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Assessing the Influence of the Technology Acceptance Model on Social Media and eLearning Content Adoption: A Case Study of Colleges of Education in the Central and Western Zone of Ghana

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ABSTRACT

This study investigated the impact of Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Perceived Reliability (PR) on the attitudes of Colleges of Education (CoE) students regarding social media and their adoption of E-learning content. As digital tools become increasingly essential in education, this research explored how students' perceptions of the utility, ease of use, and reliability of social media influence their attitudes and the adoption of eLearning content. The study also assessed gender differences in the impact of these factors on students and the implications of PR, PU, and PEOU of social media for eLearning content adoption. The research utilized a mixed-method approach that combined quantitative surveys and qualitative interviews, with 391 diverse CoE students selected through multistage sampling. The quantitative phase measured PU, PEOU, PR, and Attitude as variables, establishing their relationships through statistical analysis. In the qualitative phase, in-depth interviews provided nuanced insights into students' experiences and perceptions. The results demonstrated a positive and significant influence of social media's PU, PEOU, and PR on Attitude, as well as on eLearning content adoption. Notably, there is no significant gender-based difference in the influence of PR, PU, and PEOU on attitude, although male values slightly exceed those of females. The research also explored the implications for increasing female participation in eLearning and the potential for replication using other technology acceptance models. Educators, institutions, and developers can leverage the findings of this research to improve the design and implementation of digital tools, ultimately enhancing the educational experience for CoE students.

Keywords: *Technology Acceptance Model (TAM), Perceived Reliability, Social Media, eLearning, Content Adoption.*

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INTRODUCTION

Social media has gained widespread acceptance among students in the 21st Century.[1] Several research works have shown that social media has contributed to improved students' learning outcomes.[2] It cuts across diverse

[1] Ismaila Aliyu Yahaya and Hadi Abdul Ayodeji, "Influence of Social Media Usage on the Information Behaviour of Undergraduate Students in Selected Universities in Kwara State, Nigeria," *Library Philosophy and Practice (e-Journal)*, 2019, https://digitalcommons.unl.edu/libphilprac/3655.

[2] Turgut Karakose, Ramazan Yirci, and Stamatis Papadakis, "Examining the Associations between COVID-19-Related Psychological Distress, Social Media Addiction, COVID-19-Related Burnout, and Depression among School Principals and Teachers through Structural Equation Modeling," *International Journal of Environmental Research and Public Health* 19, no. 4 (2022): 1951.

facets of students' lives and it is not limited to the academic ecosystem.[3] In educational environments, students may use social media for a variety of purposes, including learning,[4] networking,[5] creative expression,[6] experiencing global exposure,[7] employment opportunities,[8] collaboration,[9] and social interaction.[10]

Traditional educational paradigms have gradually evolved into more flexible, tech-enhanced modes of learning, prompting higher education institutions to harness the potential of eLearning. The incorporation of eLearning content into the educational landscape has seen significant improvements over the years.[11] Simultaneously, the ubiquity of social media platforms has established them as an integral part of students' daily lives, by creating a platform where students can exchange information between students and their teachers, communicate with each other and collaborate on projects.[12]

The intersection of eLearning content adoption and social media acceptance within the context of Colleges of Education is particularly pertinent. This unique academic environment not only prepares future educators but also serves as a microcosm of contemporary education trends. Understanding the factors influencing students' acceptance of social media for eLearning content is essential for educators, administrators and policymakers to better design and implement effective eLearning strategies.

The central research problem addressed by this study is the extent to which social media acceptance influences CoE students' willingness to adopt eLearning content. It is crucial to unravel how the key determinants of the Technology Acceptance Model (TAM) affect students' attitudes toward social media and their eLearning content adoption. It sought to answer this research question; What is the influence of PU, PEOU and PR of social media on eLearning content adoption among CoE students? The following hypotheses were used to test the influence of the independent variables on the dependent variable: $H_0$1: There is no positive influence of PU, PEOU and PR of social media on the attitude of CoE students. $H_0$2: There is no statistically significant difference in the influence of PU, PEOU and PR on Attitude among male and female CoE students. The research employs a mixed-methods approach, including surveys and interviews, to gather data from a diverse sample of CoE students. By utilizing TAM as a theoretical framework, the study assesses students' attitudes, PU, PEOU and PR concerning both social media and eLearning content. These quantitative and qualitative data will subjected to statistical analysis and thematic coding to provide a comprehensive understanding of the research problem. The paper begins with an introduction, literature review, conceptual framework, methodology, results, discussions, recommendations, conclusions, further research and bibliography. Through this structure, this study aims to shed light on the intricate relationship between social media acceptance and eLearning content adoption within CoE and contribute valuable insights to the field of education and technology integration.

LITERATURE REVIEW

In the digital age, the integration of technology in education has witnessed a transformative shift, and eLearning has become a prominent feature of contemporary pedagogy. As educational institutions adapt to these changes, the acceptance and utilization of eLearning content are of paramount importance. In this context, this literature review explores the influence of CoE students' acceptance of social media on their eLearning content adoption, drawing from TAM. TAM serves as the foundational theoretical framework for understanding user acceptance of technology, including social media and eLearning systems. Fred D. Davis introduced TAM, which posits

[3] Amer Mutrik Sayaf et al., "Factors Influencing University Students' Adoption of Digital Learning Technology in Teaching and Learning," *Sustainability* 14, no. 1 (2022): 493.
[4] Jin Mao, "Social Media for Learning: A Mixed Methods Study on High School Students' Technology Affordances and Perspectives," *Computers in Human Behavior* 33 (2014): 213–23.
[5] Helen N Eke and Nneka Jennifer Odoh, "The Use of Social Networking Sites among the Undergraduate Students of University of Nigeria, Nsukka," *Library Philosophy and Practice*, 2014, 0_1.
[6] Jia-Xiang Chai and Kuo-Kuang Fan, "Constructing Creativity: Social Media and Creative Expression in Design Education," *Eurasia Journal of Mathematics, Science and Technology Education* 14, no. 1 (2017): 33–43.
[7] Douglas Thomas and John Seeley Brown, "A New Culture of Learning," *Lifewide Magazine* 10 (2014).
[8] Philip L Roth et al., "Social Media in Employee-Selection-Related Decisions: A Research Agenda for Uncharted Territory," *Journal of Management* 42, no. 1 (2016): 269–98.
[9] Liette Lapointe, Jui Ramaprasad, and Isabelle Vedel, "Creating Health Awareness: A Social Media Enabled Collaboration," *Health and Technology* 4, no. 1 (May 17, 2014): 43–57, https://doi.org/10.1007/s12553-013-0068-1.
[10] Jeffrey A Hall, "When Is Social Media Use Social Interaction? Defining Mediated Social Interaction," *New Media & Society* 20, no. 1 (January 28, 2018): 162–79, https://doi.org/10.1177/1461444816660782.
[11] Abid Haleem et al., "Understanding the Role of Digital Technologies in Education: A Review," *Sustainable Operations and Computers* 3 (2022): 275–85.
[12] Vavek Bharwani, "The Impact of Social Media on Students," Your CommonWealth, April 16, 2023, https://yourcommonwealth.org/social-development/the-impact-of-social-media-on-students/.

that PEOU and PU significantly impact user acceptance.[13] When applied to eLearning, students' perceptions of how easy and useful these digital tools are can influence their decisions to adopt eLearning content. The historical context of eLearning and social media adoption within education reveals a steady progression. In the early 2000s, eLearning emerged as a novel educational approach, but it was not until the mid-2010s that social media platforms became integral tools for communication, collaboration, and content sharing in academic settings. To understand the intersection of social media, eLearning, and acceptance, key concepts need to be defined. Social media encompasses online platforms such as Facebook, Twitter and YouTube, which facilitate user-generated content, interaction, and networking. In contrast, eLearning content refers to digital educational materials, including text, multimedia, and interactive resources, accessed via electronic devices.

One theoretical gap in the literature relates to the intricate relationship between students' acceptance of social media and its influence on their eLearning content adoption. While TAM provides a framework, scholars continue to debate the specific variables that influence these perceptions and how they may vary across different educational contexts. One of the least explored areas is how the perceived reliability of social media affects the actual usage of eLearning systems among students. Additionally, some argue that TAM might not fully capture the nuanced dynamics of social media acceptance in education. Key contributors to the field include Davis, who initially formulated TAM, and Venkatesh and Davis who extended the model.[14] In recent years, scholars such as Liaw, Huang, and Chen have applied TAM to eLearning contexts, highlighting the importance of PEOU and PU in eLearning adoption. Social Cognitive Theory, as proposed by Bandura, is also relevant as it underscores the role of observational learning in social media adoption.[15] The literature reveals a dearth of research examining the specific dynamics of social media acceptance in Colleges of Education in Ghana and its direct impact on eLearning content adoption. While general studies exist on eLearning and TAM, there is a need for more focused investigations to explore how TAM constructs such as PU, PEOU and PR influence students' attitudes toward social media and their eLearning content adoption.

CONCEPTUAL FRAMEWORK

TAM was proposed by Davis to explain and predict users' adoption or acceptance of computer technology.[16] In TAM, Behavioral Intention to use leads to Actual Usage behavior. Behavioral Intention is determined jointly by Attitude and PU, where PU also affects Attitude directly. Rauniar et al., believe that the issue of students' adoption of social media is based on the internalization of usage behavior that is embedded in their attitudes.[17] Meanwhile, PEOU directly influences both Attitude and PU. PU is defined as "the degree to which a person believes that using a particular system would improve his or her job performance" while PEOU is defined as "the degree to which a person believes that using a particular system would be free of effort.[18]

To advance TAM and contribute to its development and future research, this study slightly modified the independent variables of TAM to include PR. PR is a user's expectation that a system will function the way it should. Thus, the study hypothesised Attitude (dependent variable) to use social media as a function of students' reported PU, PEOU and PR (independent variables). The author is of the view that students' PU, and PEOU, coupled with their PR could promote their adoption and acceptance of eLearning systems. In considering the reliability of social media, two issues come to mind.[19] They are the reliability of the service apps and the reliability of the social media content consumed by users. According to Griffin, a reliable source of information is one that can be backed up with evidence, free from personal or institutional biases and comes from a

[13] Fred D. Davis, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," *MIS Quarterly* 13, no. 3 (September 1989): 319, https://doi.org/10.2307/249008.
[14] Viswanath Venkatesh and Fred D Davis, "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies," *Management Science* 46, no. 2 (2000): 186–204.
[15] Shu-sheng Liaw and Hsiu-mei Huang, "Enhancing Interactivity in Web-Based Instruction: A Review of the Literature," *Educational Technology* 40, no. 3 (2000): 41–45; Albert Bandura, "Social Foundations of Thought and Action," *Englewood Cliffs, NJ* 1986, no. 23–28 (1986).
[16] Fred D Davis, "A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results" (Massachusetts Institute of Technology, 1985).
[17] Rupak Rauniar et al., "Technology Acceptance Model (TAM) and Social Media Usage: An Empirical Study on Facebook," *Journal of Enterprise Information Management* 27, no. 1 (2014): 6–30.
[18] Davis, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology."
[19] Pulkit Tayal and Vijayakumar Bharathi. S, "Reliability and Trust Perception of Users on Social Media Posts Related to the Ongoing COVID-19 Pandemic," *Journal of Human Behavior in the Social Environment* 31, no. 1–4 (May 19, 2021): 325–39, https://doi.org/10.1080/10911359.2020.1825254.

trustworthy source.[20] Reliable social media information is such that users believe that they are credible, accurate, free from bias and complete.[21] The reliability of (social media) software represents its ability to perform the intended function properly without any failures.[22] Furthermore, the reliability of a software product consists of several characteristics such as integrity, fault recovery, and maturity. It is thus evident that increasing the reliability of social media applications and content will increase user acceptance and adoption. Consequently, in this study, perceived reliability is defined as the extent to which a user finds the use of the application and the content of a social media service consistently dependable.

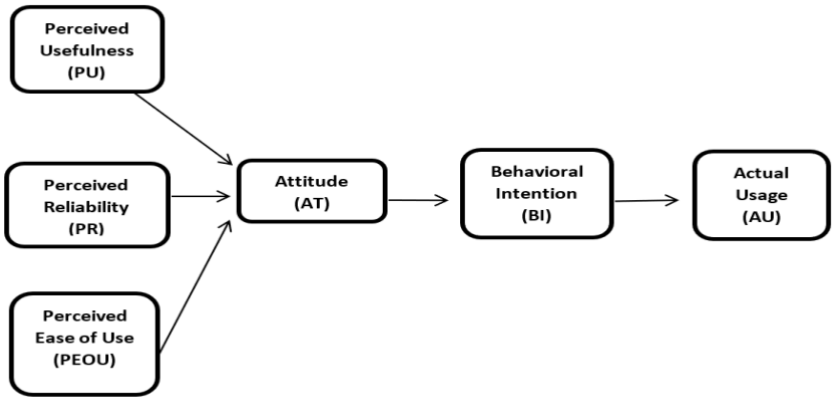

Figure 1: Conceptual model of TAM with Perceived Reliability

METHODOLOGY

The study employed the explanatory sequential mixed technique.[23] This research approach was deemed appropriate for this study because the researcher first gathered quantitative data using a questionnaire. It was then followed up with interviews using a semi-structured interview guide. The interviews were conducted to answer the research question. Multi-stage sampling was used to sample respondents. First, convenience sampling was used to sample one out of the five zones of Colleges of Education in Ghana. The five zones include Cenwest (Central and Western Zone), Ashbar (Ashanti- Brong-Ahafo Zone), Northern (Northern Zone), EAGA (Eastern–Greater Accra) and Volta (Volta Zone). The selected zone (Cenwest) comprises 7 Colleges with a total of 8,217 students. Secondly, stratified random sampling was used to sample students from the seven colleges. The strata were created by the students' course of study; Early Grade, Upper Primary and Junior High School (JHS) programmes.

There were 1,726 students in the Early Grade programme, 2,054 Upper Primary students and 4,437 students in the JHS programme. A total of 391 students were selected comprising of Early Grade (n = 82), Upper Primary (n=98) and JHS (n=211). This value was calculated using the sample size calculation table created by Krejcie and Morgan.[24] To make sure the items on the questionnaire complied with the requirements of face and content validity, two experts in the field assessed them. Additionally, a pilot study that was not included in the main study was conducted in one College of Education with similar characteristics as the participating colleges. To evaluate the questionnaires' dependability, the pilot study's results were assessed. The Cronbach coefficient alpha was used to determine the internal consistency of the questionnaires and was found to be 0.82. This implies that all the components that make up the items on the questionnaire had acceptable reliability.[25] The instrument was administered to the participants on their various campuses. The

[20] Carrie Griffin, "Reliable Sources | Definition, Characteristics & Examples," Study.com, 2023, https://study.com/academy/lesson/reliable-research-how-to-determine-if-a-source-is-credible-accurate.html.
[21] Przemysław Majerczak and Artur Strzelecki, "Trust, Media Credibility, Social Ties, and the Intention to Share towards Information Verification in an Age of Fake News," *Behavioral Sciences* 12, no. 2 (February 16, 2022): 51, https://doi.org/10.3390/bs12020051.
[22] Jim A McCall, Paul K Richards, and Gene F Walters, "Factors in Software Quality. Volume i. Concepts and Definitions of Software Quality," *General Electric CO Sunnyvale CA*, 1977.
[23] John W Creswell and J David Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (Sage publications, 2017).
[24] Robert V. Krejcie and Daryle W. Morgan, "Determining Sample Size for Research Activities," *Educational and Psychological Measurement* 30, no. 3 (September 2, 1970): 607–10, https://doi.org/10.1177/001316447003000308.
[25] Julie Pallant, *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS* (McGraw-hill education (UK), 2020).

data was analysed, using means, percentages, multiple-regression analysis and independent sample *t*-test. Twenty (20) students were chosen at random among the participants and interviewed.

RESULTS

Interview Responses on Influence of PR, PU and PEOU of Social Media on eLearning ContentAdoption

The interviews were conducted in response to the research question. The interviews were done with a diverse group of 20 participants, selected using purposive sampling from the respondents of the questionnaire. It was to ensure a comprehensive exploration of how PR, PU and PEOU features of social media influenced students' eLearning content adoption. In order to maintain anonymity in the transcription of interview responses, the 20 selected students were coded as "Participant A" (1st interviewee) through to "Participant T" (20th interviewee).

The first question centered around the reliability of social media and how it impacted on eLearning experiences of students. Respondents were first asked about whether they verified the credibility of information they access on social media in the form of text, videos, audio, images, lecture notes, PowerPoint presentations, etc. before incorporating them into their eLearning. While the majority responded in the affirmative, a few were not too keen on authenticating social media information before they used it for academic work. Three respondents said they do this almost daily. "I make it a habit to always verify information from social media before adding it to my e-learning materials. It's essential to ensure accuracy in the content I provide", Respondent G said. Respondent B also noted that "I regularly check sources that I quote from social media since there can be reliability issues." Two of the interviewees said they rarely do any form of crosschecking. Respondent C for example said, "I trust that most of the information I come across on social media is reliable. I don't verify it very often unless something seems highly questionable." Respondent T cited time constraints as a barrier to carrying out the needed verification for social media information. He noted, "I would like to verify more, but I'm not able to do as much because of time constraints, I often use social media information as it is in my eLearning materials". These views confirm Khan and Idris's finding that the sharing of information on social media without verification is predicted by internet experience, internet skills, sharing, verification, and belief in the reliability of information.[26]

The next question centered on the influence of PU of social media and its influence on eLearning among CoE students. It attempted to elicit the extent to which the perceived usefulness of social media services influenced students' trust in eLearning content. For most of the respondents, there was a high influence while others said it is either "context-dependent" or they did so after critical evaluation. For a few, however, the influence was low. According to Respondent A, he greatly depended on social media applications to access educational content; he continued by saying "If I find a platform trustworthy and useful, it greatly impacts my trust in the eLearning materials available there." Another respondent who found social media highly useful noted, "If a social media app has a good reputation for educational content and a strong community of learners, I'm more likely to use what's offered on that platform." For Participant I, there was not much influence; he noted "I don't really associate social media apps with educational content. My trust in e-learning materials is based on the course quality and instructor credibility, not the platform." For a few other participants, adopting social media content for eLearning purposes was context-dependent; that is if the platform is well-known and has a strong educational focus. These views further confirmed the assertion of Elkaseh et al., who noted that PU is important for predicting a student's behavioral intention to use social media for e-learning.[27]

Lastly, respondents were asked about the extent to which ease of use of social media affected their learning experiences. Most respondents were positive; they opined that if an eLearning platform has social media-like and easy-to-use functionality, it has positive effects on their use of that platform. To this question, Respondent P said "User friendliness is a big factor for me in my adoption of eLearning platforms. If a platform is easy to navigate, I'll be more motivated to engage with the e-learning materials for longer periods." Another student said she was likely to spend more time on a platform that is user-friendly and intuitive. "It makes the whole learning experience smoother and more enjoyable", she added. For another group of respondents, their experience was moderate. Respondent F said, "It matters, but it's not the only factor. User-friendliness can encourage me to spend more time, but the content quality and relevance are equally important." Another respondent said, "I appreciate user-friendly interfaces, but my time spent on eLearning also depends on my

[26] M. Laeeq Khan and Ika Karlina Idris, "Recognise Misinformation and Verify before Sharing: A Reasoned Action and Information Literacy Perspective," *Behaviour & Information Technology* 38, no. 12 (2019): 1194–1212.

[27] Ali Mohamed Elkaseh, Kok Wai Wong, and Chun Che Fung, "Perceived Ease of Use and Perceived Usefulness of Social Media for E-Learning in Libyan Higher Education: A Structural Equation Modeling Analysis," *International Journal of Information and Education Technology* 6, no. 3 (2016): 192.

schedule and the content's engagement level." For some respondents, neither ease of use of social media nor eLearning applications mattered. For participant B, there is not much connection between social media and eLearning applications in terms of ease of use. He said, "I don't associate social media tools with e-learning. My time spent on e-learning depends on my goals and the course's value, not how user-friendly it is." Participant H also said, "The user-friendliness of social media tools isn't a factor in my e-learning decisions. I look for dedicated e-learning platforms that are designed for education." For other participants whether they were influenced or not depended on the kind of eLearning activity. "For quick, informal learning, a user-friendly tool might encourage me to spend more time. For formal courses, it's just one consideration", Participant N opined while Participant M said, "I find user-friendly tools more appealing for shorter, self-paced learning sessions. But for structured courses, I prioritize content quality over user-friendliness." For Respondent E, she appreciates user-friendliness, but it's just the first step. "I look for credible sources and relevant content. If it checks all the boxes, I'll spend more time", she said. Nuryakin in a similar study found perceived ease of use to have a significant positive effect on students' attitude to use online learning which confirms the views of the participants.[28]

It can be concluded from the interviews that the PR, PU, and PEOU of social media have a significant influence on CoE students' adoption of eLearning content. Students' perceived reliability had a very significant influence on their eLearning content adoption as most respondents correlated the credibility of a social media site to the quality of eLearning content and subsequent adoption. PU and PEOU of social media had a moderately high influence on CoE students' eLearning content adoption.

Quantitative Analysis of Social Media Usage and Factors Affecting Adoption

This section presents quantitative findings and provides a comprehensive perspective on the analysis of data from the 391 respondents. It presents a brief background of respondents and their use of social media. Regression analysis of the influence of the dependent variables on the independent variables is also presented here.

Background Information on Respondents and the extent to which they Use Social Media

Table 1: Gender Distribution of Respondents

Gender	Frequency	Percent
Male	197	50.38
Female	194	49.62
Total	**391**	**100.00**

Table 1 presents the gender distribution of respondents, with 50.38 percent being male and 49.62 percent female. The research sample comprises a slightly higher proportion of male participants compared to their female counterparts.

Table 2: Students' Use of Social Networking

Use of Social Networking	Frequency	Percentage
Yes	389	99.49
No	2	0.52
Total	**391**	**100.00**

Table 2 presents data on student engagement with social networking. Notably, 99.49% of surveyed students responded affirmatively ("Yes"), with a minority of 0.52% responding negatively ("No"). This overwhelmingly positive response indicates that a significant majority of CoE students actively utilize social networking platforms. These results align with prior research conducted by Smith and Anderson, specifically their study on "Social Media Use in 2018," which underscores that young adults consistently represent the most substantial

[28] Nuryakin Nuryakin, Nandrianina Louis Pierre Rakotoarizaka, and Hussein Gibreel Musa, "The Effect of Perceived Usefulness and Perceived Easy to Use on Student Satisfaction The Mediating Role of Attitude to Use Online Learning," *APMBA (Asia Pacific Management and Business Application)* 11, no. 3 (2023): 331–44.

user group of social media. In their investigation, they observed that an impressive 90% of young adults actively engage with social media, a statistic consistent with the findings in this study.

Table 3: Number of Social Network Sites that Students Actively Use

Social Network Site	Frequency	Percent
One	24	6.14
Two	117	29.92
Three	112	28.65
Four	72	18.41
Five	29	7.42
More than Five	37	9.46
Total	**391**	**100.00**

Analysis of the data in Table 3 reveals that a majority of respondents, 29.92%, actively engage with two social networking platforms while 28.65% are active members of three social network sites. A smaller proportion, 9.46%, are active members of more than five social network sites. This trend aligns with the findings of a prior study conducted by Korsah, Enu, and Ibrahim, which identified WhatsApp and Facebook as the most frequently utilized social media services among students at Komenda College of Education.[29]

Table 4: Social Network Sites that Respondents Use

Social Network Site	Frequency	Percent
Facebook	330	84.40
WhatsApp	376	96.16
Twitter	93	23.79
Instagram	140	35.81
YouTube	224	57.29
Others	39	9.97

Examination of Table 4 indicates a prevalent utilization of social media platforms among students. WhatsApp emerges as the most widely employed platform, with 96.16% of students reporting its usage, followed closely by Facebook at 84.40%. Twitter, at 23.79%, and Instagram, at 35.81%, also exhibit notable levels of engagement. Conversely, lesser-known services such as Imo, Tango, and Viber garner a collective usage of 9.97%. These findings are consistent with a study conducted by Yeboah and Ewur, which emphasized WhatsApp as the primary social media service utilized by students for interpersonal communication.[30]

$H_0$1: There is no positive influence of PR, PU, and PEOU of Social Media on the Attitude of CoE Students

Table 5: Model Summary of Effect of PR, PU and PEOU on Attitude

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.648[a]	.420	.415	.44916
a. Predictors: (Constant), PR, PU, PEOU				

From Table 5, it can be seen that the adjusted R square value is 0.415. The R square coefficient is 0.420. The adjusted R square value of 0.415 suggests that attitude toward the use of social media sites among CoE students account for 41.5% of the variance in the influence of PR, PU and PEOU on Attitude. The remaining percentage might be accounted for by factors not included in the model.

[29] Daniel Paa Korsah, Justice Enu, and Alhaji Waziru Ibrahim, "Students' Engagement with Social Media: A Case Study at Komenda College of Education," *International Journal of Multidisciplinary Research and Development* 4, no. 6 (2017): 344–50.
[30] Johnson Yeboah and George Dominic Ewur, "The Impact of WhatsApp Messenger Usage on Students Performance in Tertiary Institutions in Ghana," *Journal of Education and Practice* 5, no. 6 (2014): 157–64.

Table 6: ANOVA Result of the Effect of PR, PU and PEOU on Attitude

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	56.498	3	18.833	93.350	.000[b]
	Residual	78.074	387	.202		
	Total	134.572	390			
a. Dependent Variable: AT						
b. Predictors: (Constant), PR, PU, PEOU						

The analysis of variance is used to establish the significance of the model generated. Table 6 contains the ANOVA results. The ANOVA findings are used to test the hypothesis. Because the p-value is smaller than 0.05, the F statistics show that the regression slope of the model is substantially different from zero (F (3,387) = 93.350, p.001). As a result, the model was determined to be significant, and the variables PR, PU, and PEOU have a significant positive influence on Attitude.

Table 7: Coefficients Result on Effect of PR, PU and PEOU on Attitude

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	1.224	.185		6.626	.000
	PU	.201	.043	.208	4.645	.000
	PEOU	.224	.042	.241	5.272	.000
	PR	.281	.034	.368	8.246	.000
a. Dependent Variable: AT						

The study's model, generated from the multiple regression findings, is shown in Table 7. The standardized regression coefficient for PU influence on Attitude is 0.208 with a p-value of 0.001, indicating that PU has a positive influence on Attitude. The computed standardized regression weight for PEOU is 0.241, with a p-value of 0.001. According to the findings, PEOU has a positive and significant influence on Attitude. The standardized regression estimate for PR is 0.368, with a p-value of 0.001 which is less than the threshold value of 0.05, implying that PR has a considerable positive influence on Attitude. The reported results indicate that PU, PEOU and PR have a positive influence on Attitude. The null hypothesis is thus rejected.

$H_0$2: There is no statistically significant difference in the influence of PR, PU and PEOU on Attitude among male and female CoE students.

Table 8: Model Summary Result of the Difference in Influence of PR, PU and PEOU on Attitude between Male and Female Students

Model Summary					
Gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
MALE	1	.659[a]	.435	.426	.43984
FEMALE	1	.651[b]	.424	.415	.44781
a. Predictors: (Constant), PR, PU, PEOU					
b. Predictors: (Constant), PR, PEOU, PU					

Comparing the difference in R and Adjusted R values of the male (0.435, 0.426) and female (0.424, 0.415) in Table 8, there is no significant difference in the influence of PR, PU, and PEOU on Attitude based on gender even though the male values are a bit higher than the female.

Table 9: ANOVA Result on the Difference Between Male and Female

ANOVA[a]							
Gender	Model		Sum of Squares	df	Mean Square	F	Sig.
MALE	1	Regression	28.569	3	9.523	49.225	.000[b]
		Residual	37.144	192	.193		
		Total	65.713	195			
FEMALE	1	Regression	28.171	3	9.390	46.826	.000[c]
		Residual	38.303	191	.201		
		Total	66.474	194			
a. Dependent Variable: AT							
b. Predictors: (Constant), PR, PU, PEOU							
c. Predictors: (Constant), PR, PEOU, PU							

Analysis of Table 9 shows that the model for both males and females was determined to be significant, and the variables PR, PU, and PEOU have a significant positive influence on Attitude. This shows that there is no difference between males and females in that regard. The null hypothesis is thus upheld.

Table 10: Coefficients Result on the Difference Between Male and Female

Coefficients[a]							
			Unstandardized Coefficients		Standardized Coefficients		
Gender	Model		B	Std. Error	Beta	t	Sig.
MALE	1	(Constant)	.915	.312		2.929	.004
		PU	.167	.070	.142	2.384	.018
		PEOU	.394	.062	.401	6.310	.000
		PR	.215	.050	.277	4.309	.000
FEMALE	1	(Constant)	1.451	.236		6.155	.000
		PU	.250	.056	.293	4.484	.000
		PEOU	.085	.058	.096	1.477	.141
		PR	.315	.047	.417	6.774	.000
a. Dependent Variable: AT							

Table 10 shows that there are no differences in the influence of PU, and PR on attitude based on gender. However, there is a gender difference in the influence of PEOU on Attitude. The null hypothesis is thus upheld for PR and PU while it is rejected for PEOU.

DISCUSSION

The study found that all three variables under investigation – perceived usefulness, perceived ease of use and perceived reliability contributed positively to students' attitudes with perceived reliability being the greatest predictor. PU was found to have a moderately high influence on attitude while PEOU was also found to have a positive influence on attitude. The study however found no significant difference in the influence of PR, PU, and PEOU on attitude based on gender even though the male values were a bit higher than female values. Understanding the role of perceived usefulness can guide educational application designers in creating effective and engaging learning tools. These include having clear objectives on content, designing applications that are relevant to student learning, ensuring that applications focus on problem-solving and practical usage, and ensuring that student's progress can be tracked on eLearning systems.

Several authors including Muzammil agree that social media is easy to use.[31] This characteristic is a major contributive factor to its acceptance among CoE students. The instinctive interfaces, user-friendly

[31] Syed Muzammil, "Top 10 Advantages and Disadvantages of Social Media in 2023," Web Training, 2023, https://www.webtrainings.in/social-media-advantages-and-disadvantages/; Daniel Pereira, "Instagram Business Model," The Business Model Analyst, 2023, https://businessmodelanalyst.com/instagram-business-model/.

navigation, and features that encourage engagement have contributed to their widespread adoption. Social media platforms prioritize simplicity and accessibility, catering for a broad range of users, making it easy for both power users and novices. The reliability factor of social media has implications for designers of eLearning systems as they have to focus on increasing the reliability of eLearning and other internet-based systems to avoid system failures and downtimes as much as possible. When users perceive that a technology, such as social media, is useful and can contribute positively to their academic needs, they are more likely to adopt it. Reliability is an indicator of customer expectations of whether or not an IT service should be relied on to deliver.[32] Griffin opines that reliable sources of information should be accurate, purposeful and verifiable. Additionally, the author should have expertise in the subject under discussion.[33] Another area of reliability relates to the reliability of the applications that run social media. According to Barack and Huang, software reliability represents the quality of the software running without producing defects.[34] The strong influence of PR on attitude also suggests that as the reliability of social media technology increases, users form more positive attitudes toward their use.

RECOMMENDATIONS

In implementing social media-like perceived usefulness into eLearning, educational app designers should ensure that the software clearly communicates the learning objectives and outcomes they offer. Demonstrating how the app's features can be useful in achieving these objectives will enhance users' perceived usefulness of the app. Designers of educational applications should collaborate with teachers to align the app's content and features with the users' educational needs and goals. When users see the direct relevance of the app to their studies, they are more likely to perceive it as useful. For example, an e-course which offers additional topics to face-to-face learning and makes a good general impression on the students is more likely to be perceived as useful by students.[35] The PEOU and familiarity that users have with social media interfaces can be applied in the engineering of educational applications to enhance engagement and improve learning outcomes while giving attention to software characteristics such as intuitive design, engagement strategies, micro-learning and mobile-friendly designs.

Additionally, educational applications need to be designed to have interfaces that resemble social media. This can reduce the learning curve for many users and encourage them to explore the app's features more readily. Educational apps can incorporate engagement strategies commonly found in social media platforms, such as notifications, likes, shares, and comments. These features can motivate users to interact with educational content more actively. Social media's preference for small-size content aligns with the concept of micro-learning, where educational content is broken down into smaller, easily digestible units. Educational app designers can utilize this approach to deliver content that is easier for users to absorb and retain. Given the dominance of social media use on mobile devices, educational app designers should prioritize mobile-friendly designs to accommodate blended learning on various mobile devices. E-learning policies can also include specific clauses to encourage female participation in an attempt to improve the adoption rate of eLearning technologies. Finally, in an attempt to shore up the online presence and participation of females in virtual environments, teachers can adopt many strategies including appointing female students as group leaders during online presentations and assignments.

CONCLUSION

In conclusion, the implications of PR, PEOU and PR on students' attitudes towards social media and eLearning content adoption are profound. The extent to which students develop positive attitudes towards social media, find value in eLearning resources, and perceive the ease of navigating digital platforms can significantly impact their interaction with online systems, motivation, and overall success in eLearning. Recognizing the importance of these factors, educational institutions including CoE and eLearning designers should put a premium on strategies to enhance the reliability of eLearning applications and content, emphasize the usefulness of online academic resources, and ensure the user-friendliness of eLearning platforms. Moreover, fostering digital literacy skills and critical thinking abilities is essential to help students make informed decisions such as always cross-checking facts in order to ascertain the credibility of information they encounter on social media.

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[32] Qaribu Yahaya Nasidi, Isyaku Hassan, and Muhamad Fazil Ahmad, "Mediating Role of Social Media in the Relationship between Reliability, Perceived Usefulness on Online Shopping Behaviour: Building a Conceptual Framework," *International Journal of Academic Research in Business and Social Sciences*, 2021.

[33] Griffin, "Reliable Sources | Definition, Characteristics & Examples."

[34] Osama Barack and Liguo Huang, "Assessment and Prediction of Software Reliability in Mobile Applications," *Journal of Software Engineering and Applications* 13, no. 9 (2020): 179–90.

[35] Aleksander Aristovnik et al., "Determining Factors of Students' Perceived Usefulness of E-Learning in Higher Education.," *International Association for Development of the Information Society*, 2016.

FURTHER RESEARCH

As eLearning continues to advance and improve in quality, it will be necessary to focus other research on the influence of social media attributes on eLearning content adoption. Other technology acceptance frameworks such as the Unified Theory of Acceptance and Use of Technology (UTAUT), Theory of Reasoned Action (TRA), Diffusion of Innovation Theory (DIT) and Model of PC Utilization (MPCU) will provide different perspectives to advance knowledge in this area.

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