU	3.46	1.135	3.05	1.18	3.835	0.001	1.158	Supported

From Table 6, the results show that there is no statistically significant differences between male and female pre-service teachers behavioural intentions in respect of PE, = $t(460) = 0.932$, $p = 0.352$; EE, = $t(460) = 0.625$, p =.532; SI, = $t(460) = 0.040$, $p = 0.968$; and FC, = $t(460) = 0.512$, $p = 0.609$. That notwithstanding, the results indicate that there is a statistically significant difference between male and female pre-service teachers in their behavioural intention to use ChatGPT (BIU) in favour of males, = $t(460) = 3.835$, $p = 0.001$. That said, the Cohen's d value for each of the dimensions is strong which indicates significant practical difference between male and female pre-service teachers for all dimensions.

4.1.2 EE, FC, PE, and SI as predictors of pre-service teachers' behavioural intention to use ChatGPT

This objective was tested using bootstrapping in SmartPLS-SEM by calculating path coefficients for the relationships between the predictor variables (EE, FC, PE, and SI) and BIU (Table 7).

Table 7
Path Coefficients

Dimensions	β	M	SD	T statistics	P values	Decision
EE -> BIU	0.224	0.222	0.072	3.124	0.002	Supported
FC -> BIU	0.316	0.316	0.062	5.082	0.000	Supported
PE -> BIU	0.039	0.043	0.061	0.651	0.515	Not supported
SI -> BIU	0.240	0.242	0.051	4.686	0.000	Supported

The results in Table 7 indicate that EE (β = 0.224, $p = 0.002$); FC (β = 0.316, $p = 0.000$), SI (β = 0.240, p = 0.000) are statistically significant predictors of pre-service teachers' behavioural intention to use ChatGPT (BIU). On the contrary, PE (β = 0.039, $p = 0.515$) is not a statistically significant predictor of pre-service teachers' behavioural intention to use ChatGPT (BIU). Therefore, the null hypothesis was rejected in respect of EE, FC, and SI. However, the null hypothesis was not rejected in respect of PE. The results further show positive relationship between all the dimensions and BIU which vary from weak to moderate in terms of effect size.

4.2 Discussion

Findings of the study indicate no statistically significant sex differences in pre-service teachers' acceptance of ChatGPT in respect of their PE, EE, FC, and SI. This means that both males and females generally share similar views in the perceived benefits, ease of use, facilitating conditions and social influence in relation to ChatGPT. This corroborates the findings of Agormeda (2025) and Adam et al. (2025) that there exists no sex difference relation to AI among pre-service teachers. This is justified by empirical studies which have shown pre-service teachers reporting to have acquired skills in ChatGPT use from friends whilst also highlighting its benefits in terms of aiding them to gain autonomy in writing (Nyaaba et al., 2023). Overall, this finding reflects reports by extant empirical literature which demonstrate that there exist no sex differences in AI use across studies in Africa.

Contrary, the study found statistically significant sex differences in pre-service teachers' behavioural intention to use ChatGPT. This diverges from the submission of Adam et al. (2025) that there is no statistical evidence to show that sex differences in intention to use AI exist. It however reflects broader disadvantage female pre-service teachers have in digital literacy as reported by some studies which sought to evaluate their self-efficacy (such as Dangor & Osman, 2026). This finding could hypothetically be attributed to factors which generally confront females' access to training opportunities in AI literacy. Soko et al. (2026) for instance narrated that males have more access to capacity building programmes in AI integration. Also, females have been found to exhibit negative attitudes (Eleje et al., 2025) and high anxiety (Devanadera, 2025; Zhang et al., 2023) towards AI. This could account for the advantage males have over females in their intention to use ChatGPT. This is illustrated by Demir (2026) that attitudes towards AI turn to

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influence its actual usage. This finding brings to the fore the need for stakeholders to address systemic, cultural and social barriers that militate against female intentions to use ChatGPT and other AI models.

Beyond the absence of statistical differences in terms of sex, the study reveals strong practical differences among pre-service teachers in relation to PE, EE, FC, SI, and BIU. This means that there exist significant practical differences among male and female pre-service teachers which cut across the determining factors and their actual intentions to use ChatGPT.

In respect of predictors of pre-service teachers' behavioural intention to use ChatGPT, the study found PE, FC, and SI as positive predictors. This converges with the findings of a large body of empirical studies on the topic. Other studies have found social influence (Arthur et al., 2026), ease of use as predictors of pre-service teachers' intention to use AI models including ChatGPT. These extant finding contradicts Örnek et al. (2026) indicating that there is still no consensus on the topic. These findings imply efforts by stakeholders to effectively integrate ChatGPT use among pre-service teachers and teacher education generally should consider a host of factors. For instance, the need for capacity building, upgrading of their skills to leverage on the gains ChatGPT brings whilst also taking measures to mitigate risks such as plagiarism, cyber insecurity, data privacy, and ethical usage. These are important because, previous studies in Ghana (Atuahene & Boateng, 2026) and Africa in general (Apata et al., 2026; Ponera & Madila, 2024) have identified lack of institutional support as a challenge confronting AI and ChatGPT use.

That said, the study also revealed that perceived gains of ChatGPT is not a predictor of its use among pre-service teachers in Ghana. This implies that pre-service teachers' PE does not determine their intention to use the AI model. This is an unexpected finding considering the fact that the mean score of PE of respondents (Table 5) is high. The finding is in contention with other well-established studies (Demir, 2026; Indasari, 2026; Köse & Kudratovna, 2026; Nja et al., 2023; Partey et al., 2026; Zhang et al., 2023). This could be attributed to possibility of respondents deciding to misrepresent their actual intention due to fears or absence of clear institutional policies (Beckman et al., 2025). This is justified in the case of this study because the mean score for FC (Table 5) is moderate which suggest that respondents perceive their institutions not to be very supportive of ChatGPT use.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This is a pioneering study on modeling behavioural intention of pre-service teachers in colleges of education to use ChatGPT guided by the UTAUT model. The results indicate absence of sex differences in the factors that influence their intention to use ChatGPT except their actual behavioural intention. The study also found that effort expectancy, social influence, and facilitating conditions positively predicted behavioural intention of ChatGPT use. Also, the study found performance expectancy not a statistically significant predictor of ChatGPT use among pre-service teachers in Ghanaian colleges of education. Findings of the study provides insight on the topic in the context of pre-service teachers in colleges of education which remain largely underexplored.

5.2 Recommendations

Base on the findings, the study recommends to colleges of education to consider a host of factors in their quest to effectively integrate ChatGPT use as a pedagogical tool for pre-service teachers in colleges of education and teacher education generally. Particularly, colleges of education need to develop and formalise AI policies and strategies couple with curricular modifications. Also, capacity building workshops should be organised to upgrade skills of students, so as help them leverage on the gains ChatGPT brings whilst also taking measures to mitigate risks such as plagiarism, cyber insecurity, data privacy, and ethical usage. In doing so, there is the need to identify psychological, social, systemic, and cultural barriers that confront AI use among females through further research.

Declaration of Interest

The authors declare that they do not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Funding Declaration

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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