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Factors affecting the Students Intention to use digital learning during the COVID-19 outbreak in Pakistan: A Case Study

Abstract

This study aims to investigate the intention of students to perceive the online learning as an easy and useful to them during the COVID-19 outbreak which results to impact on their learning management and accomplishment of syllabus. The prevailing study applied initiatives to interpret the students' perception of students from graduate to Ph.D. level in Sindh that confined to a particular institution the Shah Abdul Latif University Khairpur. Survey was adopted to collect data and 215 respondents feedback secured and interpreted via filling questionnaires by means on online and personal approach of researcher to accomplish the task. Five point Likert scale was used to collect the data and test of Hypotheses encircled regressions and correlations.

Keywords: Digital learning, intention to use, COVID-19 outbreak, Perceived ease of use

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Introduction

The vitality of virtual learning sustained an effective adoptability during the Covid-19 pandemic outbreak in the way to ensure a speedy diffusion and transmission of knowledge and keep disclosed them via an online means. Digital learning is an online accessibility of students to teaching staff and interconnectivity remained based on the information technology (IT) to meet the learning management (Chandio, 2020; Mukhtar, et al, 2020). The higher education commission (HEC) initiated to online learning atmosphere in order to protect from education loss during the COVID-19 outbreak and delivered the affiliated institutions to adopt the digital learning activities in the country (Chandio, 2020). The lack of infrastructure and poor information technology (IT) remained the chief challenges to be faced by the institutions to ensure an easy and quick adoption of innovative virtual learning system which also becomes a hard task to Pakistan to commence online education system on an emergency and urgency basis in the country to materialize a digital educational activities (Chandio, 2020; Mukhtar, et al., 2020; Haider, et al., 2019). In Pakistan number of educational institutions adopted the electronic learning and maintained the online classes in which, Mehran University of Engineering & Technology Jamshoro, Allama Iqbal Open University, Institute of Business Administration (IBA) (Punjab University, Virtual University of Pakistan, university of Peshawar, Shah Abdul Latif University Khairpur, and University of Sindh etc (Chandio, 2020). In spite of the announcement of the higher education commission (HEC) universities faced the detentions and hard challenges to due to lack of information technology infrastructure and students expertise to wards the technological use and adoption of innovative system.

Electronic learning (E-learning) highlights an online learning and digital teaching and learning that is based on the availability of resources as information technology (IT) infrastructure as

computer, accessibility to internet, effective signal and coverage and expertise of candidate with the technology that can motivate students and attract their intention to use and adjust with the digital learning atmosphere (Chandio, 2020; Mukhtar, et al., 2020). The significance of technology cannot be denied in the modern time of scientific age of globalization where it is adopted in the every institutions as education sector also prioritize itsrole of e-learning during the outbreak of pandemic across the world (Abbasi, et al., 2020; Eltayeb, et al., 2020).Emerging innovative technologies and learning management systems in the way of teaching and assessment have made progress, providing a user-friendly solution for educators and allowing policymakers to implement the use of information technology during quarantine days to cover coursework (Popovici, and Mironov, 2015).

Digital learning remained a dire need to assist the educational institutions to propagate the educational activities in the days of natural calamities and dilemmas. The higher education commission recommended adopting the online learning mechanism in the days of natural calamity as COVID-19 concerning the quarantine circumstances in the country that can be fruitful to mobilize digital classes and cover remote learning activities of students during the outbreak and lockdown (Chandio, 2020).In addition, HEC encourages universities to equip technology infrastructure for distance learning.Culture of virtualizing e-learning Pakistan faces obstacles and opportunities to make the country a digital state, especially in the field of education.While an appropriate tool is available to deal with the distance learning challenges imposed due to COVID-19 pandemic spread, it is preferable to keep the learning simple, as it is considered challenging if it were not for the supervision of a specialist teacher to make technology an easy to be adopted by learners (Rodrigues, et al., 2020; Gonzalez, et al., 2020).

Literature review

Digital learning encompasses the diverse concepts that comprise as electronic learning, online learning, computer-assisted instruction, wireless based education, mobile learning, and virtual learning etc (Govindasamy, 2001). It provides online instructions to students and support the dissemination of a wireless based educational activities via adoption of the utility of information and communication technologies (ICT). The viability of digital learning has figured prominently in the ongoing Covid-19 pandemic, which has diverted the attention of global educational institutions to fill the gap in faculty closures (Abbasi, et al., 2020; Chavarría, et al., 2020). Key stakeholders, including teachers, students, administration and technology infrastructure, can make substantial efforts to maintain a virtual learning environment in order to mobilize the educational process and minimize the gaps that erupt in the days of the pandemic outbreak.

There are number of studies encourage the adoption of online learning system and world educational institutions supported digital learning system in order to meet the closures of educational activities due COVID-19 to affect the students to carry out their academic activities (Chandio, et al., 2020; Chavarría, et al., 2020; Govindasamy, 2020; Martín, and Fernández, 2009). The current study is concerned with discovering the intention of students to perceive the adoption of innovative technology in their educational process as an easy and useful during the pandemic outbreak lockdown and closures of institution. In this way, the perception of students of Shah Abdul Latif University was collected relating to adopt the digital learning where students maintained their virtual classes by means of software team, Zoom, and Teams assigned to them.

In this study proposed factors (perceived ease of use, perceived usefulness, and intention to use) were used to investigate the students intention to use the electronic learning whereas there are number of researchers adopted the same line of action in their

respective studies with light diverse in nature of research (Al-Okaily, et al., 2020; Chandio, 2020; Haider, et al., 2019). The extant study paid attention toward the assessing the student intention to use electronic learning during the closures of the university and center of discussion is to interpret the perceived usefulness (PU) and perceived ease of use (PEOU). The vitality of technology cannot be denied in the educational activities in the contemporary scientific age and world communities around the world took initiatives to sustain the education process via adopting the online means. The chief purpose of this researcher was made on the conducting investigation to find out the users intention to use electronic learning.

Intention denotes perception students to use online technology in his/her educational activities and the construct assist to investigate the intentional approach relating to adoption of electronic learning system (Chandio, 2020). The proposed determinants like perceived ease of use (PEOU) entails and directs a degree of easiness to be perceived by users to believe that adopted system is free of troublesome and uneasiness whereas perceived usefulness mentions the parameter of usefulness of the system to considered by the users to use the technology in the way to carry out and accomplish the task (Chandio, 2020; Haider, et al., 2019; Davis, 1989). In this scenario, the proposed constructs by research determine the intention of users to use the electronic learning particular students in the Shah Abdul Latif University Khairpur.

Conceptual framework

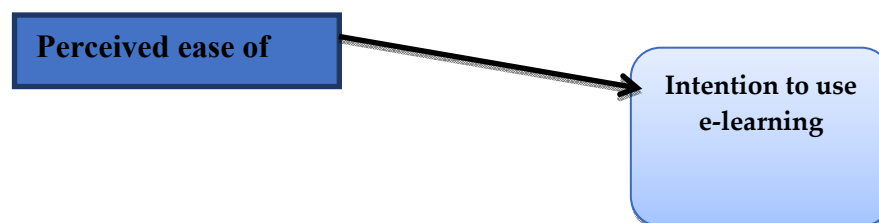




Fig. 1 Proposed conceptual model

In the present study two independent constructs (PEOU, and PU) and one dependent variable have been proposed in which independent factors maintain their positive significant relation with the criterion determinant. It investigates the electronic learning users and interpret the intention of the students regarding the acceptance of the technology in the way of online classes management. Assessing the intention of users is a behavioral approach relating the approving the digital based classes and dissemination of education has depended on the users attitudes, perception, and beliefs towards intention to use electronic learning. Moreover, a theoretical perspective has been adopted in which proposed factors derived to theses theories and existing study included the theory as TAM, and UTAUT model where were considered to be applied for the adoption of innovative technology in the atmosphere. In this perspective, the designed model the constructs as PEOU, and PU were borrowed from the theory of acceptance model (TAM) model and the determinant intention to use (ITU) derived from the unified theory of acceptance and use of technology (UTAUT) (Venkatesh, et al., 2003; Davis, 1989). The constructs used in the presented theories were applied to interpret the user's point of view on technological acceptance and user's intention was to be measured to use the electronic technology as an innovative system.

Hypotheses

H1. The construct between perceived ease of use (PEOU) and Intention to use e-learning (ITEL) sustained a positive and significant relationship.

H2: The construct between perceived usefulness (PU) and Intention to use e-learning (ITEL) sustained a positive and significant relationship.

Results and discussion

The exiting study encompasses the sectional, quantitative, and survey based research. The proposed constructs develop hypotheses to maintain the positive significant association as the factors (PU and PEOU) retains their relationship with the Intention to use e-learning (ITEL). In the present research data was secured from the students Shah Abdul Latif University in which data was gathered from the (Bachelor, Master, Mphil, and PhD). In addition, proposed determinants was applied by the previous research with slight different language and nature of study and the prevailing study is related to interpret the intention of students to use electronic learning during the COVID-19 outbreak (Chandio, 2020; Venkatesh, et al., 2003; Devis, 1989). For data collection, Five point Likert scale was used in which options encircled as strongly disagree (SD), Disagree (D), neutral (N), agree (A), and strongly agree (SA) (Chandio, 2020). The current study correlation and regression analysis were used to test the hypotheses validity.

Variables	Description	Frequency	Percentage
Gender	Male	198	92.09
	Female	17	7.9
Age	21-30	179	83.2
	31-40	36	16.7
Education	Master/Bachelor	201	93.4
	M.Phil/ P.hd	14	6.5

Table 2: Demographic Characteristics

Q1: I intent to use electronic learning	3.682	.9624

(ITEL).		
Q2: I expect to follow the use of digital learning system (ITEL).	3.7568	.85312
Q3: I prefer and envisage a plan to organize the use of electronic learning (ITEL).	3.7143	.84646
Q4: I perceive an easiness to use e-learning to me to use the system (PEOU).	3.6554	.84640
Q5: I perceive the use of electronic learning is the trouble-free in the way to achieve my learning objects (PEOU)	3.72305	.76542
Q6: the use of electronic learning would be easy for me to learn skills and educational essentialities via adoption of the digital learning system (PEOU)	3.7946	.73725
Q8: Electronic learning can be helpful for me to carry out my learning process faster and timely to be accomplished (PU)	3.8278	.78549
Q9: Electronic learning services ensure the provision of an easiness to perform my educational activities to be done (PU).	3.8651	.74544
Q10: with the use of electronic learning system I can progress my performance and eliminate interruptions to comprehend my class activities except any uneasiness (PU).	3.7567	.78647

Table 3: Survey items, standard deviations and mean

The factors significance and multivariate correlation meet to positive relationship. Thus, researcher carried out an investigation

to maintain relationship of independent and dependent factors through via Pearson's correlation. Results and findings indicates the significant relations at 0.1 level and proposed constructs were supported in this study significant positively correlated with the criterion variable.

Correlation

	BI	PEOU
ITEL	1	
PEOU	.587	1
PU	.556	.517

Table 4: Pearson correlation

The variables correlation remained under (.587 to .517) whereas correlation of PEOU (.587) and PU (.556-.517) was confirmed. The impact of the independent constructs and criterion variable (dependent factor) were discovered by the multiple regression analysis.

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-.799	.297		-2.687	.008
PEOU	.370	.080	.273	4.680	.000
PU	.354	.081	.265	4.316	.000
Dependent Variable: ITEL					

In this study 215 respondents participated to carry out the empirical analysis of students intention to use electronic learning. In the questionnaire Cronbach's alpha was calculated as 0.851. The students' perception meet with positive intention for acceptance of electronic learning and majority of respondents

perceive to use the digital learning system and they applied the system during the COVID-19 outbreak.

The present study results to support the all developed hypotheses and recommend the coming researchers to broaden the study at large scale as the current research confined to a single university. The findings find out that students intention support the technology acceptance thus the adoption of digital system in educational institutions can be progressed with the provision of information technology infrastructure and encouragement of computer based literacy is the dire need to motivate electronic learning atmosphere in the country. Moreover, different factors should be used to interpret the innovative technology users in the different institution and organization as they were affected by the covid-19 pandemic during lockdown.

Conclusion

In Pakistan electronic learning got popularity during the pandemic outbreak when universities in the country adopted the online means of learning management.

Morovere, learning and teaching via use of wireless based technology has been prioritized the student in the Shah Abdul Latif university in which they intent to perceive the system as an system an easy and useful for their learning activities in the time of natural calamity that support the system to be adopted in future thus more investment is required in this regard. In addition, promoting electronic learning depends on the presence of the high IT literacy and information technology (IT) infrastructure where administration and students should adopt effective measures by means of learning expertise, skills and ensure the availability of resources.

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