EFL Students' Attitudes towards Using Online Learning during Covid-19: Applying Technology Acceptance Model

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Abstract:
This study examined the attitudes toward online learning of EFL students by applying technology acceptance model (TAM) constructs along with the characteristics of the online learning system and the experience of online learning as external independent variables. The study used a quantitative approach. The researchers collected data by administering a questionnaire using Microsoft's online form to the tertiary students who were studying for their Bachelor of Arts degree (B.A.) in the English Language and Literature Department at Al-Balqa Applied University – Jordan. . One hundred eighty-five students out of 602 responded to the questionnaire. The researchers used SPSS and Structural Equational Modeling (SEM – Smart PLS) to analyze the data. Among the findings, the characteristics of an online learning system significantly affected perceived usefulness (PU), perceived ease of use (PEOU), attitudes, and the behavioral intentions (BIs) of EFL learners. In contrast, EFL learners' PEOU negatively affected their attitudes towards online learning and BIs. Finally, the attitudes of students who studied online for four semesters or more were negative compared to those who took less than four semesters online. These findings could be attributed to the supposedly temporary and rapid shift to online learning due to Covid-19 lockdown measures. This study is significant because it develops an understanding of tertiary EFL attitudes towards online learning. It also reflects on their behavioral intentions to utilize online learning after the pandemic. The researchers believe that this is the first study to examine EFL learners' attitudes and BIs on using online learning during/after the pandemic in Jordan using TAM.
Keywords: Covid-19, EFL students' attitudes, experience in online learning, online learning system characteristics, technology acceptance model

Introduction

The emerging health measures of coronavirus (Covid-19) have demanded adaptations in almost all aspects of life, including social and educational domains. Full and partial lockdowns worldwide have imposed restrictions on individuals and institutions. Closures of schools and universities forced the shift to online learning. In Jordan, and according to the enforcement of the Jordan National Defense Law No. 13 of 1992 (Ministry, 2021), fully online classes have started in March 2020 till the end of August 2021. Starting from the academic year 2021/2022, a hybrid education system at schools and universities took place under the government's recovery plan. The design incorporates in-person, blended, and online classes depending on the development of the measures due to the vaccination rates and the constant mutation of the virus.

Although online instructions started earlier in Jordan during the 2000s by individual institutions and scholars (Badran, 2014), most students and instructors have never experienced formal online instructions. Moodle platform is the Learning Management System (LMS) used by most Jordanian universities (Wimpenny, Adefila, & DeWinter, 2018; Al-Shboul & Alsmadi, 2014). At an earlier stage, the Ministry of Higher Education and Scientific Research tolerated a "25% cap for online content" (Wimpenny, Adefila, & DeWinter, 2018, p. 28). Following the aftermath of the pandemic, "online learning is no longer an option but a necessity" (Al-Salman & Haider, 2021, p. 296). Thus, the ministry has issued regulations for officially merging electronic instructions in higher education institutions, valid on the 30th of June 2021 (Education, 2022).

To understand how English as a Foreign Language (EFL) students received online learning to enhance its points of strength and address its challenges, the researchers applied TAM constructs and two external variables. They were the characteristics of the online learning system and experience in online learning. The Technology Acceptance Model **(**TAM) constructs, introduced by Davis (1989), stemmed from the Theory of Reasoned Action (TRA). TRA states that people's perceptions identify their attitudes toward an object, which determines their intentions to act accordingly, and they will finally decide on their actual behavior (Agudo-Peregrina, Hernández-García, & Pascual-Miguel, 2014). Davis regarded that the use of a particular system was a behavior that could be explained by TRA, and the user's attitudes towards that system were "a major determinant of whether the user will use or reject the system" (Granic & Marangunic, 2019, p. 2574).

As for the external variables, experience in online learning was cited as among the most commonly used external factors (Abdullah & Ward, 2016). The researchers assumed that the EFL learners' previous experience in online learning had a positive impact on their attitudes and behavioral intentions to use online learning. Researchers who used online learning experience as an external variable found that "the greater the online learning experiences of users, the stronger their intention to use an online learning community" (Liu, Chen, Sun, Wible, & Kuo, 2010, p. 608). Furthermore, the characteristics of online learning as an Information System (IS) are defined in this research by the features this system offers to assist the online user of the learning system (Hassanzadeh, Kanaani, & Elahi, 2012).

Rationale and Significance of the Study

This study attempts to understand how students perceive online learning and their attitudes towards using it after Covid-19 to help teachers and officials at the universities to improve and develop online learning to achieve the best of students' interests. This study is believed to be the first on EFL students using TAM in Jordan.

Thus, in the context of EFL online learning, it was hypothesized that:

H1: Online learning system characteristics significantly affected PU of online learning.
H2: Online learning system characteristics significantly affected PEOU of online learning.
H3: Online learning system characteristics significantly affected attitudes towards using online learning.
H4: Online learning system characteristics significantly affected the BIs of online learning.
H5: PEOU significantly affected PU of online learning.
H6: PEOU of online learning significantly affected attitudes toward using online learning.
H7: PU of online learning significantly affected attitudes towards using online learning.
H8: PU significantly affected BIs to use online learning.
H9: Attitudes towards online learning significantly affected BIs to use online learning.
H10: The positive effect of proposed determinants on attitudes and BIs was more robust for EFL students who studied online for four semesters or more than EFL students who studied less than four semesters.

For this research, besides the primary constructs of TAM, online learning system characteristics and online experience, which the researchers argue to influence the EFL learners' acceptance of using technology in an online learning setting, were used. In the following section, empirical literature concerning the constructs of the learners' acceptance of and their attitudes towards the online learning systems will be examined.

Literature Review

Technology Acceptance Model is introduced by Davis (1989) to anticipate the user's acceptance of a new technology before launching it. It suggests that the use of the new technology is predicted by the behavioral intentions of the user. It is based on two primary constructs, i.e., perceived usefulness (PU) and perceived ease of use (PEOU) of that technology. Davis (1989) defines PU as the degree to which users believe that using a particular system would enhance their performance, and PEOU as the degree to which users believe that using a specific system would be free of effort. That is to say, if the new technology is easy to use, this means it is usefully perceived, and users' attitudes and behavioral intentions are positive concerning it.

In their research, Pituch and Lee (2006) studied the effect of the online learning system characteristics on the learners' acceptance of technology. The findings revealed a strong impact of online learning system characteristics on the students' acceptance of using online learning. Previous research has also shown that online learning system characteristics have positively affected PU of online learning (Hsieh, Huang, & Wu, 2016). Moreover, in their research, Alharbi and Drew (2014) and Salloum, Alhamad, Al-Emran, Abdel Monem, & Shaalan (2019) found a positive correlation between system characteristics and PU of the online learning systems. Likewise, it had been determined that the online learning system characteristics positively affected

PEOU of online learning Salloum et al. (2019). In their research, Pituch and Lee (2006) also revealed a significant relationship between online learning system characteristics and learners' PEOU of online learning. As stated by Pituch and Lee (2006), if the online learning system positively affected PU and PEOU of online learning, it meant that this system was user-friendly. Therefore, the learners' attitudes towards online learning would be enhanced completely. Kanwal and Rehman (2017), who examined the effect of online learning system characteristics on the students' attitudes towards using online learning, reported a positive relationship between the online learning system characteristics and the students' attitudes toward using it.

Kanwal and Rehman (2017) stated a significant correlation between the online learning system characteristics and the learners' BIs to use it. Pituch and Lee (2006) pointed out that if the online learning system characteristics have positively impacted the learners' attitudes toward it, the learners would have apparent behavioral intentions to use it.

Research that examined the potential relation between PEOU and PU in the domain of online learning has shown that PEOU of online learning positively affected the learners' PU of online learning (Almarabeh, 2014; Al-Okaily, Alqudah, Matar, Lutfi, & Taamneh, 2020; Farahat, 2012; Hsieh, Huang, & Wu, 2016; Jiang et al., 2021). While previous research has shown a significant relationship between learners' PEOU of online learning and their attitudes towards using online learning (Almarabeh, 2014; Farahat, 2012; Jiang et al., 2021), learners' PEOU of using online learning in the study of Natasia, Wiranti, & Parastika, (2022) did not significantly affect the learners' attitudes towards using online learning system.

Regarding PU as a TAM construct that significantly affected the learners' attitudes towards using online learning, previous research acknowledged that PU has positively affected learners' attitudes towards using online learning systems (Almarabeh, 2014; Farahat, 2012; Jiang et al., 2021; Natasia et al., 2022). As stated in the literature, several research articles have shown that PU had a positive impact on the learners' BIs using online learning systems (Almarabeh, 2014; Farahat, 2012; Haleman & Yamat, 2021; Jiang et al., 2021; Natasia et al., 2022; Salloum et al., 2019).

Some researchers indicated that the students with positive attitudes toward online learning systems had greater BIs toward them (Almarabeh, 2014; Farahat, 2012; Haleman & Yamat, 2021; Natasia et al., 2022). On the contrary, others claimed that learners' attitudes toward online learning systems had an insignificant effect on the learners' BIs toward them because the online learning systems were the only choice they had during the lockdown in the era of covid-19 (Jiang et al., 2021; Teo, Wong, & Chai, 2008).

Experience, as one of the common external constructs used in the TAM in an online learning setting in literature, had been generally viewed as an important one to be examined for its possible effect on the learners' attitudes toward using online learning systems besides their intentions to use it. Some research articles revealed that both the learners' attitudes towards using an online learning system and their BIs to use it were positively affected to different degrees by the online learning experience (Abramson, Dawson, & Stevens, 2015; Jiang et al., 2021; Liu et al., 2010), whereas other related research revealed that online learning experience had no significant effect

on the learners' attitudes towards using online learning system and their BIs to use it (Hrtoňová, Kohout, Rohlíková, & Zounek, 2014; Mailizar, Burg, & Maulina, 2021).

   The previous research showed similarities and differences in terms of the positive effect of the core constructs of the TAM and the proposed external ones in the learners' acceptance of using online learning (Almarabeh, 2014; Al-Okaily et al., 2020; Farahat, 2012; Hrtoňová et al., 2014; Hsieh, Huang, & Wu, 2016; Jiang et al., 2021; Mailizar et al., 2021). This research combined the core constructs of the TAM (PEOU and PU of using online learning), which were believed to have an effect on the learners' acceptance of technology, with the external constructs (online learning system characteristics and experience of online learning) to examine their impact on the undergraduate EFL Jordanian students' attitudes towards accepting the use of online learning. However, the researchers found that no previous research was conducted to examine the undergraduate EFL learners' attitudes towards accepting online learning systems using TAM and the two proposed external constructs (online learning system characteristics and experience of online learning) at the national and local levels.

Methods
   This is quantitative research. The researchers used an online Likert-scale questionnaire targeting FEL students. The study investigated the factors that predict EFL students' attitudes toward using online learning during covid-19 by applying TAM constructs to design the questionnaire. The questionnaire items were adopted from the previous literature (see Table one). It contained six sections (demographic information, PU, PEOU, BIs, attitudes, and characteristics of online learning systems). Participants were asked to choose their answers for the demographic part. Five-point Likert scale was used in sections two to six (strongly disagree, disagree, neutral, agree, and strongly agree). The ethical considerations were met despite the low-risk nature of the research. They included voluntary participation, anonymity, and confidentiality.

Table 1. *Sources of the questionnaire*

Sections of the Questionnaire	Source
Perceived usefulness of online learning	(Mohammadi, 2015)
Perceived ease of use of online learning	(Mohammadi, 2015)
Intentions to use online learning	(Mohammadi, 2015)
Attitudes towards using online learning.	(Salloum, Alhamad, Al-Emran, Abdel Monem, & Shaalan, 2019)
*Online learning system characteristics	(Pituch & Lee, 2006)

*Online learning" is used instead of "web-based learning" for consistency

   Preliminary data computation was conducted using SPSS 26 (Pallant, 2020). Meanwhile, the measurement model and structural model were assessed using Smart PLS 3.3. Smart PLS is a Structural Equation Modeling (SEM) method that has received much significance in recent decades, and its popularity has grown for testing concepts and theories. The success of SEM is justified by its ability to evaluate measurement models that include latent variables and, at the same time, test relationships among the latent variables (Babin et al., 2008; Hair, Hult, Ringle, & Sarstedt, 2021), making this approach helpful for this study.

Research Procedures

The distribution of the online questionnaire was done through Microsoft Forms. The questionnaire link was sent to the targeted students with a cover letter explaining the study's goals and instructions to fill out the questionnaire. Several reminders were sent to students to increase the responding ratio. After two months (November and December 2021), data collection was stopped as no more responses were received, and the sampling approach was based on simple random methods. The targeted population comprised 602 EFL students who are studying for their B.A. degree in the English Language and Literature Department at Al-Balqa Applied University, making the required sample 234. The sample size was determined by statistical tables proposed by (Bougie & Sekaran, 2019) for the sample size needed at a confidence of 95% and a 5.0% margin of error.

Further, as this study used the SEM approach for statistical analysis, SEM-AMOS was not seen as suitable for this study because the goodness of fit indices in AMOS is sensitive to sample size. Fitness indices in AMOS require using a ratio of 1:10 per parameter (Bentler & Chou, 1987). Since the instrument has 25 parameters, this requires a sample comprising 250 responses. However, the exact sample size in this study included 177 responses. Therefore, Smart PLS was seen as more suitable since Smart PLS discards data distribution assumptions, and it is ideal for small samples (Hair et al., 2021). In total, 187 complete responses were received. However, ten responses were dropped due to patterns in assessments. The exact sample size that was deemed for further analysis comprised 177 answers.

Findings

Socio-demographics of Students

Counts and percentages were gathered for the socio-demographics of students. Out of 177, n= 155 (87.6%) were females, and n= 22 (12.4%) were males, showing that most of surveyed FEL students were females. Further, more than half of students n= 104 (58.8%), completed less than four online semesters. Meanwhile, n= 73 (41.2%) completed four or more online semesters. Concerning the level of study, the sample comprised students from all levels as follows: n= 52 (29.4%) in the first year, n= 42 (23.7%) in the second year, n= 35 (19.8%) in the third year, and n= 48 (27.1%) in the fourth year or more. Finally, the majority of the sample, n= 171 (96.6%), used Moodle and Microsoft Teams, and n= six (3.4%) used other online learning systems. See Table two.

Table 2. *Socio-demographics of students (n= 177)*

Demographic	Subset	Count	%
	Male	22	12.4%
Gender	Female	155	87.6%
	Total	*177*	*100%*
	Less than four	104	58.8%
No. of online semesters	Four or more	73	41.2%
	Total	*177*	*100%*
	First-year	52	29.4%
	Second-year	42	23.7%
Level of the study	Third-year	35	19.8%
	Fourth-year or more	48	27.1%
	Total	*177*	*100%*

Online learning system	Moodle and Microsoft Teams	171	96.6%
	Other	6	3.4%
	Total	*177*	*100%*

Descriptive Statistics

Table three gathered mean and std. values for our proposed factors. FEL students perceived that the online learning system had moderate levels of usefulness (Mean= 3.40), ease of use (Mean= 3.59), and moderate levels of attitudes toward the online learning system (Mean= 3.04), along with a moderate level of BIs toward the future use of the system (Mean= 3.39). Meanwhile, students reported a high level (Mean= 3.73) of online learning system characteristics showing that it had a high level of favorable characteristics. Besides, all responses were seen spanning around its mean values as neither of std. values were greater than (1) except for attitudes. Std. value for attitudes scored (1.06), showing non-homogeneity among respondents.

Table 3. *Descriptive statistics (n= 177)*

Factor	Mean	Level	Std.	Minimum	Maximum
Perceived usefulness	3.40	Moderate	0.75	1.33	5.00
Perceived ease of use	3.59	Moderate	0.81	1.00	5.00
Behavioral Intentions	3.39	Moderate	0.94	1.00	5.00
Attitudes	3.04	Moderate	1.06	1.00	5.00
Online learning system characteristics	3.73	High	0.74	1.00	5.00

This could be explained by varying agreement levels among respondents. Gathered findings demonstrated that online learning systems were still not fully effective in providing students with valuable capabilities and ease of use.

Measurement Model Testing

Various procedures were utilized to test measures validity as well as reliability. The measurement model was evaluated using the PLS algorithm and Factor Loading (FL) for all parameters scored values exceeding the minimum recommended level (0.70), except for two parameters in PU (U1, U2). Accordingly, they were dropped from the model. As a result, all retained parameters have FL > (0.70).

Retained parameters have remained for the next step in PLS analysis. Statistical consistency across parameters was evaluated based on internal consistency. For this purpose, Composite Reliability [CR] and Cronbach alpha were reported. Through the threshold set by Hair et al. (2021), which is (0.70), both CR and Cronbach alpha were evaluated. Findings illustrated in Table four reported that FL for all retained parameters were found to be greater than (0.70). Furthermore, Cronbach alpha and CR values were also found to be greater than (0.70), showing that all measures

have satisfactory internal consistency. Cronbach alpha values were found as follows: PU (0.819), PEOU (0.840), Behavioral Intentions (0.795), Attitudes (0.915), and Online Learning System Characteristics (0.880). Meanwhile, CR values were found as follows: PU (0.880), PEOU (0.887), Behavioral Intentions (0.878), Attitudes (0.940), and Online Learning System Characteristics (0.909).

Table 4. *FL, internal consistency, and convergent validity for revised measures (N= 177)*

Measure	Parameter	AVE	Cronbach α	CR	FL	T
Perceived usefulness	U3	0.649	0.819	0.880	0.749	17.064
	U4				0.773	19.870
	U5				0.854	38.702
	U6				0.841	32.792
Perceived ease of use	E1	0.610	0.840	0.887	0.762	18.724
	E2				0.804	19.932
	E3				0.803	21.866
	E4				0.815	32.371
	E5				0.719	14.485
Behavioral intentions	INT1	0.708	0.795	0.878	0.716	11.971
	INT2				0.887	52.313
	IN3				0.907	79.913
Attitudes	A1	0.798	0.915	0.940	0.926	88.983
	A2				0.907	59.933
	A3				0.816	27.191
	A4				0.920	57.170
Online learning system characteristics	C1	0.626	0.880	0.909	0.716	18.312
	C2				0.776	21.883
	C3				0.840	23.788
	C4				0.789	19.648
	C5				0.812	20.126
	C6				0.807	28.992

Regarding convergent validity, Average Variance Extracted (AVE) was reported. The AVE values were greater than (0.50), showing that all measures explain more than 50% of the variance (Hair et al., 2021). AVE values were found as follows: PU (0.649), PEOU (0.610), Behavioral Intentions (0.708), Attitudes (0.798) and Online learning System Characteristics (0.626). Finally, the gathered results in Table five addressed discriminant validity using Fornell and Larcker's (1981) criterion.

Table 5. *Discriminant validity through Fornell & Larcker criterion (n= 177)*

Factor	1	2	3	4	5
Attitudes	**0.893**				
Perceived ease of use	0.642	**0.781**			
Behavioral intentions	0.777	0.705	**0.841**		
Online learning system characteristics	0.607	0.679	0.655	**0.791**	
Perceived usefulness	0.794	0.667	0.738	0.587	**0.805**

- Square root for AVE is in diagonal

Indeed, the square root for each measure's AVE value was lower than the measures shared correlation with other measures, showing that the discriminant validity was established.

Structural Model Testing

A structural model was used to test the proposed hypotheses by gathering path estimates. As a start, collinearity was examined by reporting Variance Inflation Factor (VIF) values. Collinearity issues exist whenever the VIF values exceed 3.00 (Hair et al., 2021). None of VIF values exceed 3.00, showing that this issue does not emerge in this study. VIF values were found: 2.330, 1.972, 1.911, 1.000, 2.951, 1.658, 2.840 and 1.855.

Coefficient of determination (R^2) values were gathered from regression output. The model scored a moderate level of R^2 values showing a sufficient proportion of variance which is explained by the proposed factors. Determination Coefficient (R^2) values were as follows: PU (47.7%), PEOU (46.1%), BIs (68.3%), and Attitudes (66.7%). Further, the predictive relevance of the model Q^2 demonstrated that the model has moderate to large predictive relevance as Q^2 values exceeded the 0.15 level (Hair et al., 2021). Q^2 values were as follows: PU (0.301), PEOU (0.269), Behavioral Intentions (0.458), and Attitudes (0.526). After assessing the structural model quality, path estimates were gathered to provide a decision for our hypotheses. Path estimates gathered beta coefficients to determine the amount of change along with *P* values using bootstrapping through 5000 sub-samples. Path analysis is displayed in Figure one.
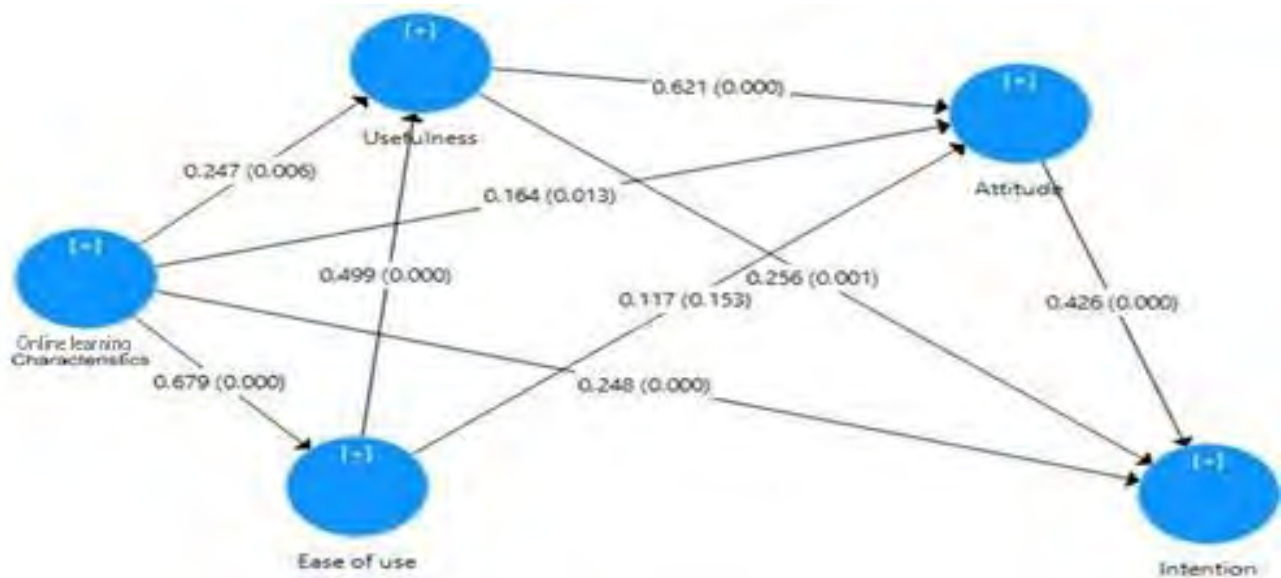

Figure 1. Path analysis for structural model

H1: Online learning system characteristics significantly affected PU of online learning. Path estimates for this hypothesis were (β= 0.247, t= 2.727, P= 0.006) showing a positive effect supporting H1.

H2: Online learning system characteristics positively affected PEOU of online learning. Path estimates were (β= 0.679, t= 14.104, P= 0.000) reporting a significant effect supporting H2.

H3: Online learning system characteristics positively affected attitudes towards using online learning. Path estimates were (β= 0.164, t= 2.485, P= 0.013) reporting a significant effect supporting H3.

H4: Online learning system characteristics positively affected the behavioral intentions of online learning. Path estimates were (β= 0.248, t= 4.260, P= 0.000) reporting a significant effect supporting H4.

H5: PEOU significantly affected PU of online learning. Path estimates were (β= 0.499, t= 6.008, P= 0.000) reporting a positive effect supporting H5.

H6: PEOU of online learning significantly affected attitudes toward online learning. This was the only non-supported hypothesis as the path estimates were not significant: (β= 0.117, t= 1.430, P= 0.153), rendering no support for H6.

H7: PU of online learning significantly affected attitudes towards using online learning. Path estimates were (β= 0.621, t= 8.876, P= 0.000), reporting a positive effect supporting H7.

H8: PU significantly affected behavioral intentions to use online learning. Path estimates were (β= 0.256, t= 3.364, P= 0.001) reporting a positive effect supporting H8.

H9: Attitudes towards online learning significantly affected behavioral intentions to use online learning. Path estimates were (β= 0.426, t= 5.190, P= 0.000) reporting a positive effect supporting H9. Table six provides a summary of path estimates.

Table 6. *Summary for path estimates*

H	*Path*	*Beta*	*Decision*
H1	Online learning system characteristics → Perceived usefulness	0.247*	Supported
H2	Online learning system characteristics → Perceived ease of use	0.679*	Supported
H3	Online learning system characteristics → Attitudes	0.164*	Supported
H4	Online learning system characteristics → Behavioral intentions	0.248*	Supported
H5	Perceived ease of use → Perceived usefulness	0.499*	Supported
H6	Perceived ease of use → Attitudes	0.117	Not supported
H7	Perceived usefulness → Attitudes	0.621*	Supported
H8	Perceived usefulness → Behavioral intentions	0.256*	Supported
H9	Attitudes → Behavioral intentions	0.426*	Supported

$*P < 0.01$

Finally, to test H10, which says that "The positive effect of proposed determinants on attitudes and BIs was more robust for EFL students who studied online for four semesters or more than EFL students who studied less than four semesters", the researchers executed MGA using PLS. Parametric test results for the differences in path coefficients between the two groups (Less than four semesters vs. Four or more semesters). The results revealed insignificant differences for all paths donating that enrolling in more than four online semesters did not add any improvements to the model. Hence, H10 is not supported. Table seven gathered parametric test results for comparisons between path estimates.

Table 7. *Parametric test results*

H	*Path*	*Beta-diff*	*P-value*

H1	Online learning system characteristics → Perceived usefulness	0.163	0.354
H2	Online learning system characteristics → Perceived ease of use	-0.007	0.938
H3	Online learning system characteristics → Attitudes	-0.085	0.536
H4	Online learning system characteristics → Behavioral intentions	0.030	0.797
H5	Perceived ease of use → Perceived usefulness	-0.227	0.161
H6	Perceived ease of use → Attitudes	0.212	0.217
H7	Perceived usefulness → Attitudes	-0.080	0.582
H8	Perceived usefulness → Behavioral intentions	-0.138	0.381
H9	Attitudes → Behavioral intentions	0.158	0.346

*P < 0.01

The following sections will discuss the findings of our study in relation to other studies, along with their practical implications and the conclusion.

Discussion
   This study investigated factors that predict EFL students' attitudes toward online learning in the COVID-19 era. TAM was successfully employed to capture the factors that explain students' attitudes. To do so, the quantitative approach guided this study to gather students' perceptions while using an online questionnaire. Scales were adopted from previous studies. The instrument was validated and exhibited satisfactory statistical reliability and validity.

   Starting with descriptive analysis, critical implications can be concluded. Although online learning systems became the primary means to interact with students and thus required such systems to be thoroughly and professionally tailored to provide education of high quality, students' perceptions of benefits that should be provided by systems were of moderate levels. This entailed that these systems were still subject to improvement and enhancement that should be considered by these systems developers.

   Through path estimates supported by bootstrapping results, most hypotheses were supported except for the association between PEOU and attitudes. Findings of Alharbi and Drew (2014), Hsieh et al. (2016), Pituch and Lee (2006), and Salloum et al. (2019) all supported the positive effect of online learning system characteristics on PU of online learning. Pituch and Lee (2006) and Salloum et al. (2019) also found a positive impact of online learning system characteristics on the PEOU of online learning. Positive effects of online learning system characteristics on both attitudes and BIs of EFL learners were also depicted in studies by Kanwal and Rehman (2017) and Pituch and Lee (2006). Like online learning system characteristics, the positive effects of PU of online learning on attitudes and BIs of EFL learners were also supported by most of the studies (Almarabeh, 2014; Farahat, 2012; Haleman & Yamat, 2021; Jiang et al., 2021; Natasia et al., 2022; Salloum et al., 2019;).

In contrast, PEOU and attitudes toward EFL learners' use of online learning received contradictory views. While most of the studies supported the positive effects of PEOU on PU of online learning (Almarabeh, 2014; Al-Okaily et al., 2020; Farahat, 2012; Hsieh et al., 2016; Jiang et al., 2021), some studies were inconsistent about the relationship between PEOU and attitudes towards online learning. Natasia et al. (2022) findings were conformed with our results that PEOU did not positively affect EFL learners' attitudes toward using online learning. On the contrary, Almarabeh (2014), Farahat (2012), and Jiang et al. (2021) findings revealed positive effects of PEOU on learners' attitudes. The association between PEOU and attitudes was seen as insignificant. This entailed a critical implication that should be considered. The ease of using online learning systems couldn not foster or shape the students' attitudes. This took us to the earlier point that the ease of use of online learning is still a subject for improvement to promote its role in becoming a significant predictor of attitudes.

Likewise, the findings related to attitudes and BIs towards using online learning were also discordant. While studies by Almarabeh (2014), Farahat (2012)2, Haleman and Yamat (2021), and Natasia et al. (2022) supported our findings that attitudes towards online learning significantly affected their behavioral BIs, findings of other studies like Jiang et al. (2021) and Teo et al., (2008) found that EFL learners attitudes towards online learning had an unimportant effect on their behavioral intentions to use online learning. Finally, our findings proved that the experience in online learning did not have a positive impact on EFL learners' attitudes and BIs to use it. We argued that the insignificant effect of previous online learning experience on students' attitudes toward using online learning might be because dealing with technology and its tools was considered a normal part of the students' daily life with different degrees. It could also be attributed to the sudden, supposedly temporary, and abrupt shift to online learning because of Covid-19 lockdown measures. Studies by Hrtoňová et al. (2014) and Mailizar et al. (2021) showed concordance with these findings, while studies by Abramson et al. (2015) and Jiang et al. (2021) revealed a positive effect of experience on attitudes and BIs to use online learning.

Path estimates for all proposed associations that reported significant positive influences to support the idea that these factors as predictors for attitudes and BIs provided a promising scenario if online learning systems are maintained effectively. Students' attitudes will be in favor of these systems. Accordingly, their future intention to use these systems can be granted.

Conclusion

The aim of this research is to understand how EFL students receive online learning to enhance its points of strength and address its challenges. As a result, the researchers applied TAM to investigate students' attitudes towards using the online learning system. The most significant findings of this study revealed that characteristics of the online learning system positively affect the EFL learners' PEOU, PU, and attitudes towards online learning systems. Additionally, our findings revealed that the online learning system characteristics positively impact the learners' BIs of the online learning system.   Furthermore, PEOU has a positive impact on PU of online learning system and the attitudes toward using it. The PU of online learning has significantly affected the attitudes and the BIs to use it. This study has asserted the essential role the online learning system characteristics ought to play in affecting the learners' attitudes towards the online learning system.

We could conclude that the online learning system needs to be user-friendly to enhance its usability.

Practical Implications

The outcomes of this research have some practical implications for the successful adoption of online learning in teaching English as a foreign language. Taking into consideration that the research results might be shared with other tertiary students, online officials in the higher education institutions in Jordan ought to make use of the positive impact of online learning system characteristics on students' attitudes and behavioral intentions towards the adoption of the online learning system. This positive impact could be enhanced by getting programmed and continuous feedback from the students. Accordingly, the flexibility and constant improvement of online learning system tools empower students learning styles to keep them up-to-date with technological innovation and ultimately produce an autonomous and long-life learner.

The online learning system could be considered an employability skill because EFL learners, especially the future teachers of them, need not to stop developing their language and communication skills. Secondly, and despite the insignificant impact of online experience on EFL students, attention should be paid to the students' psychological aspect towards online learning since it is unquestionably linked to Covid-19 pandemic measures, which gave it a sense of a temporary nature. Education administration and instructors might gradually use all the opportunities to merge online learning as part of the students' lifestyle.

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