

COVID-19 fears and e-learning platforms acceptance among Jordanian university students**Tha'er Majali^{a*}, Kholoud Al-kyid^{b*}, Ibrahim Alhassan^c, Samer Barkat^d and Rateb Almajali^e**^a*Applied science private university, Jordan*^b*University of Wollongong, Australia*^c*Saudi Electronic University, Saudi Arabia*^d*Applied Science Private University, Jordan*^e*Mu'tah University, Jordan***CHRONICLE****ABSTRACT***Article history:*

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Broadening the approval and usage of technology to study online education is not a novel study subject, and several researchers have addressed it. However, the production of a systematic Technology acceptance model capable of examining online education adoption in the current Covid-19 is seen as a vital research path. Literature research was conducted to evaluate the most used external influences of innovation adoption regarding online learning acceptance. The search revealed that computer self-efficacy, corona apprehension, perceived ease of use, and perceived usefulness are the external factors for technology acceptance. The purpose of this paper is to investigate the variables that online education programs' approval among students can influence. 185 students from Jordan's Al-Zaytoonah University and Applied Science Private University participated in the online research. The online questionnaire system in this report was analyzed using SmartPLS tools. According to the findings, perceived usefulness, behavioral intent of use, self-efficacy, and Corona fear all positively affect the adoption of online education programs. The findings of this study were used as a required input in the latest online education interactive analytical production that was used extensively during the pandemic.

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1. Introduction

The COVID-19 outbreak poses a significant threat to many facets of our lives. This challenge induces all institutions and decision makers to be adapted to the difficult situation. COVID-19 pandemic has urged the whole world to issue public policies that include social distance, isolation, and quarantine (Anderson, Heesterbeek, Klinkenberg, & Hollingsworth, 2020). However, information technologies offer an alternative that facilitates our livelihood in this pandemic (Raza, Qazi, Khan, & Salam, 2020). For instance, using information technologies solved distance learning; students and instructors now exchange information. The digital media and the growing popularity of e-learning have changed the norms of lecture delivering methods. Higher-educational institutions had to activate e-learning systems widely. The latest developments in information and communication technology (ICT), along with the enhancements on the internet and the widespread use of the online system, has taken online education to a more flexible and interactive level with well-designed systems (Alkandari, 2015; Binyamin, Rutter, & Smith, 2020; Salloum, Al-Emran, Shaalan, & Tarhini, 2019). The use of ICT in education has necessitated a change in how academic students learn by incorporating more innovative methods such as e-learning. (Selim, 2007). In Jordan, the Education Ministry has recognized the critical role of e-learning systems in the sustainability of the Covid-19 disease outbreak; the instructional phase was in full swing.

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Consequently, the secondary education system in Jordan has started using its e-learning websites and other communications tools such as Microsoft teams, Zoom, Moodle, and social media that made part of the learning and communication process (Almajali, 2020). The adoption of the online classes method by graduates depends on many factors that immensely affect the success of teaching processes (Al-Adwan et al., 2012; Al-Zagheer, 2017; Salloum et al., 2019). Systems especially motivate students to embrace and completely use them. Even with E-learning systems' vast adoption and practical advantages, students still have attitudes toward such systems (Kanwal & Rehman, 2017). Previous studies investigated e-learning acceptance from different perspectives, either technological, organizational, or environmental (Abu-Al-Aish & Love, 2013; Jaradat, 2014; Salloum et al., 2019). However, the urgent need for e-learning systems due to the COVID-19 pandemic has shown that students still face problems using them. Prior research demonstrated that the use easiness' and usefulness of any information systems are vital factors to enhance user's acceptance of technology (Alkandari, 2015; Binyamin et al., 2020; Tran, 2016). Self-efficacy, which refers to the user's ability to perform a particular behavior, affects users' acceptance of e-learning systems (Hayashi, Chen, Ryan, & Wu, 2020; Pituch & Lee, 2006). Moreover, Raza, Qazi, Khan, and Salam (2020) stated that the unexpected situation caused by COVID-19 might affect student attitudes toward online courses. In response to this gap, this study examined the impact of perceived ease of use, perceived usefulness, self-efficacy, and the moderating effect of COVID fear on users' approval of online education platforms.

2. Theoretical background

Numerous automation-acceptance philosophies have been engaged to examine online learning schemes' recognition from learners, teachers, and creators' viewpoints. This paper uses the technology acceptance model (Davis, 1989), a famous and acknowledged outline in forecasting operator reception automation. Consequently, this framework is valuable to examine learner recognition during the COVID-19 Epidemic. The framework was long-drawn-out to embrace self-efficacy and COVID terror in the online learning system's support among Jordanian college apprentices.

A correspondence course, also known as distance education, was introduced in the 1850s. It is an erudition technique that allows the association between educators and their learners faintly without conventional schoolrooms. This schooling method entails an Internet grid and well-matched equipment types such as desktops, cell phones, and laptops. It eases distant coaching and education, actual appointment, appealing, informative material, and assessment (Bataineh et al., 2021). E-learning and online education are arguable topics for the investigators. Many scholars trust that online teaching and distance learning are beneficial as they are time-saving and less costly, student-paced understanding, it is accessible by everyone and many more (Bataineh et al., 2021; Chen, 2010; Smart & Cappel, 2006; Traxler, 2018; Wu et al., 2011). In his research (Traxler, 2018), online teaching could spread admission to progressive organizations and lift the learner populace's diversity. Online teaching scholarships significant cases to learn from any place, anytime from anyone. Moreover, (Chen, 2010) claimed the prominence of online teaching where learners can attain texts, statistics, audio, and video and online investigations and web links, allowing for mutual communication.

Conversely, other investigators stated that online learning could be puzzling if not applied precisely. They emphasized online education difficulties, such as computers and difficulties, learners' interruptions, and concealed expenditures. It is indispensable that learners have decent mechanical information as there is no direct communication amongst presenters and learners (Arbaugh, 2000; Freeman & Capper, 1999).

Primary acceptance educations have absorbed various procedures for the feeling of fright. Nervousness, for instance, is seen as a vital influence in many investigation lessons that attack the acceptance of machinery and concern. Apprehension is the main point that affects various students while adopting the technology for educational purposes. Other than concern and tension, the inability to use such advanced technological pieces of equipment may make the students more uninterested in using the online learning platforms. One more unique issue is the dread of using the machine itself, which, when combined with the concern and literateness, minimizes any possibility of using e-learning. Consequently, educators and instructors should consider the mental side and get ready learners to admit the automation in the educational sector. The absence of readiness and practical willingness is an additional cause of distress within the instructive industry, and both of them harm the approval of online learning (Mac Callum & Jeffrey, 2014; Nchunge et al., 2012; Thatcher & Perrew, 2002).

Due to the rapid increase of COVID-19, the colleges and academies found themselves obliged to construct a peaceful schooling setting where the web is the primary enabler. Conversely, selecting the most acceptable online teaching environment with operative teachings has been considered an extensive trial (Al-Marroof et al., 2020). Today, distance schooling is the only practicable form of education; particular consideration is attained. Jordan may be a high-tech nation where the web is accessible almost in all places. Though distance education is easy, it is still doubtful for a few lecturers and students.

3. Research framework & hypotheses development

3.1 E-learning Acceptance (ELA)

In the context of online learning, the behavioral purpose (ELA) refers to the students' desire to use online education frameworks in the near and future (Liao & Lu, 2008). The application of online teaching is being made in some institutes for a limited number of subjects to enhance the distance learning usage among the teachers and students. However, the Jordanian schooling systems are not yet ready to accept the idea of e-learning as there is a lack of motivation to do so. Nonetheless, due

to the current emergence of the Corona pandemic, the Jordanian people have no option but to force online learning implementation in all universities.

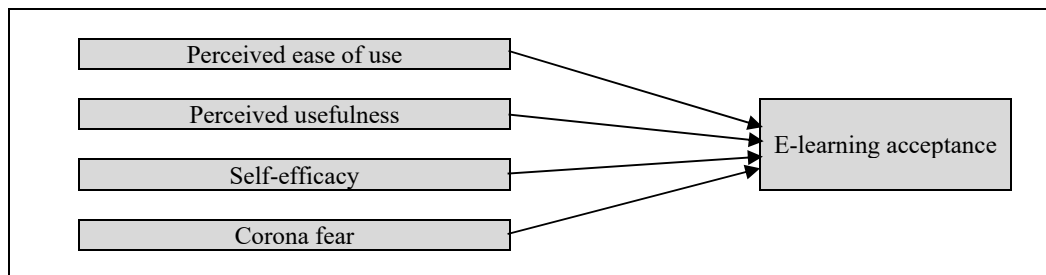


Fig. 1. The proposed study

3.2 Perceived ease of use (PEOU)

The level to which an individual assumes that using a specific concept or work is not complicated is referred to as the perceived ease of use (PEOU) of a device (Davis, 1989). According to the existing literature, perceived ease of use profoundly impacts the perceived usefulness of online education systems (Al-Aulamie, 2013; Almaiah et al., 2016; Revythi & Tselios, 2019; Wongvilaisakul & Lekcharoen, 2015). When a student finds an e-learning system available, there is a greater likelihood that the system's usability and ease of use will (Al-Aulamie, 2013; Almaiah et al., 2016; Revythi & Tselios, 2019). Various previous studies have shown that the PEOU has a positive association with behavioral intention to use (BI), both directly and indirectly (Alharbi & Drew, 2014; Jaber, 2016; Sandjojo & Wahyuningrum, 2015; Tarhini et al., 2017). PEOU, in the context of online education, is described as a student's belief that using an online e-learning platform will be counterproductive. It would take much time and would be simple to use.

This research tries to see the approval of e-learning amongst the students and teachers amid the covid-19. This study investigates university students' professed Easiness of using e-learning stages to complete several learning errands. Therefore, it is cogent to think that when learners understand that using online learning arrangements does not entail an excellent deal of struggle, they would be more driven to use such education programs. In light of the previous studies, we can assume that

H₁: *Perceived ease of use positively affects students' acceptance of e-learning systems.*

3.3 Perceived usefulness (PU)

The level to which people assume that utilizing modern technologies can increase their job efficiency is referred to as perceived usefulness (PU) (Davis, 1989). According to previous research studies, Perceived usefulness is the determining factor of utilizing a particular system (Al-Busaidi, 2013; Ayodele et al., 2016; Khor, 2014; Tan et al., 2012; Tarhini et al., 2017; Wongvilaisakul & Lekcharoen, 2015). Students can only support the e-learning framework if they believe that using it will increase their academic results. Previous e-learning research has found a significant positive relationship between perceived utility (PU) and behavioral intention to use an e-learning system (ELA) (Haryanto & Kultsum, 2016; Hsia et al., 2014; Mahmodi, 2017). So, based on the previous studies, it can be assumed that

H₂: *The perceived usefulness (PU) positively affects student's acceptance of e-learning systems.*

3.4 Self-efficacy (SE)

Efficacy is said as an individual's capacity to execute a specific action using computers and information technology. According to early studies, effectiveness has a positive effect on perceived ease of use. Suppose users feel they have a high degree of effectiveness. In that case, they will find that using e-learning is simpler (Sanayei & Salimian, 2013). The study conducted by (Jaber, 2016) proved that self-efficacy positively impacts the acceptance of the e-learning system. so according to the previous studies, we hypotheses is formed that:

H₃: *Self-efficacy (SE) positively affects student's acceptance of e-learning systems.*

Corona fear (CF)

Due to the rapid spread of COVID-19, colleges and universities were under pressure to create a secure teaching atmosphere, with the web serving as the primary facilitator. Selecting the perfect e-learning framework with successful pedagogies, on the other hand, has been considered a difficult task (Al-Marouf et al., 2020). According to a previous study, the following hypotheses is formed:

H₄: *Corona fear (CF) positively affects student's acceptance of e-learning systems.*

4. Methodology

The individuals participating in the study are the Applied Science Private University and the Al-Zaytoonah University of Jordan. By the use of a survey form, this study takes a quantitative methodology. The online study included 375 students from Jordan's Al-Zaytoonah University and Applied Science Private University. As per information gathered from institutions, there were 15983 registered students during the data collection process. Concerning (Krejcie & Morgan, 1970), the least sample size for a population of 15983 is 375. The interview questions were then distributed electronically to learners at the institutions above.

4.1 Data collection

In total, 375 questionnaires were distributed to students via the internet. All of the targeted students received an email with a connection to the study. Small sets of respondents were excluded due to many incomplete data or the respondent's failure to answer. Following that, only 185 available questionnaires were analyzed, yielding a 46.7 percent answer rate. The universities provided a total of 185 valid answers, so they were included in the study. The participants who took part in the study had various majors and were enrolled in multiple departments at various studies, such as undergraduate and postgraduate like Master and Ph.D. As per the evidence, convenience sampling was used in this study because the participants were conveniently accessible and willing to participate (Alshurideh et al., 2019; Salloum & Al-Emran, 2018).

4.2 Data Analysis

This research used Smart PLS. Three software to analyze the research hypotheses because they can function with latent indicators within a complex model. The data was collected and analyzed with the different variables. Four variables: Self-efficacy (SE), Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Corona fear (CF) which are the dependent variables, were tested against the Behavioral Intention to Use (ELA). The discriminant validity (outer model) relates to the relation between the structures and their markers. The conceptual framework, on the other hand, gives the connection between the temporary structures involved. (Hair Jr et al., 2016).

4.3 Evaluation of the Measurement Model

Evaluating a measurement model achieved through factor loading, the convergent and discriminant validity.

4.4 Convergent Validity

When assessing convergent validity, a diversity of factors must be considered. The independent tests' factor loading, composite reliability, and the average variance are among these (AVE). The values of the items loadings and reliability should be equal to or greater than 0.7. In contrast, the AVE values should be greater than 0.5, per the research (Hair Jr et al., 2016). Table 1 represents the convergent validity results. The loadings for the measurement products were found to be higher than the permissible limit in this report. Furthermore, it was shown that the composite reliability (CR), Cronbach's alpha, and AVE values were all greater than the maximum levels. As a result, convergent validity is established.

Table 1
Convergent validity results

Constructs	Items	Factor Loadings	Cronbach's Alpha	CR	AVE
Covid-19 fear	CF1	0.835	0.900	0.923	0.668
	CF2	0.865			
	CF3	0.825			
	CF4	0.783			
	CF5	0.774			
	CF6	0.816			
E-learning acceptance	ELA1	0.740	0.709	0.820	0.533
	ELA2	0.710			
	ELA3	0.738			
	ELA4	0.717			
Perceived Ease of Use	PEU1	0.789	0.811	0.875	0.638
	PEU2	0.871			
	PEU3	0.809			
	PEU4	0.883			
Perceived Usefulness	PU1	0.909	0.876	0.916	0.732
	PU2	0.888			
	PU3	0.730			
	PU4	0.807			
Self-efficacy	SE1	0.846	0.834	0.889	0.668
	SE2	0.780			
	SE3	0.835			
	SE4	0.731			

4.5 Discriminant Validity

Discriminant validity (Chin, 1998) refers to how one construct varies from all other constructs in the research model. Two indicators should be taken into consideration when determining discriminant validity: the Fornell-Larcker, and the Heterotrait-

Monotrait (HTMT) as they depict the ratio among relationships. The square root of AVE (diagonal value) in any construct in the correlation matrix must exceed the correlation of latent constructs, which is met by the present study as presented in Table 2.

Table 2
Fornel Larcker scale

Constructs	CF	ELA	PEOU	PU	SE
COVID-19 fears (CF)	0.817				
E-learning acceptance (ELA)	0.676	0.730			
Perceived ease of use (PEOU)	0.408	0.389	0.799		
Perceived usefulness (PU)	0.600	0.421	0.398	0.856	
Self-efficacy (SE)	0.644	0.609	0.353	0.374	0.817

The values of HTMT must be less than 0.85 as the second criterion of discriminant validity. Table 4 shows that the second requirement has also been verified, implying that the discriminant validity has also been identified.

Table 3
Heterotrait-Monotrait Ratio (HTMT)

Construct	COVID-19 fears	E-learning acceptance	Perceived ease of use	Perceived usefulness	Self-efficacy
COVID-19 fears					
E-learning acceptance	0.831				
Perceived ease of use	0.465	0.510			
Perceived usefulness	0.674	0.520	0.464		
Self-efficacy	0.743	0.788	0.431	0.438	

4.5 Structural Model Evaluation

The coefficient of determination (R²) is the most common metric for analyzing structural models (Hair Jr et al., 2016). This metric is used to calculate the model's forecasting ability. It also denotes the consistency in the regression model validated by each exogenous construct associated with it. According to Chin's (Chin, 1998) guidelines, R² values higher than 0.67 are deemed "large," 0.33 to 0.67 are "normal," and 0.19 to 0.33 are deemed "small." The only exogenous construct used was the e-learning acceptance; hence the R² value was found to be 0.518, which shows a moderate predictive power. In the second phase of structural model assessment the bootstrapping method was used to examine the numerous hypothesized associations in the established model (Atkinson & Wilson, 1995). Since all the hypotheses are directional, a one-tailed t-test was used in this analysis. The one-tailed t-test (df D 285) requires a t-value > 1.657 for the 0.05 significance level (i.e., p 0.05), a t-value > 2.354 for the 0.01 significance level (i.e., p 0.01), and a t-value > 3.152 for the 0.001 significance level (i.e., p 0.001). A t-test, path coefficient, Pearson Correlation, and standard deviation of the hypothesized variables were used to assess the current analysis. Table and figure 1 summarize the findings.

Table 4
Results of the structural model

Relationships	Mean	T Statistics	P Values	Standard Deviation (STDEV)
COVID-19 fears → E-learning acceptance	0.450	5.902	0.000	0.076
Perceived ease of use → E-learning acceptance	0.105	1.987	0.047	0.053
Perceived usefulness → E-learning acceptance	0.005	0.094	0.926	0.052
Self-efficacy → E-learning acceptance	3.281	3.922	0.000	0.072

The t-value, path coefficient and Pearson correlation of each relationship were calculated for the results. Five endogenous factors were confirmed (ELA, SE, PEOU, PU, and CF). The t-test value for each relationship showed a minimal value portraying a similar relationship between each variable. The perceived ease of use and perceived usefulness showed the same value for the t-test showed that these two variables had the same effect on the people's intention to use the e-learning method. The correlation coefficient and the Pearson coefficient for the Perceived Ease of use showed a perfect correlation; as the perceived ease of use increased, the people's willingness to use online education also showed an increase. The self-efficacy showed a moderate correlation impact on the eagerness of the people to accept online e-learning methods. However, the corona fear and the perceived usefulness showed a very low degree correlation with the students' enthusiasm to adopt the e-

learning methods. From table 6, it can be assumed that the Corona fear and system usefulness play a significant role in the student's decision-making process when choosing the learning methods for the study. From the above results inferred in Table 6, it has been found that the student's behavioral intention for accepting the use of an e-learning system is influenced positively by usefulness, self-efficacy, and Perceived Ease of use. Apart from this, the results also portray that the perceived ease of use positively impacts the perceived effectiveness of the e-learning system.

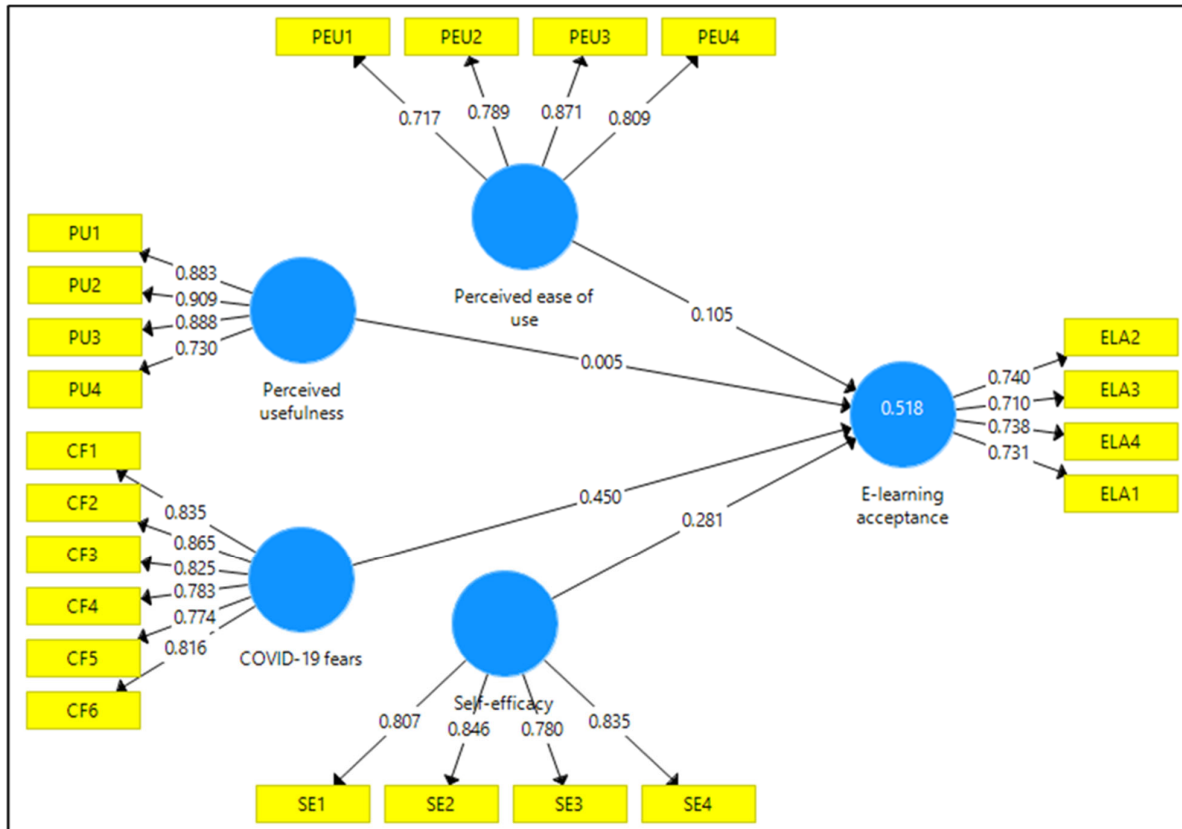


Fig. 2. Path coefficient results.

5. Discussion

This research adds to our understanding of how e-learning systems are used and adopted in underdeveloped countries like Jordan. For instance, difficulties in using an e-learning platform include concerns such as e-learning program technological issues, user satisfaction of use, corona fear, and change organization matters, computer self-efficacy, and usefulness, in addition to the technology issues listed in earlier studies.

5.1 Self-efficacy (SE)

According to the participants, self-efficacy is an essential factor in deciding whether an educational establishment should follow an e-learning program. From the results, it can be seen that self-efficacy influences the student’s intention to adopt the e-learning system. From the results, it can be observed that most of the respondents feel that they can handle the online learning mechanism on their own without the help of anyone. However, some students are still anxious about using the electronic means of studying and are not very confident in its usage or might feel that they need assistance in handling the online classes. Students in Jordanian universities must have strong self-confidence to fulfil the essential objectives of the e-learning system; otherwise, it will be challenging to complete teaching methods through the e-learning system if students have low self-efficacy. These results are consistent with the previous results of the various studies (Jaber, 2016) and (Sanayei & Salimian, 2013), which showed a positive correlation between self-efficacy and acceptance of the e-learning system.

Users' competency, according to (Venkatesh, 2000) will influence how they use technology. In addition, (Woodrow, 2011) suggested that self-efficacy was a critical factor in students' self-awareness, attitudes, and actions in e-learning, as well as a significant criterion for determining their willingness to embrace e-learning. (Salari et al., 2009) found that self-efficacy was positively correlated with the perception of using e-learning as a dependent variable. (Sanayei & Salimian, 2013) have agreed that students' self-efficacy affects their use of online education.



Fig. 3. The impact of self-efficacy of the students on the behavioral intention to adopt e-learning

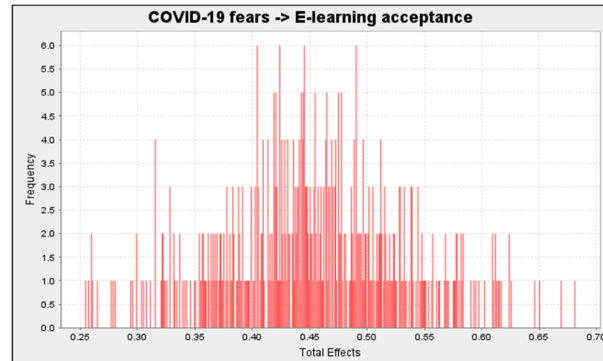


Fig. 4. The impact of self-efficacy of the students on the behavioral intention to adopt e-learning

From Fig. 3, it can be assumed that most students believe that they are confident to use the e-learning method and are willing to adapt to the electronic way of studying amid the Covid crisis.

5.2 Corona fear (CF)

In December 2019, a new coronavirus infection emerged, with the first case being discovered in China. After that, it spread all over the world. According to recent research, fear is by far the most common deep-felt reaction during this time. Fear is the most prominent emotion on the Health Anxiety Inventory scale (HAI) (Nicomedes & Avila, 2020). The fear of the coronavirus plays a significant role in the students' thinking while adopting the e-learning methods. According to the results obtained from the study, the fear factor is evident in this period while adopting the e-learning system. From the online survey, it is observed that most of the students are concerned for their health while going outside and may think that they might get sick in the next six months amid the Covid-19 crisis. This fear of getting sick and not going outside pushes the students to use the e-learning methods, even if they are not happy. This result is consistent with the study of (Al-Marroof et al., 2020), which also shows a positive connection between the fear of corona and the student's intention to use the e-learning system. From Fig. 3, it is deduced that the fear of Corona directly affects students' decision-making process when adopting e-learning methods. The results show that most of the students are afraid of the Covid-19, and the anxiousness of the students regarding getting sick makes them take online classes.

5.3 Perceived ease of use (PEOU)

The perceived ease of use can be defined as how much a person thinks that using a particular thing will make their life easier. In the context of Jordanian students, the perceived ease of use seems to have a visible impact on the student's adoption of online classes. Online survey shows a mixed opinion among the students regarding the simplicity of the usage of electronic learning. There is a fairly distributed opinion among the students. Some students think that e-learning is simple enough to use and makes life easier, while the other students think that interacting through e-learning requires much mental power and clear understanding. The results of the study are following the previous studies' results. Multiple earlier pieces of research have shown that the PEOU has a positive relationship with behavioral intention to use (BI), both directly and (Alharbi & Drew, 2014; Jaber, 2016; Sandjojo & Wahyuningrum, 2015).

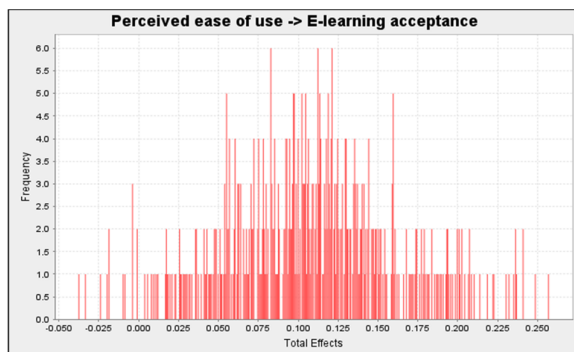


Fig. 5. The impact of perceived ease of use of the students on the behavioral intention to adopt e-learning

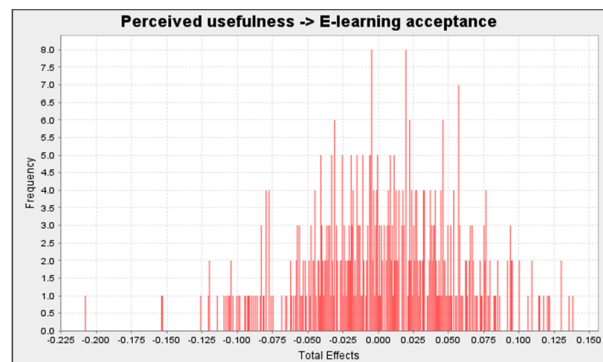


Fig. 5. The impact of perceived usefulness of the students on the behavioral intention to adopt e-learning

From Fig. 5, it is seen that perceived ease of use and the intention of the students to use e-learning are direct-connected to each other. Perceived ease of use is positively related to the adoption of online learning methods.

5.4 Perceived usefulness (PU)

According to the findings of this report, the ease with which students used online education affected their natural inclination to use it. According to the previous studies, usefulness is the determining factor of employing a particular method (Al-Busaidi, 2013; Khor, 2014; Tan et al., 2012). The research of (Sanayei & Salimian, 2013) showed that the perceived ease of use of e-learning affected the students' eagerness to adopt online education. The current study results, most of the students believe that the e-learning system seems to enhance their learning performance and effectiveness. The adoption of e-learning is useful in their learning process.

6. Implications for the research

This study supports the use of social distance and acceptance of e-learning among Jordanian university students. The research findings also include a better understanding of external influences and practical recommendations for regulators, professionals, designers, and users in successfully implementing e-learning systems. First, the college authority must develop an effective e-learning system and assess students' readiness for e-learning systems. Second, the administration and management of e-learning systems in Jordanian higher educational institutions must concentrate on the factors that influence students' acceptance of such systems, including schemes that affect the learning and students' competence. Third, the study results demonstrate the significance of external influences in students' adoption of e-learning systems. As a result, students should be ingrained with an e-learning ethos. As a result, students' willingness for e-learning systems should be assessed and improved. IT laboratory equipped with appropriate e-learning system facilities developed and made available to every learner. Fourth, preparation programs should be designed to promote students' perceptions of the ease and utility of technology acceptance systems. This will boost students' favorable attitude and, as a result, their continuance intent to use the systems. Lastly, the finding of this study will assist investors in making informed decisions about online learning adoption, which will primarily support the application of online learning platforms in Jordan and other similar settings.

While the study's findings were intriguing and played an important role in explaining students' acceptance of e-learning systems, they did have some drawbacks. First, the analysis was exclusively focused on students; however, if educators' answers were taken into account, it would match teacher and student evaluations. This is something that should be looked into further. Second, the study is cross-sectional, determining the expectations and intentions of users at a particular time. Hence, it is recommended to conduct more longitudinal studies, as participants' expectations and priorities will change when they grow and learn. Third, since the current research is centered on private universities in Jordan, the findings can only be applied to private universities rather than public ones. Fourth, the study was drawn from a small number of universities, and it was essential to understand broader populations with different income levels, educational levels, demographics, and physiological behaviors. Future studies should suggest other experimental approaches to generalize the results to the whole population further.

7. Conclusion

This article aimed to study social distancing and online education adoption among Jordanian University learners in the current situation of COVID-19 and the factors that affect the psychological purpose of participants to use this online education method. To attain this research's objectives, online questionnaires were conducted on Applied Science Private University students and the Al-Zaytoonah University of Jordan. Since Smart PLS. 3 Within a complex model, programs can work with functional frameworks; this analysis was used to evaluate the research scenarios. The results also portray that the perceived ease of use positively impacts the perceived usefulness of the e-learning system. The fear of Corona also showed a remarkable effect on the student's willingness to use the e-learning platforms. Self-efficacy can also be seen as most students believe that they can handle the e-learning platforms themselves, while some need assistance with online classes. The perceived ease of use had a partial effect on the students regarding online education. On the other hand, the survey showed that all of the theories tested are surprisingly confirmed, according to 185 students. Regarding its practical enforcement of this work, the developed model will help the other researchers determine the variable factors that promote higher acceptance and more usage of the e-learning system in the educational systems during the Covid-19 crisis.

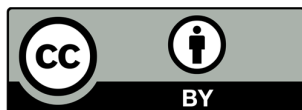
Furthermore, this study shows that when an e-learning system is simple to use, available, and beneficial to users, it can be used more effectively to increase e-learning adoption and approval. Users and engineers of e-learning systems should pay more attention to these two crucial factors (perceived utility and perceived ease of use), critical aspects of the learners' perspective. As a result, they must reduce the learner's initiative when using an e-learning framework by developing user-friendly interfaces, and the state must have appropriate ICT infrastructure. Following that, advertisement and marketing strategies promoting the possible advantages of e-learning should be launched. In conclusion, the current research would contribute to the literature in e-learning acceptance, in a nutshell. They can help improve recent e-learning training courses and urge kids to use more e-learning channels, especially during this pandemic.

References

Abu-Al-Aish, A., & Love, S. (2013). Factors influencing students' acceptance of m-learning: An investigation in higher education. *International Review of Research in Open and Distributed Learning*, 14(5), 82-107.

- Al-Adwan, A., Al-Adwan, A., & Smedley, J. (2013). Exploring students acceptance of e-learning using Technology Acceptance Model in Jordanian universities. *International Journal of Education and Development using ICT*, 9(2).
- Alkandari, B. (2015). An investigation of the factors affecting students' acceptance and intention to use e-learning systems at Kuwait University: Developing a technology acceptance model in e-learning environments (Doctoral dissertation, Cardiff Metropolitan University).
- Binyamin, S. S., Rutter, M. J., & Smith, S. (2020). The moderating effect of gender and age on the students' acceptance of learning management systems in Saudi higher education. *Knowledge Management & E-Learning: An International Journal*, 12(1), 30-62.
- Davis, F.D., Bagozzi, RP, & Warshaw, P.R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, 35(8), 982-1003
- Hayashi, A., Chen, C., Ryan, T., & Wu, J. (2020). The role of social presence and moderating role of computer self-efficacy in predicting the continuance usage of e-learning systems. *Journal of Information Systems Education*, 15(2), 5.
- Kanwal, F., & Rehman, M. (2017). Factors affecting e-learning adoption in developing countries—empirical evidence from Pakistan's higher education sector. *IEEE Access*, 5, 10968-10978.
- Pituch, K. A., & Lee, Y. K. (2006). The influence of system characteristics on e-learning use. *Computers & Education*, 47(2), 222-244.
- Salloum, S. A., Al-Emran, M., Monem, A. A., & Shaalan, K. (2017). A survey of text mining in social media: facebook and twitter perspectives. *Advanced Science Technological Engineering System Journal*, 2(1), 127-133.
- Salloum, S. A., Al-Emran, M., Shaalan, K., & Tarhini, A. (2019). Factors affecting the E-learning acceptance: A case study from UAE. *Education and Information Technologies*, 24(1), 509-530.
- Selim, H. M. (2007). Critical success factors for e-learning acceptance: Confirmatory factor models. *Computers & Education*, 49(2), 396-413.
- Tarhini, A., Hone, K. S., & Liu, X. (2013). Factors affecting students' acceptance of e-learning environments in developing countries: a structural equation modeling approach.
- Tran, K. N. N. (2016). The Adoption of Blended E-learning Technology in Vietnam using a Revision of the Technology Acceptance Model. *Journal of Information Technology Education*, 15.
- Al-Aulamie, A. (2013). Enhanced technology acceptance model to explain and predict learners' behavioural intentions in learning management systems.
- Al-Busaidi, K. A. (2013). An empirical investigation linking learners' adoption of blended learning to their intention of full e-learning. *Behaviour & Information Technology*, 32(11), 1168–1176.
- Al-Marouf, R. S., Salloum, S. A., Hassanien, A. E., & Shaalan, K. (2020). Fear from COVID-19 and technology adoption: the impact of Google Meet during Coronavirus pandemic. *Interactive Learning Environments*, 1–16.
- Alharbi, S., & Drew, S. (2014). Using the technology acceptance model in understanding academics' behavioural intention to use learning management systems. *International Journal of Advanced Computer Science and Applications*, 5(1), 143–155.
- Almaiah, M. A., Jalil, M. A., & Man, M. (2016). Extending the TAM to examine the effects of quality features on mobile learning acceptance. *Journal of Computers in Education*, 3(4), 453–485.
- Alshurideh, M., Salloum, S. A., Al Kurdi, B., & Al-Emran, M. (2019). Factors affecting the social networks acceptance: an empirical study using PLS-SEM approach. *Proceedings of the 2019 8th International Conference on Software and Computer Applications*, 414–418.
- Arbaugh, J. B. (2000). Virtual classroom versus physical classroom: An exploratory study of class discussion patterns and student learning in an asynchronous Internet-based MBA course. *Journal of Management Education*, 24(2), 213–233.
- Atkinson, S. E., & Wilson, P. W. (1995). Comparing mean efficiency and productivity scores from small samples: a bootstrap methodology. *Journal of Productivity Analysis*, 6(2), 137–152.
- Ayodele, S. O., Oga, O. E., Bundot, Y. G., & Ogbari, M. E. (2016). Role of power supply towards e-learning acceptance: VBSEM-AMOS. *2016 6th International Conference on Information Communication and Management (ICICM)*, 151–155.
- Bataineh, K. B., Atoum, M. S., Alsmadi, L. A., & Shikhali, M. (2021). A silver lining of coronavirus: Jordanian Universities turn to distance education. *International Journal of Information and Communication Technology Education (IJICTE)*, 17(2), 1–11.
- Chen, C. W. (2010). Brief introduction of new instruction–network learning. *Living Technology Education Journal*, 34(4), 10–16.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*, 295(2), 295–336.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Freeman, M. A., & Capper, J. M. (1999). Exploiting the web for education: An anonymous asynchronous role simulation. *Australasian Journal of Educational Technology*, 15(1).
- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). A primer on partial least squares structural equation modeling (PLS-SEM). Sage publications.
- Haryanto, H., & Kultsum, H. U. (2016). E-learning program adoption: Technology acceptance model approach. *Proceeding of the International Conference on Teacher Training and Education*, 2(1), 616–622.

- Hsia, J.-W., Chang, C.-C., & Tseng, A.-H. (2014). Effects of individuals' locus of control and computer self-efficacy on their e-learning acceptance in high-tech companies. *Behaviour & Information Technology*, 33(1), 51–64.
- Jaber, O. A. (2016). An examination of variables influencing the acceptance and usage of E-learning systems in Jordanian higher education institutions. Cardiff Metropolitan University.
- Khor, E. T. (2014). An analysis of ODL student perception and adoption behavior using the technology acceptance model. *International Review of Research in Open and Distributed Learning*, 15(6), 275–288.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Liao, H.-L., & Lu, H.-P. (2008). The role of experience and innovation characteristics in the adoption and continued use of e-learning websites. *Computers & Education*, 51(4), 1405–1416.
- Mac Callum, K., & Jeffrey, L. (2014). Factors impacting teachers' adoption of mobile learning. *Journal of Information Technology Education*, 13, 141.
- Mahmodi, M. (2017). The analysis of the factors affecting the acceptance of E-learning in higher education. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, 8(1).
- Nchunge, D. M., Sakwa, M., & Mwangi, W. (2012). User's perception on ICT adoption for education support in schools: a survey of secondary school teacher's in Thika district Kenya. *International Journal of Humanities and Social Science*, 2(10), 17–29.
- Nicomedes, C. J., & Avila, R. M. (2020). An analysis on the panic of Filipinos during COVID-19 pandemic in the Philippines. Unpublished Manuscript. <https://doi.org/10.13140/RG.2.17355.54565>.
- Revythi, A., & Tselios, N. (2019). Extension of technology acceptance model by using system usability scale to assess behavioral intention to use e-learning. *Education and Information Technologies*, 24(4), 2341–2355.
- Salari, M., Yaghmayee, F., Mehdizade, S., Vafadar, Z., & Afzali, M. (2009). Factors related to accept of " e-learning" in nursing students. *Education Strategies in Medical Sciences*, 2(3), 103–108.
- Salloum, S. A., & Al-Emran, M. (2018). Factors affecting the adoption of E-payment systems by university students: Extending the TAM with trust. *International Journal of Electronic Business*, 14(4), 371–390.
- Sanayei, A., & Salimian, H. (2013). The analysis of effecting factors on virtual education acceptance with emphasis on internal factors. *Technology of Education Journal (TEJ)*, 7(3), 149–158.
- Sandjojo, N., & Wahyuningrum, T. (2015). Measuring e-learning systems success: Implementing D & M is success model. *2015 4th International Conference on Interactive Digital Media (ICIDM)*, 1–6.
- Smart, K. L., & Cappel, J. J. (2006). Students' perceptions of online learning: A comparative study. *Journal of Information Technology Education: Research*, 5(1), 201–219.
- Tan, G. W.-H., Ooi, K.-B., Sim, J.-J., & Phusavat, K. (2012). Determinants of mobile learning adoption: An empirical analysis. *Journal of Computer Information Systems*, 52(3), 82–91.
- Tarhini, A., Hone, K., Liu, X., & Tarhini, T. (2017). Examining the moderating effect of individual-level cultural values on users' acceptance of E-learning in developing countries: a structural equation modeling of an extended technology acceptance model. *Interactive Learning Environments*, 25(3), 306–328.
- Thatcher, J. B., & Perrewe, P. L. (2002). An empirical examination of individual traits as antecedents to computer anxiety and computer self-efficacy. *MIS Quarterly*, 26(4), 381–396.
- Traxler, J. (2018). Distance learning—Predictions and possibilities. *Education Sciences*, 8(1), 35.
- Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research*, 11(4), 342–365.
- Wongvilaisakul, W., & Lekcharoen, S. (2015). The acceptance of e-Learning using SEM approach: A case of IT Literacy development for PIM students. *2015 12th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI-CON)*, 1–6.
- Woodrow, L. (2011). College English writing affect: Self-efficacy and anxiety. *System*, 39(4), 510–522.
- Wu, W. V., Yen, L. L., & Marek, M. (2011). Using online EFL interaction to increase confidence, motivation, and ability. *Journal of Educational Technology & Society*, 14(3), 118–129.



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