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ORIGINAL

# The factors that affect electronic learning students' behavioural intentions in the higher education tourism and hospitality disciplines

## Los factores que afectan a las intenciones de comportamiento de los estudiantes de aprendizaje electrónico en las disciplinas de turismo y hostelería en la enseñanza superior

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## ABSTRACT

**Introduction:** this study aims to explore the factors influencing the intention of hospitality and tourism students in the UAE to adopt e-learning using the Technology Acceptance Model (TAM). E-learning has become an essential tool in higher education, particularly in response to the COVID-19 pandemic. The research seeks to identify the key determinants that affect students' willingness to engage with e-learning platforms.
**Method:** a cross-sectional survey was conducted in two phases, involving 278 undergraduate students from a UAE university. The survey assessed various TAM constructs such as perceived usefulness, ease of use, system characteristics, and hedonic motivation. Data were analyzed using SmartPLS software and Structural Equation Modeling (SEM) to test the relationships between the variables.
**Results:** the study found that perceived usefulness and ease of use were the most significant factors influencing students' intention to adopt e-learning. Other influential factors included e-learning resources, platform functionality, subjective norms, and e-learning support. Additionally, hedonic motivation played an important role in enhancing students' engagement with e-learning.
**Conclusions:** the findings suggest that higher education institutions should focus on improving the perceived usefulness and ease of use of e-learning platforms while ensuring robust system functionality and support. The study contributes to the understanding of technology adoption in non-technical fields, offering insights that can inform e-learning strategies, especially in the context of future pandemics or disruptions.

**Keywords:** TAM; E-L; Learners' Intention; UAE.

## RESUMEN

**Introducción:** este estudio pretende explorar los factores que influyen en la intención de los estudiantes de hostelería y turismo de los EAU de adoptar el e-learning utilizando el Modelo de Aceptación de la Tecnología (TAM). El e-learning se ha convertido en una herramienta esencial en la enseñanza superior, sobre todo en respuesta a la pandemia del COVID-19. La investigación pretende identificar los determinantes clave que

afectan a la disposición de los estudiantes a comprometerse con las plataformas de e-learning.
**Método:** se realizó una encuesta transversal en dos fases, en la que participaron 278 estudiantes universitarios de una universidad de los EAU. La encuesta evaluó varios constructos TAM, como la utilidad percibida, la facilidad de uso, las características del sistema y la motivación hedónica. Los datos se analizaron mediante el software SmartPLS y el modelo de ecuaciones estructurales (SEM) para comprobar las relaciones entre las variables.
**Resultados:** el estudio reveló que la utilidad percibida y la facilidad de uso eran los factores que más influían en la intención de los estudiantes de adoptar el aprendizaje electrónico. Otros factores influyentes fueron los recursos de aprendizaje electrónico, la funcionalidad de la plataforma, las normas subjetivas y el apoyo al aprendizaje electrónico. Además, la motivación hedónica desempeñó un papel importante en la mejora del compromiso de los estudiantes con el e-learning.
**Conclusiones:** los resultados sugieren que las instituciones de enseñanza superior deberían centrarse en mejorar la utilidad percibida y la facilidad de uso de las plataformas de e-learning, garantizando al mismo tiempo una funcionalidad y un soporte sólidos del sistema. El estudio contribuye a la comprensión de la adopción de la tecnología en campos no técnicos, ofreciendo perspectivas que pueden informar las estrategias de e-learning, especialmente en el contexto de futuras pandemias o interrupciones.

**Palabras clave:** TAM; E-L; Intención de los Alumnos; EAU.

## INTRODUCTION

The notion of Electronic Learning (E-L) is not novel (Wang, 2003); indeed, it has been employed globally for numerous decades. It is worth mentioning that higher education institutions worldwide have been growing using E-L due to the rapid expansion of Information and Communication Technologies (ICT), particularly Internet technologies (Persico et al., 2014; Perera & Nalin, 2022). The increasing use of virtual education settings, including Blackboard, WebCT, and Moodle, has greatly influenced the development of E-L in institutions (Kamalasena & Irisena, 2021; Jameel et al., 2021). Furthermore, the growing rivalry among higher learning establishments to entice learners and fulfil their learning requirements has prompted colleges to embrace and employ E-L (Lee & Hsieh, 2009). As a result, institutions around the world are making significant investments in E-L to enhance conventional teaching methods and enhance the education experience and academic achievement of their students (Mafuna & Wadesango, 2016; Wang, 2003).

Several endeavours have been undertaken to forecast the individual adoption of technology-driven products or services using established theories. The TAM theory is generally acknowledged as one of the most frequently referenced theoretical frameworks among numerous ideas. The TAM suggests that the perception of how easy a technology is to utilise and how beneficial it is can influence a user's attitude towards that technology. This, in turn, can raise their intention to use it. Broadbent (2017) Meanwhile, the theory of planned behaviour (TPB) is a conceptual model that has been commonly used in many investigations to identify the motivating factors behind individual behaviour. TPB suggests that an individual's behavioural intentions are influenced by their attitude, subjective standards, and perceived behavioural control (Bruso et al., 2020). Both the TAM and the TPB were evolved from the Theory of Reasoned Action (TRA), which proposes that individual behavioural intention is entirely within one's control (Alzoubi & Alzoubi, 2020). These two models have been extensively employed to study the acceptance of technology-enhanced learning in higher learning. In addition, there have been other notable efforts that have expanded current theories by introducing other factors and integrating ideas to gain a deeper understanding of how individual behavioural intentions are formed in the university sector (Abuhammad, 2020; Martin et al., 2020; Hanham et al., 2021).

Despite the growing utilise of E-L at universities for many years, several academics contend that only a limited number of institutions truly maximise the advantages of E-L (Perera & Nalin, 2022). Thus, comprehending the learners' willingness to embrace E-L is regarded as a crucial milestone in establishing and enhancing an effective E-L setting (Tamer et al., 2016). Numerous researchers on E-L have primarily examined the experiences of staff members while giving little consideration to the perceptions and engagement of the learners (Wei & Chou, 2020; Al-Adwan et al., 202; Muhmmad et al., 2023). This is particularly true in the domain of hospitality and tourism (Lee et al., 2019). Moreover, the majority of studies conducted in the hospitality industry have concentrated on the viewpoints of learners about completely online or partly online/blended classes (Pang et al., 2010; Murphy et al., 2014; Muhmmad et al., 2023). Nevertheless, little research has been conducted on the learners' views about conventional in-person courses that incorporate technology. Furthermore, the predominant focus of prior research on E-L has been on homogeneous samples obtained from a singular group (Alzoubi & Alzoubi, 2020).

The majority of these investigations have been carried out in wealthy nations. Insufficient study exists on

the topic of E-L in developing nations, which could provide insight into learners' inclination to utilise E-L (King & So, 2014). Conducting relevant research is very crucial, especially in impoverished countries where institutions depend on conventional face-to-face classes because they lack the necessary technological infrastructure to conduct E-L (Al-Qirim et al., 2018; Abbad, 2021). Hence, the objective of the research is to utilise the extended TAM to investigate the determinants that impact the inclination of institution learners studying hospitality and tourism to adopt E-L in higher learning settings that provide technology-enhanced classes.

## Literature review and hypotheses

### *E-learning defined*

A universally acknowledged definition of E-L is a challenging task for most academics in the scientific community, as established by Sangra et al. (2012). Certain investigations in the literature have provided definitions of E-L depending on specific attributes of the education environment, including asynchronous and synchronous (Alzoubi & Alzoubi, 2020). Asynchronous E-L pertains to prerecorded or readily accessible E-L materials that can be accessed by learners at their convenience and potentially from anywhere. In contrast, synchronous E-L refers to live E-L, where all students are required to be present in front of their electronic devices simultaneously (Broadbent, 2017), such as during electronic lectures or live video broadcasts. The study looks at how much more engaged the students were in E-L in traditional, in-person classes with the use of an online course management system like Blackboard. The term E-L, in this research, refers to the process of delivering educational materials through online platforms that utilise the Internet as a means of distribution. This enables students to access various learning tools, such as bulletin boards, course content management systems, and private email, at their convenience.

### *Subjective Norm (SN)*

The SN pertains to the effect that others have on a user's decision to engage in a certain activity. Ajzen, (1991) defined social norms as the observed impact of society on an individual's behaviour. Subjective norms have a considerable influence on a person's inclination to accept a technology (Schepers & Wetzels, 2007; Venkatesh & Davis, 2000). Furthermore, Al-Okaily et al., (2020) and Jameel et al., (2021) have verified that SN has a considerable effect on learners' inclination to embrace E-L technology. Furthermore, throughout the COVID-19 pandemic, learners embraced online classes as a means to sustain their academic pursuits, and their views towards accepting E-L were notably influenced by subjective standards (Abbad, 2021; Almaiah et al., 2020). Thus, the current research presents the hypothesis:

**H1:** SN has a favourable influence on PU of E-L.

### *Technology Acceptance Model*

Various theoretical frameworks have been utilised in the field of IS to explain the acceptance and utilisation of technology. Davis created the TAM in 1989, which is one of the theoretical concepts. Fishbein and Ajzen's TRA, which they proposed in 1975, served as the foundation for the TPB. Davis proposed the idea in 1989 that PU and PEOU, two individual beliefs, have an impact on the influence of external factors on the acceptability of technology. PU refers to an individual's perception of how using a specific system would improve their job performance, whereas PEOU refers to their perception of how operating the system requires minimal cognitive and physical exertion. (Davis, 1989). Within the realm of learning and education, numerous studies (Park, 2009; Ain et al., 2016; Wei & Chou, 2020) have employed the TAM to assess students' willingness to embrace E-L as an additional educational resource alongside traditional classroom instruction. Nevertheless, Nawaz & Mohamed (2020) contended that the current parameters of TAM are inadequate for accurately capturing student acceptance of E-L. Therefore, it is necessary to conduct further analysis of the supplementary aspects to be included. In addition, a significant number of studies on TAM have mostly examined Western or developed countries, with limited testing conducted in developing countries (Nawaz & Mohamed, 2020). In nations outside of the Western world, such as the UAE, universities prefer to rely on traditional in-person courses due to the limited technology infrastructure available. This lack of infrastructure poses a challenge for universities to implement E-L methods. This then impacts the level of technology adoption in these nations (Samsudeen & Mohamed, 2019). Therefore, it is imperative to prioritise the examination of technological variables that could impact students' inclination to utilise an E-L platform. Hence, the present research expands the TAM by incorporating six supplementary technological factors, namely E-L resources, E-L assistance, platform functionality, system characteristics, subjective norms, and hedonic motivation. Thus, this study presents the hypothesis:

**H2:** PEOU has a favourable influence on the intention to use E-L.

**H3:** PU has a favourable influence on the intention to use E-L.

**H4:** PEOU has a favourable influence on PU of E-L.

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*E-learning Resources*

For the purposes of this research, E-L resources are specifically described as the hardware equipment, software programmes, and digital materials (such as electronic journals and books) that are necessary for the implementation of E-L. Several scholars have highlighted the perception of resources as a significant external element that influences the acceptability of technology (Al-Qirim et al., 2018; Lee et al., 2019). In research done by Raman et al. (2022), it was shown that the way people view the resources accessible to them has a positive impact on how they evaluate the utility of an E-L system. Thus, the current research presents the hypothesis:

**H5:** E-L resources have a favourable influence on the PU of an E-L use.

*E-learning Support*

E-L support, as used in the current research, pertains to the specialised provision of administrative, training, and technical assistance that is essential for the successful execution of E-L. The PEOU of an E-L system is significantly impacted by the perceived level of technical support, according to a number of studies (Lee, Song, & Hong, 2019; Raman et al., 2022; Perera & Nalin, 2022). The research conducted by Abbad (2021) in an online learning environment demonstrated that computer training positively impacted PEOU. Thus, the current research presents the hypothesis:

**H6:** E-L support has a favourable influence on the PEOU of an E-L use.

*Platform Functionality*

The creation of an E-L system is heavily reliant on the criticality of Platform Functionality (PF) (Pituch & Lee, 2006). The research defines PF as the capacity of an E-L platform to offer adaptable access to instructional and assessment media. Several investigations (Cheng, 2011; Lee M., 2010) have suggested that the functionality of a platform plays a significant role in influencing the PEOU and PU of an E-L system. Studies conducted by Cheng in 2011 and 2012 investigated how workers in financial service organisations and information system organisations perceive and adopt an E-L system. The findings of these studies indicate that the functionality of the platform has a favourable influence on the perceived effectiveness of the E-L system. Thus, this research posits the following hypotheses:

**H7:** PF has a favourable influence on the PU of an E-L use.

**H8:** FP has a favourable influence on the PEOU of an E-L use.

*System characteristics (SC)*

The function of the E-L system refers to its capacity to provide individuals with adaptable access to the structure (Al-Qirim, et al., 2018). By integrating auditory, visual, and textual modalities, an electronic learning system can enhance user involvement (Samsudeen & Mohamed, 2019). Acording to DeLone & McLean, (2004) system quality is a metric that evaluates the effectiveness of a system, including its usability, availability, and reaction time. Its addition focuses on the presence of defects in the system, the uniformity of the user interface, the simplicity of use, and the speed of reaction in communicating systems. The significance of these characteristics is validated in a study where internet users showed a strong preference for factors such as readability and ease of navigation (Smith & Merchant, 2001). Robbins & Stylianou (2003) stated that it has been shown that a responsive website is of great significance to end-users. Usage often pertains to the degree of exertion required to interact with an information system or, fewer frequently, the quantity of reports or other information outputs produced by the system during a certain timeframe. Furthermore, several researchers propose that utilisation pertains to the inherent characteristics, excellence, and suitability of the actual system utilisation rather than only being a metric of time allocated to the system (DeLone & McLean, 2004; Hanh et al., 2023). Thus, the current research presents the hypothesis:

**H9:** SC have a favourable influence on PEOU.

**H10:** SC have a favourable influence on PU.

*Hedonic motivation (HM)*

HM refers to the perceived pleasure in information system studies and has become recognised as a component that affects the adoption of technology (Teo & Noyes, 2011). Furthermore, HCI plays a pivotal role in the acceptance and utilisation of a technology by customers (Alalwan et al., 2015; To & Lin, 2007). Studies have demonstrated that both the PU and pleasure of E-L play significant roles in shaping individuals' attitudes towards and utilisation of technology. Moreover, hedonic motivation and perceived pleasure are significant determinants that may effectively forecast the inclination to partake in virtual classrooms and the degree of learner involvement during the COVID-19 outbreak (Gillis & Krull, 2020; Sitar-Taut, 2021). Thus, the current research presents the hypothesis:

**H11:** HM has a favourable effect on PEOU.

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**H12:** HM has a favourable effect on PU.

The current research objective was to utilise the TAM to investigate the factors that effect the intention of college hospitality and tourism learners to adopt E-L in higher learning settings. The strategy is based on ideas derived from Davis's (1989) TAM. Fig 1 displays the visual depiction of the framework. The TAM is widely used in the field of ICT (Alzoubi & Alzoubi, 2020).

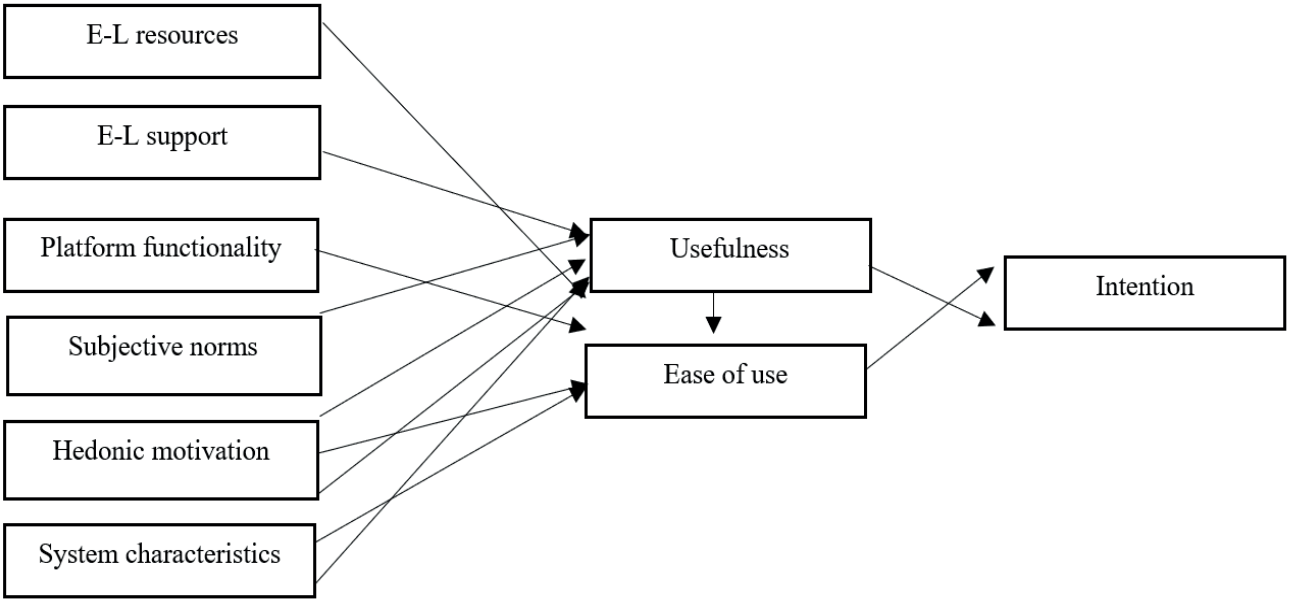


**Figure 1.** Conceptual Model

## METHOD

The current research employs a quantitative approach, utilising a survey to gather data encompassing personal and research-related information. This research focused on students from the college hotel management studies who were enrolled in technology-enhanced courses. The classes were enhanced and facilitated via the use of an online course management platform, while the learners also participated in in-person sessions. Subsequently, a preliminary survey was carried out by interviewing a small number of learners to examine the variables that contribute to poor participation. Based on the findings, it was determined that a thorough study should be done. The process of defining and measuring factors is illustrated in table 1.

The survey was created and sent to the participants by utilising Google Forms. The research population comprised all undergraduate students studying tourism and hotel management in the UAE, specifically 1025 students enrolled in the faculty of hotel management studies. The current research employed a CSM, specifically a non-probabilistic one. An evaluation was conducted on a subset of 278 surveys that were completed, after excluding any surveys that were incomplete. For the purpose of evaluating the reliability of the questionnaire, a pilot test was conducted with a randomly selected sample of 25 respondents. The presence of reliability was determined by assessing the feedback provided by the respondents.

**Table 1.** Construct measurement and sources

| Variables | No. items | References |
|---|---|---|
| E-L resources | 3 | (Tamer et al, 2016) |
| E-L support | 4 | (Tamer et al, 2016) |
| PF | 4 | (Tamer et al, 2016) |
| System characteristics | 4 | (Muhmmad et al., 2023; Alzoubi & Alzoubi, 2020) |
| Subjective norms | 3 | (Muhmmad et al, 2023) |
| Hedonic motivation | 3 | (Muhmmad et al, 2023) |
| Usefulness | 4 | (Perera & Nalin, 2022) |
| Ease of use | 4 | (Perera & Nalin, 2022) |
| Intention | 3 | (Perera & Nalin, 2022) |

## RESULTS

The reported results were derived from the SEM and aligned with the objectives of the research. Missing data may occur when a participant fails to respond to one or more survey items. To ensure the accuracy of the data, frequency and missing value analyses were conducted for each measure item. After screening the data, only a small amount of missing data was identified. To address this, the missing data was filled in by utilising the median variable responses for each measure item. Outliers are data points that deviate significantly from the normal range of values for a given variable (Hair, 2017). In addition to analysing histograms and boxplots, the standardised (z) value of each factor was examined for univariate disclosure. In Hair's (2017) study, a case is considered an outlier if its standard score is equal to or more than 4,0. Consequently, an outlier refers to any Z-score that exceeds 4 or falls below -4.

### Measurements Model

Several tests were conducted to ensure the accuracy and reliability of the metrics used in this study. CR values, exceeding the 0,7 threshold, confirmed the reliability of the factors. CA values above 0,7 also supported internal consistency. The Average AVE values, all above 0,5, indicated strong convergent validity. Discriminant validity was confirmed through the Fornell-Larcker test, which showed that the square root of the AVE for each latent variable was greater than its correlations with other variables. Metamethod analysis also supported the findings, ensuring that the correlation between constructs did not exceed their correlation with themselves. Overall, the measures used were reliable and valid, and the data were sufficient for analysis.

**Table 2.** Measurement Model

| Factors | Loading | CA | CR | AVE |
|---|---|---|---|---|
| E-L resources | | 0,925 | 0,920 | 0,728 |
| E-LR1 | 0,791 | | | |
| E-LR2 | 0,822 | | | |
| E-LR3 | 0,811 | | | |
| E-L support | | 0,877 | 0,847 | 0,620 |
| E-LS1 | 0,723 | | | |
| E-LS2 | 0,765 | | | |
| E-LS3 | 0,775 | | | |
| E-LS4 | | | | |
| PF | | 0,830 | 0,919 | 0,731 |
| PF1 | 0,781 | | | |
| PF2 | 0,793 | | | |
| PF3 | 0,772 | | | |
| PF4 | | | | |
| System characteristics | | 0,772 | 0,822 | 0,709 |
| SC1 | 0,7,14 | | | |
| SC2 | 0,771 | | | |
| SC3 | 0,898 | | | |
| SC4 | 0,741 | | | |
| Subjective norms | | 0,801 | 0,857 | 0,785 |
| CN1 | 0,727 | | | |
| CN2 | 0,712 | | | |
| CN3 | 0,749 | | | |
| Perceived ease of use | | 0,915 | 0,901 | 0,761 |
| EOF1 | 0,713 | | | |
| E2 | 0,788 | | | |
| E3 | 0,741 | | | |
| E4 | 0,779 | | | |
| Perceived usefulness | | 0,909 | 0,905 | 0,781 |
| PU1 | 0,818 | | | |

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| | | | | |
|---|---|---|---|---|
| PU2 | 0,824 | | | |
| PU3 | 0,832 | | | |
| PU4 | 0,842 | | | |
| Hedonic motivation | | 0,931 | 0,925 | 0,933 |
| HM1 | 0,744 | | | |
| HM2 | 0,757 | | | |
| HM3 | 0,739 | | | |
| Intention | | 0,897 | 0,885 | 0,877 |
| I1 | 0,753 | | | |
| I2 | 0,740 | | | |
| I3 | 0,749 | | | |

**Table 3.** Discriminant validity

| | E-LR | E-LS | PF | SC | CN | EOU | PU | I |
|---|---|---|---|---|---|---|---|---|
| E-LR | 0,841 | | | | | | | |
| E-LS | 0,723 | 0,872 | | | | | | |
| PF | 0,745 | 0,872 | 0,836 | | | | | |
| SC | 0,756 | 0,821 | 0,734 | 0,721 | | | | |
| CN | 0,734 | 0,819 | 0,839 | 0,770 | 0,757 | | | |
| EOU | 0,825 | 0,853 | 0,858 | 0,748 | 0,776 | 0,755 | | |
| PU | 0,795 | 0,813 | 0,834 | 0,742 | 0,765 | 0,749 | 0,809 | |
| I | 0,781 | 0,821 | 0,857 | 0,825 | 0,719 | 0,747 | 0,801 | 0,729 |

**Common Method Bias (CMB)**

Research that depends on self-reported measures whitethorn be vulnerable to CMB. This phenomenon occurs when the assessment method, rather than the factors themselves, affects the degree to which identified components share common variance. As a result, the real correlations between the constructs may be overestimated or underestimated. The study applied Harman's single factor test, a well-used method for assessing whether a single component explains the majority of the variability in a dataset, to evaluate the probability of the existence of CMB. However, if the beginning component explains less than 50 % of the variance, the CMB may not be a significant worry (Podsakoff et al., 2003). The study also assessed the probability of CMB using a CLF analysis. The CLF analysis entails the inclusion of a latent variable that may be discovered within the framework. This variable represents the shared variability among the components under consideration, as described by Harris et al. (2022) and Podsakoff et al. (2003). If the addition of the common variable does not result in an improvement in the model's fit, it indicates that the CMB may not be a serious concern. Harman's single-factor test findings indicate that the primary factor in this study explained 47 % of the variability. The proportion falls below the threshold of 50 %, suggesting that CMB is not a big worry. Furthermore, the research confirmed the lack of CMB through the use of CLF analysis, which indicated that the incorporation of a shared component did not enhance the model's accuracy. Therefore, the study's findings are little affected by the CMB, as seen in table 4.

**Table 4.** CMB Result

| Total Variance Explained | | | | | | |
|---|---|---|---|---|---|---|
| | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 13,012 | 46,254 | 45,365 | 13,012 | 45,544 | 45,544 |

**Hypothesis testing**

The SEM and PLS software programmes are used for hypothesis evaluation. Several indices of value, including x2/df, CFI, RMSEA, and PNFI, are employed to evaluate the degree of conformity between the data and the framework. The approach fitting statistics are as follows: x2=20,512, df=10, x2/df=1,669, p=0,050, CFI=0,879, PNFI=0,510, and RMSEA=0,042. A framework is considered to be a good fit for the data if the ratio of the index x2/df is below the threshold level of 3 and the p value is more than 0,05. The CFI grade of 0,879 is highly valuable, as the model can only be deemed excellent if it exceeds 0,8. The reference is Bentler (1990). The

value of our results (PNFI = 0,510) exceeds the threshold that indicates the model's exceptional performance. The sample discrepancy function is adjusted by the fit statistic RMSEA, which is contingent upon the degree of freedom. Regarding the RMSEA, which is a very informative criterion in structural equation modelling (SEM), values equal to or below 0,05 indicate a satisfactory fit. In our case, the model (RMSEA = 0,042) fits well according to this criterion. The fit statistics suggest that the overall model has a satisfactory fit. An effective structural equation model requires a high-quality measurement model and a well-fitting structure. The R2 value of 0,69 indicates that the combined influence of PEOF and PU explains 72 % of the variation in acceptance of E-L among university tourism and hospitality students. Assessing the level of correlation between endogenous and exogenous components. Table 4 presents the correlations among various independent factors, such as E-L resources, E-L support, platform functionality, system characteristics, subjective norms, hedonic motivation, usefulness, and ease of use, in relation to the adoption of E-L among university students studying tourism and hospitality.

Subjective norms were found to have a considerable influence on perceived usefulness during hypotheses testing, providing support for H1. The variables PU and PEOU have a notable influence solely on the students' intentions, hence confirming hypotheses H2 and H3. Furthermore, the data obtained from the SEM analysis demonstrated that the PEOU construct had a substantial influence on the students' PU, hence providing support for hypothesis H4. The response to E-L had a substantial effect on the students' PU, providing support for hypothesis 5. Likewise, the provision of E-L assistance had notable effects on the students' perceptions of ease of use, confirming hypothesis 6. The functionality of the platform had a substantial impact on their PU and PEOU, therefore confirming hypotheses H7 and H8. Based on the data presented in table 4, it can be concluded that the characteristics of the system had a notable impact on both PU and PEOU, hence providing support for hypotheses H9 and H10. The use of HM had a notable impact on their PU and PEOU, providing support for hypotheses 11 (H11) and 12 (H12).

**Table 4.** Regression weights for hypotheses testing

| Hypothesis | Path relationships | β | SE | C.R. | P |
|---|---|---|---|---|---|
| H1 | SN>PU | 0,377 | 0,066 | 6,221 | 0,000 |
| H2 | PEOU>Intention | 0,298 | 0,061 | 5,254 | 0,000 |
| H3 | PU>Intention | 0,313 | 0,060 | 6,122 | 0,000 |
| H4 | PEOU>PU | 0,365 | 0,055 | 6,020 | 0,757 |
| H5 | E-LR>PU | 0,245 | 0,071 | 3,478 | 0,000 |
| H6 | E-LS>PEOU | 0,258 | 0,075 | 4,514 | 0,000 |
| H7 | PF>PU | 0,247 | 0,073 | 4,815 | 0,000 |
| H8 | PF>PEOU | 0,256 | 0,035 | 3,657 | 0,000 |
| H9 | SCh>PU | 0,358 | 0,049 | 3,859 | 0,000 |
| H10 | HM>PEOU | 0,244 | 0,072 | 4,753 | 0,000 |
| H11 | HM>PU | 0,372 | 0,077 | 5,247 | 0,000 |

## DISCUSSION

The primary objective of this research was to utilise the extended TAM to investigate the factors that affect the intention of college hospitality and tourism learners to adopt E-L in higher learning settings. We performed an extensive examination of existing literature in order to formulate the hypothesis and conceptual framework. Although all the factors successfully passed the convergent validity, discriminant validity and reliability tests, there was no statistically significant quadratic effect observed in either the independent or dependent factors. Additionally, the suggested theoretical model did not demonstrate a satisfactory model fit. Also, looking at the structural model showed that the R2 values for the theoretical model may explain about 69 % of the variation in PEOU, 72 % of the variation in PU, and 72 % of the variation in intention. Conversely, it was discovered that subjective norms, perceived ease of use, E-L resources, platform functionality, system characteristics, and hedonic motivation all had a notable and positive impact on the PU of E-L. Additionally, E-L support, platform functionality, and hedonic motivation were found to have a significant positive influence on the PEOU of E-L. The research conducted by (Alalwan et al., 2015; Abbad, 2021; Al-Adwan , Albelbisi et al., 2021) provides evidence for the impact of PE and PEU on the intention of college tourism and hospitality students to utilise E-L in higher learning settings. Like this study, (Tamer et al., 2016; Wei & Chou, 2020) also found that HM had a substantial impact on consumers' opinions. This discovery is a novel addition to the existing body of knowledge, as no prior research has documented a notable impact of HM on attitude in E-L. However, similar effects have been observed in different scenarios, such as e-shopping. Moreover, the correlation between PEOU and PU, as

discovered in this study, aligns with the results reported by (Almaiah et al., 2020) regarding the desire to utilise E-L in a professional setting.

The findings of (Abuhammad, 2020) likewise corroborate the detrimental impact of PEOU and PU on the intention to use E-L, as shown in this study. The results of this study could potentially enhance the investigation into the expansion or adaptation of theoretical frameworks, such as TAM, TPB, and TRA, employed in the field of online learning. Conversely, the results of this study have important practical consequences for the adoption and utilisation of online learning. Online learning platform providers should prioritise the provision of E-L resources, E-L support, platform functionality, PU, PEOU, system characteristics, subjective norms, hedonic motivation, and reducing the intention to discontinue E-L. The findings of this study offer valuable suggestions for producers of online learning platform tools, policymakers, educational researchers, and teachers, enabling them to enhance the calibre of their online learning platforms. The future of online classrooms has immense promise as they have the potential to eliminate barriers to education, such as geographical distance and physical disability, which might hinder certain students in traditional classroom environments. It is imperative to prioritise the incorporation of accessibility features in the design of online courses, ensuring that all students have equitable access to the necessary technology and resources.

Technical support departments are responsible for ensuring that students have access to appropriate hardware, software, and technical assistance. Additionally, they must regularly update resources to ensure that students can properly utilise online learning platforms. Alternatively, researchers might validate the identified correlation with targeted qualitative methodologies. Excluded or omitted variables can be integrated into the study, and novel associations can be developed based on the research context. Novel factors can be discerned through the application of bibliometric analysis, or meta-analysis. A conceptual framework can be developed by incorporating the recently recognised variables. The correlation between factors can be analysed through the use of artificial intelligence and empirical data on the competitiveness of students in the field of tourism. The hospitality and tourism colleges have several stakeholders, which can be categorised into different groups for analysis. The model can be analysed from the viewpoint of different stakeholders. The potential effects of AI can be further examined in the field of sustainability within hospitality and tourism institutions.

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## CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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