



## THE RELATIONSHIP BETWEEN UNIVERSITY SOCIAL RESPONSIBILITY, DIGITAL TRANSFORMATION AND INTENTION TO CONTINUE USING E-LEARNING IN PRIVATE UNIVERSITY

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ARTICLE INFO	ABSTRACT
<p>DOI: 10.52932/jfmr.v4i1en.1094</p> <p><i>Received:</i> September 09, 2025</p> <p><i>Accepted:</i> November 26, 2025</p> <p><i>Published:</i> March 25, 2026</p> <p><b>Keywords:</b> E-learning, Service quality, Student satisfaction, University social responsibility</p> <p><b>JEL codes:</b> M14, M19, M53</p>	<p>This study examines the relationship between university social responsibility (USR), digital transformation (DGT) and online learning continuation intention (ELE) in private universities. Furthermore, this relationship is also studied in the context of the role of student satisfaction (SSA). In addition, the study also assesses the impact of several factors on USR, such as education (EDU), awareness (COG), society (SOC), and organization (ORG). There are several factors that influence digital transformation such as lecturers (LEC), students (STU), and universities (UNI). The study used both qualitative and quantitative methods. The survey collected 459 responses which were used to analyze the data in a partial-least square structural equation model (PLS-SEM). The analysis results showed that USR and DGT had a positive impact on the intention to continue choosing online training, especially taking into account the influence of SSA in that correlation. In addition, the results also provided further evidence for the simultaneous impact of the above factors. This is a new point compared to previous individual studies, in addition to the evidence that reinforces the application of research theoretical foundations. At the same time, the study suggests the managerial implications related to infrastructure investment for digital transformation and policy mechanisms to attract good lecturers. Besides, this study has provided supplementary policy mechanisms to support learners and pay attention to social responsibility in building development strategies for private universities.</p>

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## 1. Introduction

The development of science and technology has created challenges for society in general and education in particular. The development of the internet system and technology has created the background for the development of online training (E-learning). Online training can be considered a program with a different implementation form from the traditional training form, in which lecturers will guide students/learners through an online platform (Aldoori, 2023). The content that lecturers guide and convey to learners is based on the same outline content that has been organized for training under the traditional education program (Chaudhary & Saxena, 2024). Therefore, although there are differences in the form of training organization, if considering the output factor, both online and traditional training programs achieve the common goals set by the training program if the program ensures quality through the team of lecturers, management, training support, testing, and evaluation.

Many factors, including digital transformation and university social responsibility, influence learners/students' satisfaction at universities. Digital transformation will facilitate the learning process related to the challenges of time and capacity that traditional training encounters (Alhubaishy & Aljuhani, 2021). In addition, university social responsibility is the perspective that is developed by the social responsibility concept through the education literature review (Li et al., 2021). That has become an attractive topic recently to researchers, academics, economists, and businessmen regarding their outcomes in business, society, and the environment (Le, 2022). So, university social responsibility is gradually becoming more and more interesting when mentioning the strategic role of social responsibility for business development and survival (Chen et al., 2020). According to Baber

(2020), learner satisfaction can be considered based on their attitudes, thoughts, and reactions to online training programs. The objective of the study is to understand the impact of digital transformation and university social responsibility on the intention to continue choosing online training at non-public universities. Here, the analysis examines the simultaneous impact of digital transformation and university social responsibility on intention to continue choosing online programs. Based on that examination, there will be a discussion, assessment, and theoretical suggestion and management implications for the process of building and developing online training programs at non-public universities.

## 2. Literature review and hypotheses development

This research employed a literature-based qualitative approach to review the conceptual framework and develop the research hypotheses. Relevant theories and prior research were systematically reviewed to identify key constructs and their interrelationships within the context of USR and DGT. The knowledge drawn from this theoretical synthesis informed the development of the measurement items and the structure of the questionnaire. Moreover, preliminary interviews with a small group of academic experts and practitioners were conducted to verify the clarity, relevance, and contextual appropriateness of the survey items before proceeding to the quantitative phase.

### 2.1. Foundational theories

This study develops an integrated theoretical model that combines the Theory of Planned Behavior (TPB) (Ajzen, 1991), the Technology Acceptance Model (TAM) (Davis, 1989), and the Stakeholder Theory (Freeman, 1984) in order to explain individuals' intention using e-learning in the context of USR.

According to Ajzen (1991), an individual's behavioral intention is determined by attitude,

subjective norms, and perceived behavioral control. These elements include both personal beliefs and social influences, which are fundamental in understanding technology adoption behavior. Upgrading this theory, the TAM (Davis, 1989) extends the TPB by specifying how users' perceptions of technology – especially perceived usefulness and perceived ease of use – shape their attitudes. Therefore, their behavioral intentions toward adopting digital platforms are explained by TAM, which provides a technology-specific extension of the more general behavioral principles in TPB.

In order to complement these individual-level perspectives, Stakeholder Theory (Freeman, 1984) offers an organizational and contextual lens. It emphasizes that individuals' behavioral and intentions do not occur in isolation but are influenced by the expectations and responsibilities of multiple stakeholders include students, faculty, administrators, and society at large. The institution's commitment to USR reflects how universities respond to these stakeholder expectations, which can, in turn, shape individuals' perceptions and motivations toward engaging in socially responsible and technology-enhanced learning practices. Integrating these three theories, this study posits that USR (Stakeholder Theory) provides the contextual foundation that shapes the social norms and perceived usefulness and ease of use factors (TAM) influencing students' attitudes and behavioral intentions (TPB) toward e-learning. Moreover, stakeholder-driven responsibility initiatives enhance the perceived value and acceptance of e-learning by aligning technological adoption with broader social and ethical purposes.

## **2.2. University social responsibility**

Ali et al. (2021) researched “University social responsibility and self-efficacy as antecedents of intention to use E-learning: examining the mediating role of student satisfaction” to test the

relationship between USR and effectiveness in implementing e-learning. The research results show that there is a positive influence of self-efficacy, social responsibility of the university, and intention to use the e-learning system. Besides, Cardinali and De Giovanni (2021) have studied the value that technology brings to the economy as well as society. On the contrary, there are negative aspects that it brings to society and the environment that need to be noted. Santos et al. (2020) studied “Understanding social responsibilities' influence on service quality and student satisfaction in higher education” to understand customers' expectations about social responsibility of universities and proposed factors that determine students' views on social responsibility of universities and its impact on service quality and satisfaction.

In the wake of the COVID-19 pandemic, universities are advised to pay attention to their strategic approach, especially in terms of social responsibility (Vutsova et al., 2023). According to Phan et al. (2024), there are many definitions of USR; however, the definition of Vallaey (2014) is considered the most appropriate and widely used. USR is considered a framework for universities to organize, manage, and implement activities related to relationships both within and outside the university environment (Latif et al., 2022). In addition, USR is related to ethical policies used in university activities, including responsible management in education, research, and environmental sustainability, and connecting with society to promote sustainable human development.

## **2.3. Digital transformation**

Maurya and Yadav (2024) studied “Dark side of digital transformation in online teaching-learning process considering Covid-19”. The study looked at the growing trend of digital transformation and how it affects education and learners. Through the emphasis on students' experiences, emotions, and perceptions, as well

as the complexities and difficulties caused by the rapid transition to online learning. This was also studied by Lu and Khan (2024) on “Influence of higher education e-service quality on e-learning student satisfaction; as moderated by digital literacy: a mixed method research approach”, and confirmed the differences in students’ perceptions of service quality influenced by different levels of digital literacy.

In their study on “The influence of digital transformation on service quality in the education sector”, Siti et al. (2023) examined and evaluated the impact of DGT in the field of educational service quality, especially in higher education. The research results show that resources, information systems, organizational structure, and culture influence the success of digital transformation and service quality in education. Previously, some studies have applied definitions from other fields to conceptualize digital transformation, and also concluded that the weakness in implementing online training is the lack of interaction or emotional closeness in building a digital platform (Hermawan, 2021). According to Van (2023), DGT focuses on implementation in educational management and teaching, testing, evaluation, and scientific research activities.

#### ***2.4. Student satisfaction and the intention to continue using e-learning***

Ejdys (2022) has published a research paper on “Factors influencing satisfaction and future intention to use e-learning at the university level”, which confirms the growing interest in online education, especially in the context of the pandemic. The research paper identifies the factors and relationships behind satisfaction and future intention to use e-learning among students. The impact of quality factors on user influence and continuance intention of using e-learning systems was examined by AL-Hawamleh (2024), and thus sheds light on the

relationship between system quality, perceived usefulness, ease of use, user satisfaction, and continuance intention.

At the same time, Rajeh et al. (2021) conducted a study on “Students’ satisfaction and continued intention toward e-learning: A theory-based study” to identify factors affecting learner satisfaction and intention to continue toward online learning. The results showed that efforts to increase SSA and ELE should be directed toward applying easy and useful online learning platforms. In which the learner factor has the greatest influence on online activities. In addition, Ngan and Dung (2023) conducted a study on “Factors influencing the intention to continue online learning of students at Tra Vinh University in Vietnam”, showing that information quality, technology, interaction in the E-learning environment, perceived usefulness, lecturers, and learners indirectly affect the intention to continue online learning through satisfaction.

According to Tariq (2023), SSA can be viewed as a reflection of their attitudes, thoughts, and reactions to e-learning programs. Additionally, student motivation within the learning environment is a critical factor that influences both the success of the program and SSA. There is a link between confidence on computer, the creation of conditions, and satisfaction, they affect each other (Ejdys, 2022; Canh et al., 2022). In universities, particularly in private universities, how to recruit students is of most concern to management. However, the students’ decision to start or continue enrolling in an e-learning program largely depends on their satisfaction. This factor is affected by different aspects, such as service quality, curriculum content, DGT infrastructure, and USR (Ngan & Dung, 2023; Vu et al., 2022).

A summary of the literature review of previous studies is presented in the appendix.

## 2.5. Hypotheses development

### *The impacts on university social responsibility*

**Education:** Education directly impacts teaching and training people in the future, including both young learners and experts. It informs the way individuals assess, interpret, and evaluate social and behavioral aspects in relation to the environment (Vallaey, 2009). The impact includes encouraging or giving the power to lecturers in the universities' social responsibility and pushing the study through the subjects that are based on the social projects (Vutsova et al., 2023). Moreover, the universities could create conferences in order to set up the reaction between majors, areas cooperating to solve the society problem, or integrate into the content of subjects (Vallaey, 2008).

**Cognitive:** This concept will influence the perceptions of individuals and organizations in schools regarding the construction of knowledge and technology content related to social issues, such as definition, science, rationality, legitimacy, usefulness, teaching methods, and other values (Santos et al., 2020). In addition, universities need to encourage democratic processes in science and consider the content, issues, and definitions in scientific discussions (Vallaey, 2008). Furthermore, universities need to play a role in monitoring selected knowledge and related issues of social responsibility to students and the community (Vallaey, 2009), to research the best way to develop.

**Social:** It has an impact on economic development and society itself in a two-way relationship. Thus, organizations do not operate independently, and similarly, universities as organizations will be responsible for the impact of their strategies and policies (Latif et al., 2022) to ensure social responsibility. This has an impact on the social responsibility of the school, in particular in promoting the connection and cooperation between research centers and lecturers from departments in the school to

implement and manage development projects. Thereby, these activities provide resources for teaching and research (Vallaey, 2008). This combination will increase opportunities for students to participate in volunteer activities from which they will benefit.

**Organization:** This can refer to the structure of the unit and the internal management method, or the assignment of functions and tasks of departments in the school. This is the basis that has an impact on the workforce, the lives of staff, lecturers, researchers, and the learning process of students through the promulgation of mechanisms, regimes, and policies related to society (Santos et al., 2020). One of the easily seen examples in recent times is the correlation between teaching, research, and environmental pollution (Vallaey et al., 2009). The school can be the unit that sets the first marks for research and action issues related to society (Vallaey, 2008). In addition, it is necessary to integrate USR into the school's management strategy to increase the school's image and reputation.

The hypotheses are:

*Hypothesis  $H_{1a}$ :* The impact of education (EDU) directly affects the general awareness of the school's responsibility to society (USR).

*Hypothesis  $H_{1b}$ :* The impact of cognitive (COG) directly affects the general awareness of the school's responsibility to society (USR).

*Hypothesis  $H_{1c}$ :* The impact of society (SOC) directly affects the general awareness of the school's responsibility to society (USR).

*Hypothesis  $H_{1d}$ :* The impact of organization (ORG) directly affects the general awareness of the school's responsibility to society (USR).

### *University social responsibility and student satisfaction*

Student satisfaction with the quality of services provided by universities has been widely studied, with research confirming that

service quality serves as the foundation for student satisfaction (Vázquez Burguete et al., 2014; Vallaey, 2014). According to Nhan et al. (2022), when students highly evaluate training programs, as well as the availability of software, equipment, and e-learning applications, these factors significantly contribute to academic performance and serve as key drivers of educational advancement. In addition, the impact of USR plays a vital role in the relationship with the satisfaction of students (Jaward et al., 2021). By the general research, Latif et al. (2022) confirmed that there is a great effect of USR on the service quality, the satisfaction, and the popularity of the university among reliable students. Thus, the hypothesis is proposed as follows:

*Hypothesis H<sub>2</sub>*: University social responsibility (USR) directly affects student satisfaction (SSA).

#### *The impacts on digital transformation*

**Lecturer:** Currently, although the role of learners is focused, the role of lecturers cannot be ignored. Lecturers are the ones who decide on methods, tools, ways of organizing, and teaching (Vu et al., 2022). Therefore, the emergence of online learning has caused pressure on them to update lectures compared to traditional training (Volvery & Lord, 2000) or to improve their ability to use information technology to serve the teaching and communication process (Muqtadiroh et al., 2020).

**Student:** Lecturers and learners/students are two categories that have a bilateral influence on the teaching process. This is the factor that largely determines the success of the program. Applying digital transformation in teaching helps learners access open sources of documents, increasing their creative thinking ability (Vu et al., 2022). Therefore, learners' attitudes, infrastructure, and knowledge reception need to be improved because online learning is not just a process of transferring

content between traditional and online forms (Hermawan, 2021). Students' awareness and cooperation in the online learning process will be an important factor in determining the success of the program (Dong et al., 2020).

**University:** The decision to choose methods and tools to support the teaching process in universities is greatly influenced by digital transformation (Sheng, 2024). Investment in infrastructure, transmission systems, and management software depends on the vision, mission, goals, and strategies of the University. Therefore, the University's responsibility in developing the system is very large in terms of investment, organization, economy, and society (Jasmina et al., 2022). In addition, investment needs to be considered in the situation of non-public universities; finance is always carefully considered in investment to limit risks and consider the profits achieved after investment (Evendi et al., 2022). The study proposes the following hypotheses:

*Hypothesis H<sub>3a</sub>*: Instructors/lecturers (LEC) have a positive impact on digital transformation (DGT)

*Hypothesis H<sub>3b</sub>*: Learners'/students' (STU) perceptions, behaviors, and emotions have a positive impact on digital transformation (DGT)

*Hypothesis H<sub>3c</sub>*: University (UNI) have a positive impact on digital transformation (DGT)

#### *Digital transformation and university social responsibility*

Some elements show the impact of digital transformation on the social responsibility of the university (Sheng, 2024). First is the increase in its responsibility to society. In the progress of digital transformation, it not only innovates business models but also gives us changes in university structure, information publication, and the rate of social responsibility. The next factor is the influence of digital transformation on stakeholders (Han, 2023).

For managers, digital transformation greatly supports management tools and decision-making processes. Meanwhile, employees can access information about performance outcomes through publicly disclosed data, and transparency helps them understand and perceive fairness. As a result, they can self-assess the alignment between their labor outcomes and wages, which increases satisfaction and loyalty. Lastly, digital transformation improves operational models; it is not only a technological innovation but also shapes the entire range of the organization's activities (Canh et al., 2022). The hypothesis is:

*Hypothesis H<sub>4</sub>*: The impact of digital transformation (DGT) directly influences the general awareness of university social responsibility (USR).

#### *Digital transformation and student satisfaction*

If we consider the investment and development of digital transformation, then the thing is that digital transformation is not only a technique improvement but also an enhancement of academics, programs, organizational, and managerial structures in the process of transformation (Jasmina et al., 2022). Student satisfaction is impacted in the context of an e-learning program implemented on a digital transformation platform (Lu & Khan, 2024). Furthermore, the consistency in the transformation of teaching and learning is a complex process that requires encouragement and negotiation among stakeholders, including the learners. In another way, the digital transformation will be evaluated to succeed through the impact of digital capabilities and their effects on student satisfaction (Forid et al., 2022). Therefore, the quality of the digital transformation process, including improvements in technical infrastructure, digital content, methods of organization, and program management, will influence students'

perceptions (Sani et al., 2024). So, the following hypothesis is suggested for research:

*Hypothesis H<sub>5</sub>*: Digital transformation (DGT) directly effects to student satisfaction (SSA).

#### *Student satisfaction and intention to continue using e-learning*

Previous research has demonstrated that students' decisions to continue using e-learning programs are influenced by multiple factors (James, 2021). These factors include the service quality of training programs, the qualifications of lecturers, infrastructure, digital transformation systems, and university social responsibility, all of which are reflected in the way programs are organized and managed (Agarwal & Dhingra, 2023). Moreover, AL-Hawamleh (2024) evaluated student satisfaction based on various elements, including learner-related factors (such as attitudes and digital transformation skills) and lecturer-related factors (such as online teaching experience, training content quality, learner engagement, and the ability to integrate digital transformation into teaching). In general, student satisfaction serves as a key indicator for monitoring the quality of educational programs, products, and services, while also predicting learning outcomes and students' attitudes toward the program. Given this, improving student satisfaction is essential to ensuring their continued engagement with e-learning programs (Rajeh et al., 2021). The hypothesis is:

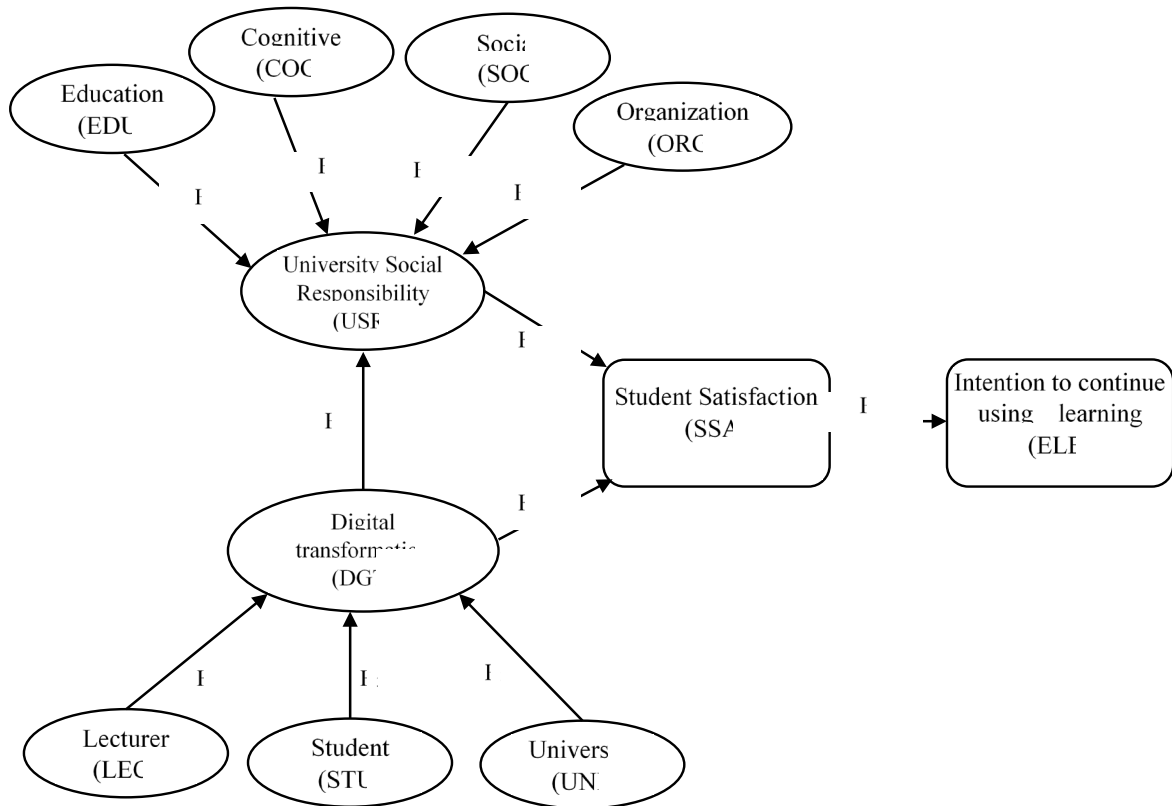
*Hypothesis H<sub>6</sub>*: Student satisfaction (SSA) directly affects the intention to continue using e-learning (ELE).

#### **2.6. Research model**

As the above analysis, a research model has been developed with a literature review and the rationale presented. The proposed research model is the combination of various factors, including university social responsibility

(USR), which is impacted by education (EDU), cognitive (COG), social (SOC), and organizational (ORG) factors. Additionally, the model examines the relationships between

service quality (SEQ), student satisfaction (SSA), and their intention to continue using e-learning (ELE). The research model is illustrated in Figure 1.



**Figure 1.** The proposed research model

### 3. Methodology

#### 3.1. Sampling method and data collection

According to the research objectives, the study focuses on private universities in Ho Chi Minh City. According to the statistics from the Ministry of Education and Training (MOET), there are currently 15 private universities in the city. Therefore, the survey respondents consist of students and learners enrolled in these institutions. Given the characteristics of private universities, the study takes into consideration several factors, including academic disciplines, student enrollment numbers, target recruitment groups, and the organization of e-learning programs. Ultimately, seven universities

were selected for the survey: the University of Economics and Finance (UEF), Ho Chi Minh City University of Technology (HUTECH), Van Hien University (VHU), Van Lang University (VLU), Hoa Sen University (HSU), Hong Bang International University (HBU), and Ho Chi Minh City University of Foreign Languages and Information Technology (HUFLIT).

The survey was performed online via Office Apps Form, facilitating ease of response for participants and data collection as well as analysis for the researchers. The Partial Least Squares Structural Equation Modeling (PLS-SEM) method with SmartPLS 4.0 software was used to analyze the data. According to Hair et al.

(2014), the sample size should be at least ten times the number of observed variables. The survey included 44 observed variables, so a minimum of 440 responses was required for analysis.

The study employed a non-probability sampling method, which was selected to test scientific theories, as suggested by Hair et al. (2010) and Kim (2022). Consequently, the sample collection followed a purposive sampling approach, meaning that respondents were chosen based on their predicted suitability for the survey. Additionally, a norming method was applied to ensure an appropriate distribution of respondents across different survey groups. Appendix 1 (*see Appendix 2 online*) below presents the items and sources being used as the question for the survey, which is graded on a five-point Likert scale (from 1 to 5 as strongly disagree to strongly agree).

## 4. Research results

### 4.1. Measurement model

The analysis results are shown in Appendix 4 (*see Appendix 4 online*), indicating that Cronbach's Alpha values range from 0.746 to 0.897. Thus, it demonstrates that the observed variables in the model have high reliability (Hair et al., 2014). Additionally, the Average Variance Extracted (AVE) values range from 0.644 to 0.793, meeting the required threshold of 0.5 (Hock et al., 2010). Moreover, all factor loading coefficients achieved the acceptable threshold of 0.7, as researched by Hair et al. (2016). These findings specify a strong positive correlation between the observed variables and

the corresponding latent constructs, assuring the measurement model is valid and reliable.

Regarding discriminant validity, the square root index Average Variance Extracted (AVE) and Heterotrait-Monotrait (HTMT) ratio were assessed. Fornell and Larcker (1981) recommended the square root index AVE as presented in Appendix 5 (*see Appendix 5 online*). The value for each latent variable is higher than the correlations between the latent variables. Besides, Henseler et al. (2015) suggest that HTMT values should be less than 0.9 to make sure that the constructs are sufficiently distinct from one another. Appendix 6 (*see Appendix 6 online*) details the HTMT values for the model, indicating that all values access the required threshold of 0.9. Thus, it could be confirmed that discriminant validity satisfies the condition, affirming that the constructs are well-differentiated within the model.

### 4.2. Structural model

After the measurement model was confirmed through validity, reliability, and overall model fit, the next step was to assess the multi-collinearity using the Variance Inflation Factor (VIF). As presented in Appendix 4, all VIF values in the structural model are less than 3.0. According to Hair et al. (2019), if a VIF value is less than 3.0, then the multi-collinearity does not exist in the research model.

In addition, the bootstrapping technique was deployed with 5,000 resampling iterations to test the above hypotheses and path coefficients. The results are indicated in Table 1. SmartPLS was used to analyze the research model.

**Table 1.** Path analysis

Hypo	Paths	Original sample (O)	Sample mean (M)	SD (STDEV)	T statistics ( O/STDEV )	CI- 2.5%	CI- 97.5%	P-values	Conclusion
H1a	EDU -> USR	-0.081	-0.080	0.039	2.081	-0.157	-0.005	0.038	Accepted
H1b	COG -> USR	0.076	0.076	0.046	1.657	-0.012	0.166	0.098	Unaccepted

Hypo	Paths	Original sample (O)	Sample mean (M)	SD (STDEV)	T statistics ( O/STDEV )	CI- 2.5%	CI- 97.5%	P-values	Conclusion
H1c	SOC -> USR	0.381	0.381	0.054	7.017	0.279	0.490	0.000	Accepted
H1d	ORG -> USR	0.501	0.499	0.050	9.961	0.321	0.503	0.000	Accepted
H2	USR -> SSA	0.677	0.678	0.039	17.305	0.507	0.695	0.000	Accepted
H3a	LEC-> DGT	0.271	0.272	0.051	5.281	0.175	0.376	0.000	Accepted
H3b	STU-> DGT	0.169	0.170	0.053	3.208	0.068	0.276	0.000	Accepted
H3c	UNI-> DGT	0.435	0.434	0.053	8.159	0.326	0.535	0.000	Accepted
H4	DGT->USR	0.184	0.183	0.054	0.184	0.461	0.684	0.000	Accepted
H5	DGT->SSA	0.255	0.257	0.050	5.051	0.172	0.403	0.000	Accepted
H6	SSA -> ELE	0.741	0.741	0.030	24.557	0.651	0.787	0.000	Accepted

Appendix 7 demonstrates the analyzed research model, presenting the p-values as well as path coefficients for each relationship. These results get a visual representation of the statistical significance and strength of the relationships between variables within the model.

### 4.3. Discussion

The statistical findings in table 1 indicate that EDU has a significant negative relationship with USR (-0.081;  $p = 0.038$ ), affirming hypothesis  $H_{1a}$  but the direction was reversed. This is illogical as theoretically, EDU such as promoting diversity and humanistic values, should improve, rather than diminish USR. The reason is that in private universities, educational activities focus on academic outcomes rather than social interactions. It leads students to perceive a weak relationship between EDU and USR. Therefore, it is necessary to research further into contextual or measurement factors that could underline this inverse effect. Moreover, SOC and USR (0.381;  $p = 0.000$ ), as well as ORG and USR (0.501;  $p = 0.000$ ), exhibit significant relationships, confirming hypotheses  $H_{1c}$  and  $H_{1d}$ . Those result matches to the previous research of Rasoolimanesh et al. (2024), Latif et al. (2022), and Santos et al. (2020).

In another way, the relationship between COG and USR was not set, as the original sample value was 0.076 with a p-value of 0.098,

indicating statistical insignificance. Therefore, hypothesis  $H_{1b}$  is not confirmed. This is different with previous study (Santos et al., 2020). The reason is that cognitive factors (COG) may not be well recognized or friendly by students. Therefore, the respondents may not understand clearly or recognize the effect of COG on USR, leading to a weaker perceived effect compared to ORG or SOC.

Moreover, the statistical results present some significant relationships within the research model: the relationship between USR and SSA has an original sample value of 0.677 with  $p = 0.000$ , which confirms hypothesis  $H_2$ , matching to previous research by Canh et al. (2022) and Jaward et al. (2021). The following hypotheses are the relationship between LEC and DGT (0.271,  $p=0.000$ ); STU and DGT (0.169,  $p=0.000$ ), then UNI and DGT (0.435,  $p=0.000$ ), so they could conclude that those hypotheses ( $H_{3a}$ ,  $H_{3b}$ ,  $H_{3c}$ ) are accepted, which matches the research of Maurya and Yadav (2024), Canh et al. (2022), Vu et al. (2022).

Furthermore, the relationship between DGT and USR with the original sample is 0.184,  $p=0.000$ . SSA is set by an original sample value of 0.184 and  $p = 0.000$ , affirming hypothesis  $H_4$ . This finding is the same as previous studies conducted by Siti et al. (2023) and Cardinali and De Giovanni (2021). The relationship between

DGT and SSA (0.255,  $p=0.000$ ) is accepted, so  $H_5$  matches the research of Lu and Khan (2024), Siti et al. (2023), Vu et al. (2022). And the last one is the relationship between SSA and ELE, with an original sample value of 0.741 and  $p = 0.000$ , supporting hypothesis  $H_6$ . Some prior research by Vu et al. (2022), Ejdays (2022), and Rajeh et al. (2021) is consistent with that finding. These further strengthen the validity of the proposed model by confirming alignment with existing literature.

## 5. Conclusion and implication

### 5.1. Conclusion

This research satisfies the initial research objectives by testing the effect of university social responsibility (USR) and service quality (DGT) on learners' intention to continue using e-learning programs. The results affirm the relationship between these factors within private universities. Moreover, this also provides a comprehensive discussion of the results, supplying valuable knowledge into these relationships and contributing to the theoretical literature in the educational research field. Especially, four key theoretical implications are indicated, extending the body of knowledge on e-learning programs. Besides, the research confirms the interaction among USR, DGT, and intention to continue using e-learning (ELE), leading to four managerial implications that support university managers in the development and deployment of e-learning programs.

### 5.2. Theoretical implications

This research shows some theoretical implications. Firstly, it provides more empirical evidence to support the existing literature on the effect of EDU, COG, SOC, and ORG on USR, as well as the mediation mechanisms through which these factors affect ELE. The findings help to solve the gap in the research

about the relationship between USR, SSA, and ELE. This consolidates the practical evidence and the previous research (Alkhawaja et al., 2021; Santos et al., 2020). In the same way, the impacts of LEC, STU, and UNI on DGT are also confirmed regarding the effect of those factors on ELE through DGT. The highlight aspect of this study is the relationship between DGT, SSA, and ELE, consolidating existing practical evidence and extending the knowledge from previous research results (Siti et al., 2023; Cardinali and De Giovanni, 2021).

Furthermore, in the previous studies, they had just tested the effects of separate factors, such as USR or DGT, on ELE (Vu et al., 2022; Jaward et al., 2021), the experimental results of this study affirmed the simultaneous impacts of both USR and DGT on ELE. This implements to the existing literature by adding a more comprehensive understanding of the factors influencing students' intention.

Next, this research promotes advanced theoretical by integrating the Theory of Planned Behavior (TPB) (Ajzen, 1985) and Stakeholder Theory (Freeman, 1984) to check the effect of USR on ELE. As the Stakeholder Theory, both internal and external stakeholders play a crucial role in the sustainable development of educational creation, where student satisfaction plays as a key determinant of e-learning programs.

Finally, this research consolidates the theoretical foundation of e-learning research by associating TPB (Ajzen, 1985) and the TAM model (Davis, 1989) to examine the relationship between DGT and ELE. The results strongly assert the influence of DGT, in alignment with the TAM model. In reality, managers of online programs should notice more about the technical infrastructure as well as ease of use, because of these significantly impact on students' intentions as suggested by TPB.

### 5.3. Managerial implications

Based on model analysis, this study suggests several managerial implications.

*First*, according to the data analysis results, the university factor has the strongest impact among the three factors of lecturers (LEC), learners/students (STU), and universities (UNI) on the digital transformation factor (DGT). Thereby, it can be visualized that the awareness of the role and position of the school has been highly appreciated by learners in the digital transformation process. Accordingly, learners affirm that the success of digital transformation will be due to the key role of the school factor. In order to create favorable conditions for building and improving the digital transformation environment as the foundation for maintaining and developing online training programs, the school plays an important role in building short-term, medium-term, and long-term development strategies. In particular, investment strategies and investment capital need to be paid attention to, with the goal of developing digital transformation infrastructure as the primary focus.

*Second*, the data analysis results confirmed the impact of the Lecturer factor (LEC) on digital transformation (DGT). At the same time, it showed that the respondents highly appreciated the quick adaptability of the lecturer when switching to online or using many different methods. However, the lecturers were not confident and did not have the friendliness and enthusiasm to support. This conclusion is consistent with reality; lecturers play an important role in the training process, whether in direct or online form, although the current general policy is to focus on learners. To attract talented and dedicated people, it is thought that administrators need to be bold in issuing salary and bonus policies and preferential policies so that talented people with good academic degrees can participate in work at the school

with a sense of confidence in the profession, focusing on professional development. In addition, it is necessary to pay attention to the work of fostering and developing the teaching staff, improving expertise, qualifications, or updating knowledge and skills to serve the teaching work of the school. Moreover, they could organize training for lecturers on how to apply new software and create interesting teaching methods. Besides, it could train learners how to use the software as well as the resources to enhance their studies.

*Third*, the data analysis results confirmed the impact of the learner/student factor (STU) on digital transformation (DGT). However, the average value of the group sample was 3.862, in which the support from family, lecturers, and schools when using new technology was highly appreciated, but the learning outcomes were not as good as the traditional training form. As analyzed above, lecturers and learners/students are two almost irreplaceable factors in the training process. To motivate learners when participating in online training programs, it is necessary to build and enhance support methods and tools. Specifically, it is possible to consider the direction of improvement, building software and applications to deploy online teaching in an accessible and user-friendly way. Create favorable opportunities for learners to look up documents, download and store learning resources and solutions to increase friendliness in interaction with lecturers and classmates, thereby creating a comfortable mentality during the training process, participating in classes. This will be the premise to help increase the feasibility of building the intention to continue choosing online training.

And the last one is the study also indicates the impacts of university social responsibility (USR) on e-learning programs (ELE). Furthermore, organizational plays an important role in setting USR. Therefore, its governance structures and

strategic planning must be in line with social responsibility initiatives and positively attract stakeholders in decision-making processes. The development of online programs should be the first concern in sustainable development, with strategic investment in e-learning infrastructure as a priority concentration. Additionally, faculty qualifications, staff relationships, and institutional support mechanisms should be given more attention. It is necessary to have the policies and incentive structures to attract and keep high-quality lecturers and experienced staff, thereby assuring the effective development and delivery of the high-quality e-learning program.

#### **5.4. Limitations for future research**

This study also has some limitations. First, the use of non-probability sampling may reduce the representativeness of the sample and limit the generalizability of the findings. As a result, the observed relationships, such as the effect of EDU on UST, should be interpreted with caution. The second one is the research that concentrated exclusively on private universities in Ho Chi Minh City, which leads to the geographical constraints. The reason is that the difficulty of accessing and collecting responses from students at other universities across the country limits the scope of this result. Next, the research only focus in students as respondents, without concern to other stakeholders such as university

administrators, faculty members, and staff. As a result, this does not give us a comprehensive evaluation of the e-learning system.

For future research, it could employ probability-based sampling and larger, more diverse samples to enhance the robustness and external validity of the results. Moreover, it should extend the area of research, including universities across Vietnam, rather than only concentrating on private institutions in Ho Chi Minh City. For example, it could include public and international universities, which increase the representativeness of the findings. The answers include the university administrators, faculty members, and staff who are directly involved in e-learning programs and should be included in the survey population. This extension aspect will provide a fuller understanding of the e-learning review in Vietnam, creating valuable managerial implications for policymakers and university managers in the development and improvement of e-learning programs.

#### **Declaration for using AI**

During the preparation of this manuscript, the authors partially used Grammarly to assist with language editing. The authors have carefully reviewed and revised the content and take full responsibility for the final version of the articles.

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