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Factors Influencing Students' Use of e-Learning Technologies

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Abstract. The integration of e-learning in teaching and learning has become increasingly prevalent in modern education as technological advancements have revolutionized traditional educational methods and enhanced students' educational experiences. Amidst this advancement, it is important to know how well this e-learning technologies engage learners in teaching and learning practices. This study aims to investigate the factors that influence students' use of e-learning technologies. To accomplish this goal, several e-learning theories were examined. A model was proposed for this research using constructs derived from UTAUT-Utility Expectance, Effort Expectancy, Social impact, and Facilitating Conditions in combination with student use of e-learning technologies construct. The study used a quantitative research method involving 250 South African university students who use e-learning technology. Using exploratory factor analysis and Cronbach's alpha, the study was assessed for validity and reliability whose values were acceptable. The hypotheses were tested using regression analysis and it was found that utility expectancy, social influence, and facilitating condition are the factors that have a positive influence on students' use of e-learning technologies. However, it was found that effort expectancy has no influence on students' use of e-learning technologies. This might be due to digital literacy background of the students. The study's findings suggest that e-learning technologies continue to motivate students to learn despite factors that affect how they are used in teaching and learning.

Keywords: e-learning; teaching; learning; student engagement; best practices

1. Background of the study

E-learning has gained relevance in today's continually changing educational setting, evolving traditional teaching, and learning methods and boosting students' educational experience. The emergence of e-learning technology has enabled more flexible ways to interact with learning resources and activities outside of traditional classroom settings (Haleem et al., 2022). To mitigate the COVID-19 epidemic's impacts and ensure continuity in the face of physical

segregation measures, educational institutions all around the world swiftly embraced online learning (Oyetade et al., 2020). e-learning, which includes a wide range of online tools and platforms have become an integral part of the modern educational process, transforming both teaching and learning and changing the dynamic between teachers and students (Liu et al., 2020; Davis, 1989). The motivation behind integrating e-learning into teaching and learning has been the recognition of its potential to enhance educational experiences and outcomes (Liu et al., 2020). e-learning presents a wealth of opportunities for students to engage in individualized and self-directed learning experiences as educators work to address the changing needs of the 21st-century learner (Zhang et al., 2023).

The use of multimedia elements, interactive simulations, and game-like content stimulates active involvement and catches learners' attention, resulting in a deeper comprehension and recollection of information (Mohd et al., 2023). Additionally, e-learning enables educators to overcome geographic limitations, reach students in a variety of contexts, and encourage them to become lifelong learners (Almulla & Al-Rahmi, 2023). Thanks to asynchronous learning alternatives and on-demand access to educational resources, which accommodate a variety of learning preferences and styles (Hinon & Seubpradt, 2021). The use of e-learning technologies also fosters digital citizenship and literacy, giving students the necessary abilities to successfully traverse the digital world (Prasetiyo et al., 2023). Understanding the factors that affect students' active participation and engagement becomes crucial as educators, decision-makers, and academics work to maximize the potential of digital learning environments.

The inclusion of e-learning technology into modern education has resulted in a fundamental shift in how students interact with learning materials and educational processes. The future of education will be shaped by our ability to comprehend the complex dynamics influencing students' use of e-learning technology. E-learning technologies offer the ability to close educational gaps by making learning more accessible to a greater range of students, especially those living in distant or underprivileged locations. E-learning technologies can give students the abilities and mindset necessary for ongoing self-directed learning, so it is critical to understand the dynamics of their use.

A fundamental question arises amidst this educational transformation: What is the true impact of e-learning technologies on learners' involvement in educational activities? This study aims to investigate the factors influencing students' use of e-learning technologies. With the use of e-learning, this project aims to provide educators, policymakers, and other educational stakeholders important insights on how to produce transformative learning experiences and best practices. Understanding the factors that motivate students to engage with e-learning tools becomes essential for educators and institutions in an era of rapid technological innovation. The findings of the study shed insight on these, which could lead to improvements in educational techniques and the overall learning experience.

2. E-learning in Teaching and Learning

The considerable influence of e-learning integration on teaching and learning outcomes has been reported by several studies. Bennani et al., (2022) found out that e-learning can increase learner engagement and motivation by capturing learners' attention and promoting better understanding of educational information through interactive multimedia features and gamified content. Since students can access instructional materials at their own pace and convenience, e-learning has been shown to be adaptable to a variety of learning styles. This encourages students to have more individualized learning experiences (Kem, 2022). Furthermore, e-learning integration transcends geographical barriers, enabling educators to reach learners in diverse settings and empowering lifelong learners across various age groups (Lucas & Vicente, 2020). Asynchronous learning options allow learners to engage in self-directed learning journeys, fostering a sense of ownership and autonomy in the learning process (Hinnon & Seubpradt, 2021). E-learning has been shown to promote digital literacy and digital citizenship skills (Kusumo et al., 2022), equipping learners with essential competencies to navigate the digital landscape with confidence. Additionally, the integration of e-learning can lead to cost savings and resource optimization as educational materials and resources can be accessed and distributed digitally, reducing the need for traditional print materials (Bennani et al., 2022). Likewise, e-learning promotes information exchange and social learning by allowing learners to participate in virtual discussions, interaction between peers, and group projects (Laranjeiro, 2022). Educators can also track learners' progress and performance via e-learning platforms, giving essential insights for tailored feedback and assistance (Liu, 2022).

While e-learning integration has many benefits, it is not without its drawbacks. Digital distractions can affect students' performance on e-learning tasks, according to Rostaminejad et al., (2022), underscoring the importance of developing techniques to keep learners' focus and attention when they are learning online. Equal access to technology and internet connectivity is also essential, especially for students in underprivileged areas or with little resources (Hinnon & Seubpradt, 2021; Fung et al., 2022). Adapting educational methods for online environments and efficiently utilizing e-learning tools may be difficult for educators (Bennani et al., 2022; Lopes et al., 2022). Education professionals need professional development and training to efficiently integrate e-learning into teaching methods. A sense of community and social connection must also be maintained in virtual classrooms to keep students motivated and engaged (Berry 2019; Almulla & Al-Rahmi, 2023).

There are several best practices that can be used to maximize the advantages of e-learning. The design of multimedia-rich, gamified interactive e-learning materials can increase learner engagement (Kiryakova 2022; Silvestru et al., 2022). Fostering knowledge sharing and peer learning through collaborative learning experiences, such as group projects and online conversations (Lucas & Vicente, 2020; Lin & Huang, 2020). Educators should take a learner-centred approach, adapting learning experiences to individual needs and preferences (Shah & Kumar, 2020). It's imperative to regularly assess learners' progress and provide feedback to provide timely advice for development. Putting a focus on digital

citizenship education can assist students in acting ethically and responsibly online (Kusumo et al., 2022). The ability to create meaningful and transformative learning experiences that prepare students for success in the digital age can be harnessed by educators and policymakers by recognizing the various characteristics of e-learning integration.

3. Theoretical Framework

One of the key elements of evaluating the effectiveness of e-learning in teaching and learning is the application of theoretical frameworks. There are relevant theories that evaluate e-learning integration in teaching and learning and identify relevant factors that influences how e-learning technologies are used to shape students' participation in educational activities.

3.1. Technology Acceptance Model (TAM)

In numerous contexts, including e-learning, the TAM has been extensively used to understand learners' acceptance and use of technology (Davis, 1989; Alshammari & Rosli 2020). Davis (1989) developed TAM, which asserts that users' intentions to utilize technology are greatly influenced by their perceptions of the usefulness and simplicity of a technology. Several studies have confirmed the usefulness of TAM in the context of online learning (Chuttur, 2009; Venkatesh & Bala, 2008). Researchers have used TAM to examine the attitudes, intentions, and usage patterns of educators and students as they perceive e-learning technologies (Alqahtani et al., 2022; Bailey et al., 2022). It has been discovered that learners' positive evaluations of the value and simplicity of e-learning platforms encourage their involvement and active engagement in educational activities (Agarwal & Karahanna, 2000). TAM provides insightful information about the cognitive and psychological elements that influence students' engagement in online educational environments. TAM can help educators and decision-makers better understand the adoption of e-learning technology and create strategies to further its integration.

3.2. Unified Theory of Acceptance and Use of Technology (UTAUT)

A complete framework for comprehending technology adoption is provided by the UTAUT, which expands upon TAM (Venkatesh et al., 2003). UTAUT highlights four fundamental dimensions that drive users' intentions and behaviours toward technology adoption: utility expectancy, effort expectancy, social influence, and facilitating conditions. Researchers have used UTAUT to investigate what influences the adoption of e-learning in educational settings Abbad, 2021; Granić, 2023, Salloum & Shaalan, 2019, Tan, 2013). Using UTAUT, educators can identify important factors that improve learners' and educators' adoption and use of e-learning technologies.

3.3. Community of Inquiry (CoI) Framework

The CoI framework places an emphasis on social and cognitive presence in online learning settings (Garrison et al., 2000). Its three interwoven presences - cognitive presence, social presence, and teaching presence all contribute to fruitful and transformative learning experiences. The CoI framework has been used by researchers to assess the effectiveness of e-learning interactions and investigate how learners' and educators' participation in online communities

affects engagement and learning outcomes (Krzyszkowska & Mavrommati, 2020; Purwandari et al., 2022; Maré & Mutezo, 2021). Educators can create and facilitate e-learning environments that support collaborative learning and knowledge development by utilizing the CoI framework.

3.4. Technological Pedagogical Content Knowledge (TPACK) Model

The TPACK model explains how teachers' bodies of knowledge interact in educational environments, combining content, pedagogy, and technology to develop the forms of flexible knowledge required to successfully incorporate technology use into teaching (Mishra & Koehler, 2006). According to TPACK, a thorough grasp of how technology might improve pedagogy and content delivery is necessary for effective technology integration (Taopan et al., 2020; Handayani et al., 2023). The TPACK model has been used by educators to investigate the strategic integration of e-learning technologies to complement educational approaches and improve the delivery of content in a variety of disciplines (Mohebi, 2021; Tunjera & Chigona, 2020; Hernández-Ramos et al., 2023). Educators can create e-learning experiences that are in line with certain learning objectives and subject matter with the help of the TPACK model.

4. Hypothesis Development

The UTAUT framework was chosen by this study because of how well it aligns with the idea of digital technologies to achieve the study's objectives. This study employed four constructs from Venkatesh et al., (2003) framework to help generate the study's research hypothesis in evaluating the factors influencing student's use of e-learning technologies. According to the theory, utility expectations, effort expectations, social influence, and facilitating factors all have an influence on how well students use e-learning technology. The definitions of the constructs are provided below for a better understanding considering the study's goal.

4.1 Utility expectance describes the perceived value or benefit that a person thinks they will obtain from utilizing a particular technology. The degree to which users and learners feel using a technological system will improve their performance, increase their productivity, or make it easier for them to attain their learning objectives is known as utility expectance regarding any technology system, including e-learning (Venkatesh et al., 2003). Utility expectancy emphasizes that students are more likely to participate when they believe that using these tools would enhance their academic performance in the context of e-learning technologies (Abbad, 2021). For instance, students are more likely to adopt e-learning platforms if they believe that they may provide interactive resources, improve understanding, or facilitate better grades.

- H_1: utility expectance has a positive influence on students' use of e-learning technologies.

4.2 Effort expectance is the degree of simplicity and convenience that people believe utilizing a particular technology to be when using it is referred to as effort expectancy. In basic terms, it measures how easy users perceive a technology to use and how straightforward they expect using the system and

carrying out activities to be (Venkatesh et al., 2003). Effort expectancy highlights that students' willingness to engage is dependent on the perceived ease of use of e-learning technology. Students are more likely to adopt e-learning systems enthusiastically if they are intuitive, accessible, and take little effort to navigate (Abbad, 2021).

- H_2: Effort expectance has a positive influence on students' use of e-learning technologies.

4.3 Social Influence describes how social interactions, peer pressure, and outside factors affect people's views and intentions about the adoption of a certain technology. Social influence has a big impact on how learners perceive and behave when using e-learning technology in the context of e-learning (Venkatesh et al., 2003). The attitudes, viewpoints, and experiences of peers and other people in their social network have an impact on learners or if they obtain recommendations from educators. Social influence emphasizes the effectiveness of peer endorsements, instructor guidance, or the larger social context in inspiring students in the setting of e-learning technology.

- H_3: Social influence has a positive influence on students' use of e-learning technologies.

4.4 Facilitating conditions refers to the degree to which people believe they have the tools, infrastructure, and technical assistance required to successfully use the technology is referred to as the facilitation of conditions. The ability and confidence of learners to embrace and use e-learning technologies depends heavily on the supporting conditions (Venkatesh et al., 2003). To interact with e-learning platforms and material, learners must have access to the required technology (such as PCs, cell phones, and tablets) and dependable internet connectivity. For learners to successfully navigate technical difficulties when utilizing the technology, adequate technical support, such as troubleshooting assistance and access to IT help centres is crucial. Facilitating conditions holds significance for e-learning technology. It emphasizes that student engagement is dependent on the presence of favourable settings. Institutions that provide strong technological assistance, reliable internet connectivity, and sufficient resources foster an environment in which students can use e-learning tools with ease (Granic, 2023).

- H_4: Facilitating condition has a positive influence on students' use of e-learning technologies.

5. Research Methodology

5.1 Study Design

The purpose of this study is to investigate the factors that influence students' use of e-learning technologies. To collect empirical data, a quantitative research approach was used, ensuring an in-depth comprehension of these factors. This method provides a structured and methodical approach to data collection, analysis, and interpretation, which has various advantages in the context of this

study. Convenience sampling was chosen as the best strategy for participant selection because it allows researchers to reach out to people of the target population who are readily available. Undergraduate and postgraduate South African university students were the study's target group. Data from participants was gathered using a standardized questionnaire. The survey was divided into two main sections: demographic data and factors affecting the use of e-learning technology. Participants were asked to provide information about their age, gender, academic program, and frequency of use of e-learning technologies.

5.2 Data Collection

The survey instrument went through a thorough review before being distributed to ensure its clarity, applicability, and conformity with the study's objectives. The survey was sent out electronically via a secure web platform, giving participants convenient and easy access. Potential participants were contacted through email and where they were informed about the study's goal and the significance of their involvement. Upon accessing the survey, participants were presented with an informed consent statement outlining the study's objectives, confidentiality measures, and voluntary participation. Participants were required to provide informed consent before proceeding with the survey. Participants responded to questions regarding demographics and the factors influencing the use of e-learning technology to complete the survey. Participants rated their agreement with statements relating to the four main constructs - utility expectations, effort expectations, social influence, and facilitating conditions—on a Likert scale (ranging from 1 to 5). To maintain data integrity and confidentiality, all responses were thoroughly recorded and securely archived. The survey received 250 valid responses, resulting in a strong dataset for analysis. The participant's full demographic profile is shown in Table 1.

5.3 Data Analysis

The survey data was statistically analysed using the Jamovi 2.3.21 program to find the factors impacting students' use of e-learning technologies. The normality of the data was examined, and a normal distribution assumption was made. EFA was initially employed to assess both the validity and quality of the data. The EFA tries to investigate fewer dimensions to display the original data structure and better comprehend the structure that supports the received data (Beavers et al., 2013, Taherdoost et al., 2022). To ensure adequate correlation in the EFA, the eigenvalues and total explained variance of the components were considered. The Kaiser-Meyer-Olkin test was used to determine sample appropriateness, and Bartlett's Sphericity Test was performed to evaluate the factorability of the correlation matrix. The EFA process for assessing validity included data preparation to organize the data into a dataset and factor extraction to find groups of variables that relate to one another. The factor structure was clarified and made simpler using rotation techniques, which also made it simpler to read. Varimax and Promax are two frequently used rotation techniques. The interpretation of factor loadings identifies which variables contribute most to each component, demonstrating how strongly each variable is related to each factor. Cronbach's alpha was used to determine the validity of the questionnaire's capacity to consistently measure the relevant constructs. Data

selection was a part of the Cronbach's alpha process to choose the survey items that would best measure each construct (utility expectation, effort expectation, social impact, and facilitating conditions). The formula used to calculate the data considered the total number of components, how they interacted with one another, and the average variance. The outcome is a number between 0 and 1, with higher numbers denoting stronger internal consistency. Using EFA and Cronbach's Alpha, the researchers showed that the survey instrument accurately measured Utility Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions, boosting the validity and reliability of the research. This, in turn, improves the trustworthiness of the findings regarding the factors influencing students' use of e-learning technologies. Regression analysis additionally investigated the connections between the variables and aids in determining the direction and degree of the relationship between a dependent variable and one or more independent variables (Price et al., 2015). The researchers' selection of regression analysis as the statistical approach for testing hypotheses is significant and fits with the goals of the study and the characteristics of the data. This is because it is an effective tool for analysing the interactions between independent variables—in this case, Utility Expectation, Effort Expectancy, Social Impact, and Facilitating Conditions—and a dependent variable, namely, students' usage of e-learning technology. Additionally, it allows for the assessment of the strength, direction, and statistical significance of correlations between variables, making it suitable for quantitative data like the Likert scale responses utilized in this study. By evaluating the goodness of fit of the models using regression analysis, researchers can select the best appropriate model. Other statistical measures, such as R2, adjusted R2, and p-values, shed light about the model's accuracy and significance.

6. Result

6.1 Demographic profile

The respondents are predominately male students (58.8%), between the ages of 25 and 31, who are daily and weekly computer users (89.2%), according to the study's demographics displayed in Table 1. Most participants are enrolled in diploma programs.

Table 1: Demographics profile

Grouping		n	Percentage
Gender	Male	147	58.8
	Female	103	41.2
Age	18-24	31	12.4
	25-31	193	77.2
	Above 31	26	10.4
Computer Usage	Daily	116	46.4
	Weekly	107	42.8
	Monthly	27	10.8
Degree Enrolled	Diploma	127	50.8
	Honors	74	29.6
	Post-Graduate	49	19.6

6.2 Evaluation of EFA

Factor analysis replaces lists of variables with a few common factors to accurately represent the information contained in the variables. To validate the utility expectancy, effort expectancy, social influence, and facilitating conditions on student use e-learning technologies, exploratory factor analysis (EFA) was considered. To determine whether EFA was applicable, the Kaiser-Meyer-Olkin (KMO) index of 0.896 was realised which is higher than the accepted standard of 0.60 (Taherdoost et al., 2022). This shows that the data were sufficiently related for a factorial analysis to be attainable. The Bartlett's test of sphericity is significant, showing that the scale's items interact strongly with one another ($\chi 2$= 3287, df = 171, $p < 0.001$). The preliminary examination of the principal components revealed the necessity to extract five components - UE, EE, SI, FC, and SEU. It accounted for 68.8% of the overall variance. The variation of the original values was successfully represented by these five factors based on the communalities of the original measures, which ranged from 0.810 to 0.955. Item SI1 was removed from the model because it loaded into the SI in a way that was inconsistent with other social influence items.

Table 2: Factor loading matrix with Oblimin rotation.

	Factor						
	1	**2**	**3**	**4**	**5**	**Variance %**	**Cronbach α**
EE2	0.897					16.4	0.912
EE3	0.862						
EE4	0.832						
EE1	0.830						
PE2		0.892				31.8	0.894
PE1		0.853					
PE3		0.731					
PE4		0.630					
SEU1			0.887			47.5	0.909
SEU3			0.860				
SEU2			0.740				
SEU4			0.555				
SI3				0.840		60.6	0.881
SI2				0.759			
SI4				0.744			
FC3					0.786	70.1	0.836
FC1					0.672		
FC2					0.655		

Note. 'Principal axis factoring' extraction method was used in combination with an 'oblimin' rotation.

Demonstrating significant correlation between the data, allowing for the potential of a factorial analysis ($\chi 2$= 3109, df = 153, $p < 0.001$). Using primary axis factoring, the factors were extracted. A five-factor solution emerged, accounting for 70.1% of the overall variance. After that, the obtained factors

were rotated using the well-known Oblimin rotation method. The latest examination of primary axis factoring components' findings is shown in Table 2. They show that each item's factor loading is greater than 0.4, confirming the adequate validity of the assessed items. The Cronbach's co-efficient alpha (α) is then used to determine reliability with an alpha reliability value of 0.60 or higher for an acceptable standard (Price et al., 2015). The study's Cronbach alpha for each of the five constructs greater than 0.8, which is the threshold for satisfactory reliability, as shown in Table 2. This demonstrates that the data may be trusted and is internally coherent.

6.3 Regression Analysis

Regression analysis was utilized in the study to examine how utility expectations, effort expectations, social influences, and enabling conditions affected students' use of e-learning technology. The regression model was developed with the entry method. The independent factors are significantly associated with students' use of e-learning technologies, according to the model, which is statistically significant at the 0.001 level F (4,245) = 91.1. Different correlation values (R = 0.773) are shown in the common regression model summary, demonstrating how closely some of the combined independent factors were related to students' use of e-learning technology (the dependent factor). Furthermore, the Adjusted R^2 = 0.591 shows that all the independent variables jointly accounted for 59% of the variations of students' use of e-learning technology.

The regression analysis revealed a causal relationship between student e-learning technology use and four research model constructs. Table 3 summarizes the anticipated factors, as well as each significant value. The regression test findings indicate that effort expectation (ρ = 0.974) is not statistically significant (ρ > 0.05). This suggests that students' use of e-learning technologies is not influenced by effort expectations. Furthermore, utility expectancy (ρ = 0.001), social influence (ρ = 0.001), and facilitating condition (ρ = 0.020) are statistically significant (ρ < 0.05). Hence, utility expectancy, social influence, and facilitating variables all influence how students use e-learning technologies. Thus, hypotheses H_1, H_3 and H_4 were confirmed.

Table 3: Model Coefficients – Student e-learning use

Predictor	Estimate	SE	t	p
Intercept	0.3261	0.2493	1.3078	0.192
UE	0.41783	0.0519	8.0491	< .001
EE	0.00118	0.0357	8.1697	0.974
SI	0.40115	0.0491	8.1697	< .001
FC	0.11828	0.0504	2.348	0.02

UE = utility expectancy, EE = effort expectancy, SI = social influence, FC = facilitating conditions

7. Discussion

The nineteen questionnaire items were found using the four factors derived from the UTAUT framework including the student e-learning constructs. The items were allocated to five latent factors using the EFA. The effort expectancy construct defines ease and simplicity as the degree to which students experience utilizing a certain technology. Utility expectance reflects a student's perception of the perceived value or utility they will obtain from using a particular technology. The use of e-learning technologies indicates how much a student believes that using technology provides educators and learners with a diverse set of digital tools and platforms to enhance the educational experience. Social influence is an illustration to describe how people's attitudes and intentions toward adopting a particular technology are influenced by social interactions, peer opinions, and outside forces. Facilitating conditions are those situations that are conducive to focusing on the resources and outside elements that assist and permit people to use a particular technology effectively. Each factor's reliability and validity, as well as the variances that each latent factor could explain, were confirmed. The model was tested to determine whether there might be a connection between the variables influencing students' use of e-learning technologies. The suggested model was substantial and met general goodness-of-fit standards. In this study, utility expectance, social influence, and facilitating conditions are the factors that influence student use of e-learning technologies. This outcome agrees with past studies that affect how students use e-learning resources (Venkatesh et al., 2003; Salloum & Shaalan, 2019; Abbad, 2021).

The study found that utility expectations have an impact on how students use e-learning technology. This is in line with previous research has supported (Abbad, 2021; Venkatesh et al., 2003). Students are more inclined to accept and engage with technology, improving their entire learning experience, when they believe that e-learning tools and platforms may successfully assist their learning process and result in positive learning outcomes (Granić, 2023). For instance, students may believe that interactive multimedia tools, online simulations, or virtual laboratories will help them better understand difficult ideas, sharpen their problem-solving skills, and offer chances for individualized learning. They consequently acquire favourable views toward e-learning and have higher willingness to use technology into their educational routines. Therefore, to encourage increased acceptance and usage of e-learning technologies, it is important to develop e-learning experiences that are in line with learners' requirements, preferences, and learning objectives.

Furthermore, the study found out that students' effort expectations had no influence on how they used e-learning technologies. This contrasts with outcomes from other studies that found effort expectations influence user intention to use e-learning technologies (Venkatesh et al., 2003), such as Moodle platform (Abbad, 2021), English e-learning websites (Tan, 2013). When using e-learning technologies, students are more likely to adopt the technology and participate in their learning activities more productively when they face few

obstacles or difficulties. By creating simple and straightforward e-learning interfaces, educators can significantly increase effort expectation. The technology may also be more enticing to learners if it has easy-to-use navigation, straightforward directions, and accessible learning resources. A smooth e-learning experience can be enhanced by removing any potential technological obstacles and providing quick technical support thereby motivating students to use technology more frequently.

Moreover, the study found out that social influence influenced students use e-learning technology. This supports study findings of Venkatesh et al., (2003); Abbad, (2021); and Granic, (2023) indicating that students are more inclined to use e-learning technology if they believe their peers or teachers support and promote their use (; Venkatesh et al., 2003;). External elements can also have a social influence on learners' decision-making, such as institutional regulations or educational trends that support the adoption of e-learning. By building a supportive and encouraging learning community, educators can use social influence to improve the integration of e-learning in teaching and learning. Collaboration and information sharing among students can develop a feeling of social connectedness and the discussion of the merits and benefits of e-learning. Additionally, stressing successful outcomes from e-learning initiatives can have a beneficial impact on learners' attitudes and impressions of the technology. Educators can use the power of social influence to promote the successful integration of e-learning in teaching and learning by fostering a supportive learning environment and addressing any potential issues.

Likewise, the study found that facilitating conditions (FC) influences students' use of e-learning technologies. The impact of FC on technology use is supported by prior research (Venkatesh et al., 2003; Tan 2013; Granic, 2023). Learners are more likely to adopt the technology and participate in their learning activities when they believe they have the resources and support needed to use e-learning effectively. A successful implementation of e-learning technologies is greatly facilitated by educators and institutions. Additionally, providing instruction and support for using e-learning tools and platforms can boost learners' competency and confidence in using the technology. A favourable atmosphere for technology adoption can also be created by encouraging a culture of e-learning and rewarding students who participate in it. Teachers and institutions can enable students to confidently embrace e-learning technologies by offering the required materials, technical assistance, and a supportive learning environment. This will promote the successful integration of e-learning in teaching and learning.

The study's findings have important implications for educators, policymakers, and educational institutions attempting to increase student acceptance and effective use of e-learning technology. Given the potential impact of students' digital literacy backgrounds, educational institutions can provide digital literacy training programs that provide students with the required abilities and confidence to effectively use e-learning tools. Similarly, policymakers might use the study's findings to help establish policies that support the integration of e-learning technology into the educational system. These policies could include

support for technology infrastructure, educator professional development, and measures to close the digital gap. Regular feedback surveys and data analysis can also assist educators and institutions in adapting their approach to changing student requirements and preferences.

8. Conclusion

This study has provided insight into the factors that influence students' use of e-learning technology. The findings invariably highlight the significance of utility expectations, social influence, and facilitating conditions in encouraging e-learning technology adoption. Effective e-learning programs have the capacity to stimulate student engagement and collaboration, all while remaining closely aligned with their academic goals. The implications of this study strongly support deeper integration of e-learning tools among students, emphasizing its ability to not only improve student involvement but also to inspire innovation and creativity. These findings are encouraging since they highlight the important role of academic and administrative assistance, the accessibility of essential materials, and the usability of e-learning systems. In conclusion, students' use of e-learning technology is influenced by utility expectations, social influence, and conducive conditions. Students who feel comfortable using and relying on e-learning tools will engage in pleasant social interactions, learn novel skills, and are more likely to keep e-learning a regular part of their academic routine.

9. Research Limitations

The study's limitations, which include the fact that it only included people who were university students, open possibilities for future research. Thus, to generalize the study's findings and determine whether the findings can be duplicated, the research should be expanded to include students from other levels of education who typically utilize e-learning tools.

10. Recommendations

Based on the study's findings, it is recommended that future research make the most of the beneficial effects of social influence by introducing group projects, discussion forums, and collaborative learning activities into the online learning environment to cultivate a sense of community among students. Academic institutions must, however, ensure that e-learning platforms and resources are easily available and user-friendly by working with supplier of technology to make sure that these platforms are simple to use and responsive to student demands. Educational institutions explore providing customized digital literacy training programs with the potential to bridge the digital skills divide and empower students to harness the full potential of e-learning tools, thereby propelling them towards enriched educational experiences demonstrating their lasting significance in modern education. Stakeholders can improve the environment for e-learning by putting these recommendations into practice. By doing so, they can take advantage of the factors found in the study. As a result, the modern educational environment will benefit from increased student involvement and achievement.

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