
Impact of virtual learning on Student's Academic Achievements during COVID19 outbreak: A Case Study

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Abstract

A virtual learning platform is an online-based platform that provides digital solutions to learners and academicians to improve their learning experience. Virtual learning is a system that provides educators with digital-based options for producing interactive lessons. Since the early days of the COVID19 pandemic, Universities throughout the world took rapid initiatives to ensure students' learning continuity and secure the well-being of their students. (Alsoud & Harasis, 2021)

Virtual learning is a form of learning that uses technology. A learning system based on dignified teaching but with the help of digital resources is known as virtual learning. This study aims To find out the impact of virtual learning on student's academic achievements during COVID-19 outbreak. The prevailing study applied initiatives to interpret the students' perception of M.Phil and Ph.D. scholars that is confined to "The Faculty of Education, University of Sindh". Survey method was used to collect data from the respondents, from which 200 respondent's feedback was secured and interpreted via filling questionnaires by means of personal approach of researcher to encompass the task. A five point Likert scale was used to collect the data and test of Hypotheses enclosed with regressions Analysis.

Keywords: Virtual learning, COVID-19 outbreak, Academic Achievements.

Introduction

During the Covid-19 pandemic epidemic, virtual learning maintained its viability as a technique of ensuring rapid information dissemination and transfer while being accessible over the internet. Virtual learning refers to students' online access to teachers and interconnectivity that is still dependent on information technology (Bernal et al., 2020).

In times of natural calamities and difficulties, virtual learning has remained a critical necessity to aid educational institutions in spreading instructional activities. The higher education commission advised using an online learning mechanism in the event of a natural disaster, such as COVID-19, which may be useful in mobilizing digital classrooms and covering distant learning activities of students during outbreaks and lockdowns. In addition, HEC pushes institutions to invest in distant learning technological infrastructure. Pakistan confronts both challenges and possibilities in its efforts to become a digital country. (Mahyoob, 2020)

It was strictly instructed to shift on virtual learning hence, the institutions created an online learning environment and instructed affiliated institutions to undertake virtual learning activities throughout the country to avoid education loss during the COVID-19 crisis (Akbar Malik, 2014). The main challenges that institutions faced in ensuring an easy and quick adoption of innovative virtual learning systems remained infrastructure and poor

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information technology (IT), making it difficult for Pakistan to start an online education system on an emergency and urgent basis in order to materialize digital educational activities. (Ong, 2020)

Different universities of Pakistan shifted their teaching and learning process on virtual learning, owing hardships in the digital paradigm in Pakistan. The University of Sindh Jamshoro is one of those universities who had strived a lot to convey the educational assets to the real deserving individuals on their end. Despite the higher education commission's (HEC) statement, institutions have encountered detentions and difficult obstacles owing to a lack of information technology infrastructure and students' skill in technological usage and acceptance of new systems. Virtual 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 virtual learning atmosphere. The importance of technology cannot be ignored in today's scientific era of globalization, where it is embraced across all institutions, including the education sector, which prioritizes the function of virtual learning during pandemic outbreaks throughout the world (Amritesh & Jeayaram, 2019).

Originating innovative technologies and learning management systems in the areas of teaching and assessment have advanced, giving a user-friendly option for educators and allowing policymakers to employ information technology to cover coursework during demented days (Alsoud & Harasis, 2021).

Statement of the problem

Universities of Pakistan are now trying to reshape their system of instruction by moving towards virtual learning. This movement towards virtual learning has many challenges ahead for academics and administration of these universities (Mahyoob, 2020).

In this regard the Faculty of Education, university of Sindh was selected to investigate impact of virtual learning on students' academic achievements during COVID19 outbreak, as it is a big challenge for all universities to shift on virtual learning during COVID19 Outbreak on a large scale throughout Pakistan.

Objective of the study

1. To find out the impact of virtual learning on student's academic achievements during COVID19 outbreak.

Hypotheses

1. Ho There is no significant impact of virtual learning on student's academic achievements during COVID19 outbreak

Significance of the study

This study will be helpful

- 1) In understanding the implication of virtual learning.
- 2) To improve the academic achievements of the students, by using virtual learning.
- 3) This study will be helpful for the researchers for conducting research on virtual learning

and seeking further guidance.

- 4) This study will be helpful for the educational institutions to enhance the students' learning outcomes by using modern technologies.
- 5) This study will be helpful for the educational institutions to maintain and enhance their standards of modern educational system.
- 6) This study will be helpful for the teachers to understand the importance of virtual learning.
- 7) This study will be helpful for the students to make themselves more effective learners by applying modern technology in learning.
- 8) This study will be helpful for the guidance of policy makers to bring some reforms in teachers' skills by ICT trainings.
- 9) This study will be helpful for the future research in digital learning.
- 10) This study will be helpful for different Non-Government Organizations (NGOs) working for the betterment of education to encompass over the gaps of ICT usage and virtual learning in educational institutions.

Delimitation of the study

- 1) This study is delimited to the students/scholars of M.Phil, Ph.D.
- 2) This study is confined to only faculty of education, university of Sindh.

Review of Related Literature

Virtual learning encompasses the divers concepts that comprises as electronic learning, online learning, computer-assisted instruction, wireless based education, mobile learning, and virtual learning etc. (Govindasamy, 2001)(Karimnia & Kay, 2015). 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 virtual learning has figured prominently in the ongoing Covid19 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.(Alves et al., 2017).

There are number of studies encourage the adoption of online learning system and world educational institutions supported virtual learning system in order to meet the closures of educational activities due COVID-19 to affect the students to carry out their academic activities(Westbrook, 2006).

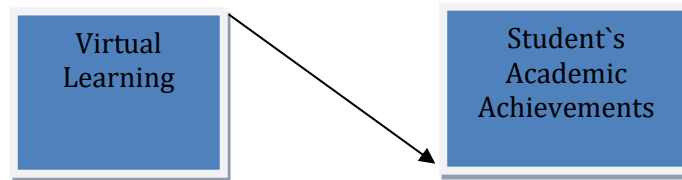
The current study is concerned with discovering the intention of students to perceive the adoption of innovative technology in their educational process as an easy and useful during the pandemic outbreak lockdown and closures of institution. In this way, the perception of students of University of Sindh was collected relating to adopt the virtual learning where students maintained their virtual classes by means of software team, Zoom, and Teams assigned to them.

In this study proposed variables COVID19 and Students' Academic Achievements 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 (Georgouli, 2011). The extant study paid attention toward the assessing the student intention to use electronic learning during the closures of the universities. 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 (Majoka & Khan, 2017). The chief purpose of this researcher was made on the conducting investigation to find out the impact of virtual learning on students' academic achievements.

Intention denotes perception students to use online technology in his/her educational activities and assist to investigate the intentional approach relating to adoption of electronic learning system (Hamid et al., 2018). The proposed determinant 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, the way to carry out and accomplish the task (Strategies, 2018). In this scenario, the proposed constructs by research determine the intention of users to use the electronic learning particular and essentially to know the impact of virtual learning on students' academic achievements in faculty of education, University of Sindh.

Conceptual framework



Conceptual Model

In the present study two variables independent and dependent had been proposed in which independent variable maintains either their positive or negative significant relationship. It investigates the electronic learning users and interpret the intention of the students regarding the acceptance of the technology in the way of online class 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 (Ahmad et al., 1998). Moreover, a theoretical perspective has been adopted in which proposed factors derived to these 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 conceptual framework was developed, in terms of variables, named virtual learning and Students' Academic Achievements from the unified theory of acceptance and use of technology (UTAUT) (Venkatesh, et al., 2003; Davis, 1989).

The conceptual framework 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.

Research Methodology

The research design adopted for this study was descriptive survey design with quantitative approach. The design attempted to collect data from the group of interest of the researcher, in order to determine the current status of that population with respect to one or more variables (Mugenda, 2003). This study design enabled the researcher to study the entire population (M.Phil, and PhD) of faculty of education, university of Sindh, in which data was gathered from the respondents M.Phil, and PhD. Scholars. For data collection Likert scale 5.0 was used in which options encircled as strongly disagree (SD), Disagree (D), Undecided (U), agree (A), and strongly agree (SA) respectively. The regression analysis was used to test hypotheses.

Data Analysis, Discussion, Recommendations and Conclusion

Table 1: Demographic Characteristics

Variables	Description	Frequency	Percentage
Gender	Male	97	48.5
	Female	103	51.5
Age	20-30	159	79.5
	30-40	41	20.5
	Master/Bachelor	171	85.5
Education	M.Phil/ Ph.D.	19	14.5

The demographic characteristics of the respondents show that 48.5% of male scholars and 51.5% of the female scholars participated in this research study while 85.5% of the respondents were enrolled in M.Phil and 14.5% of the respondents were enrolled in Ph.D.

Model Summary				
Std. Error of the Estimate	Adjusted R Square	R Square	R	Model
.52009	.826	.827	.910 ^a	1
a. Predictors: (Constant), VL				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	256.644	1	256.644	948.809	.000 ^b
	Residual	53.557	198	.270		
	Total	310.202	199			
a. Dependent Variable: SAA						
b. Predictors: (Constant), VL						

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.012	.118		.099	.921
	VL	.944	.031	.910	30.803	.000
a. Dependent Variable: SAA						

Coefficient Correlations ^a			
Model			VL
1	Correlations		1.000
	Covariances		.001
a. Dependent Variable: SAA			

Findings

The above table of linear regression model showing the calculated values e.g, R= .910, F= 948.809, (Beta= .944, t=30.803, sig=.000) found that the values are significant, thus the null hypothesis of the study is rejected. The alternate hypothesis, there is significant impact of virtual learning on students` academic achievements, hence is proved, that there is a positive impact of virtual learning on students` academic achievements.

Discussion

In this study 200 respondents participated to carry out the analysis of scholars' intention to use electronic learning. In the questionnaire Cronbach's alpha was calculated as 0.801. The students' perception meet with positive intention for acceptance of virtual learning and majority of respondents perceive to use the virtual learning system and they applied the system during the COVID-19 outbreak.

The present study results rejected null hypotheses, thus the alternative hypothesis accepted and recommend the coming researchers to broaden the study at large scale as the current research confined to a faculty of education, university of Sindh. The findings revealed that virtual learning has a positive impact on students' academic achievements, 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 virtual learning atmosphere in the country.

Conclusion

In Pakistan virtual learning got popularity during the pandemic outbreak when universities in the country adopted the online means of learning management. Moreover, learning and teaching via use of wireless based technology has been prioritized the scholars of faculty of education university of Sindh, in which they intent to perceive the online system as 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 scholars should adopt effective measures by means of learning expertise, skills and ensure the availability of resources.

Recommendations

Virtual learning has been a dire need of time as, the bookish learning has been so far from the teachers as well as learners. Every individual has switched to digital learning, so the institutions need to focus on digital amenities and should develop digital libraries to facilitate the teaching and learning process. Moreover, different other information communication technological opportunities should be introduced to interpret the innovative technology that could be involved in different practices by users in the different institution and organization as, they were affected by the covid-19 pandemic during lockdown.

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