



COMPREHENSIVE IMPACT OF ONLINE LEARNING MODES ON STUDENTS' EDUCATION IN KARACHI'S GOVERNMENT UNIVERSITIES: INTEGRATING ISLAMIC PRINCIPLES

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Abstract:

Online education has played an integral part since the outbreak of the covid-19 pandemic around the globe for students, but in the context of a country like Pakistan online education faces a vast variety of challenges especially in government universities where students face much higher challenges than private universities and there is also a literature gap in the study of online education in Pakistan. Therefore, the goal of this study is to investigate how students from Federal Urdu University and the University of Karachi faced challenges that effected their academic performance. To examine the study quantitative research method was followed in which 200 students were selected 100 each from both universities. Survey strategy was used to collect data from 200 students' findings suggests that government university students faced several challenges such as lack of digital devices, electricity load shedding, assessment method of teachers in online classes, unstable internet connections and less communication fluency between students and teachers in online classes.

COMPREHENSIVE IMPACT OF ONLINE LEARNING MODES ON STUDENTS' EDUCATION IN KARACHI'S GOVERNMENT UNIVERSITIES: INTEGRATING ISLAMIC PRINCIPLES

Keywords: Online education, face to face education, government universities, academic performance of students.

Introduction

Corona virus is an infectious disease that spreads when a covid-19 infected person coughs or sneezes. It has become the fifth pandemic in history since the 1918 flu covid-19 became widespread. China's Wuhan reported the first corona virus infection on December 31, 2019. While Pakistan reported its first incidence of COVID-19 in Karachi on February 26, 2020, World Health Organization, (2020). The world health organization directed all the countries to implement strict lockdown in their premises in order to restrict large crowds gatherings and physical interactions between people, WHO also issued some SOP's which states must implement in their regions to restrict the spread of this deadly corona virus disease. Cruz et al (2020). Covid-19 pandemic has not only changed the way of living but it has also effected the traditional way of educational practices and due to the closure of schools collage and universities more than 94% of the world's student population has been effected from this pandemic. Therefore online learning has become the need of the hour Pokhrel, & Chhetri, (2021). Carliner, S. (1999) argue that since last 20 years internet has become not only the most accessible database of information it has also changed the way people communicate shop business knowledge and learning like in every aspect of life internet has also evolved the traditional way of education into online education, online learning is a learning in which the course content is presented through a laptop computer or by other means in an online mode by the instructor to the student or a learner. Khan, B. (1997) define online education as using the internet as a channel, online instruction is a cutting-edge method of giving training to a remote audience. But there are other aspects of online education besides just displaying and providing the information online. Anderson, T. (2008) provides a more precise definition of the online learning the method of learning by using the internet to access learning resources, contact with teachers and other students, and seek assistance while studying. Whereas Johnson, D. W., & Johnson, R. T. (1996) define it as an electronically based learning that needs internet to provide channel for communication between students and teachers and also for the distribution of class materials when learning online, students must use electronic devices like laptops, PCs, and Smartphones to access the internet and learn from their instructors. Even with the availability of many online platforms which can be used for educational purpose both students and teachers had to face a vast variety of challenges and a number of researchers around the world have identified some of the most common issues. Such as lack of affordability of quality electronic devices, lack of accessibility of stable internet connections, flexibility of timings, difficult pedagogy, and educational policies, Murgatroid, (2020). Rashty, (2003) discussed some drawbacks of online learning he argued that online learning takes more time to understand than traditional physical classroom learning. So students who had bad study

habit and are low motivated will fall behind as in online education all the study related work have to be done by the student itself.

Online learning is delivered mostly on an unscheduled routine as compare to the traditional physical classroom routine which creates confusion among students. Moreover the biggest concern in online learning is that it requires good communication and writing skills among students and teachers as compare to the traditional physical education system because there are very high chances of misinterpretation of information in online learning and students who possess beginners level computer skills finds it difficult in organizing their assignment files which cause them in late submission of their assignments. Therefore, the goal of this study is to determine how much online education is affecting students' academic performance and what obstacles and challenges University of Karachi and Federal Urdu University Karachi students are facing in online classrooms.

Islamic Educational Principles and Ethical Considerations

Islamic learning is very imminent on Quran and Sunnah and stresses on the an all rounded growth of individuals, worldly and in spiritual aspects. In Islam the final goal of education is ta dib (placing a discipline and good manners), tarbiyah (nurture) and ta lim (transmission of knowledge) (Al-Attas, 1991). Education can be considered an instrumental process of forming the moral character, intellectual development, and social responsibility, which means that the learning process must reflect the purpose of creating men by God.

One of the Quran passages advises all Muslims, both male, and female, to find knowledge as their duty and present it as the way to discovering divine signs in nature (Iqbal, 2017). The crucial role that teachers are assigned with is to act as their role models as the behavior that they practice greatly determines the moral and spiritual growth of students. Moral aspects of Islamic pedagogy stress sincerity (ikhlas), fairness (adl) about learners and without any kind of exploitation and injuring (Halstead, 2004).

Further, ethics of Islamic education requires a harmonization between Islam and reason discharging that knowledge attained has to benefit the society and not corrupt (fasad). This encompasses the aspect of promoting intensive thinking within the confines of Shariat and the need to embrace things like humility, honesty and justice (Hashim, 2009). The Prophet Muhammad (peace be upon him) established such a balance in training the young by linking the moral with the skills and knowledge, and urging students to put into practice what they learn.

The cultural diversity is also an idea that is emphasized in the Islamic educational principles in modern environments as long as the specified diversity does not contradict the Islamic ideals (Yousef, 2012). The

COMPREHENSIVE IMPACT OF ONLINE LEARNING MODES ON STUDENTS' EDUCATION IN KARACHI'S GOVERNMENT UNIVERSITIES: INTEGRATING ISLAMIC PRINCIPLES

ethical system in Islamic education thus becomes both an education and a guide to the world as a base of knowledge and not as a system that only helps to refine oneself and help in community welfare.

Research Objectives

- RO1: To examine how much student's academic performance was effected from online teaching mode.
- RO2: To find out how much students face difficulties of lack of resources in online classes that affect their academic performance.
- RQ3: To examine how much student's academic performance is affected from the assessment method of teachers in online education.

Research Questions

- RQ1: What are the affect of online teaching mode on student's academic performance.
- RQ2: What are the difficulties students face regarding lack of resources in online classes that affect their academic performance.
- RQ3: What are the affect of assessment methods in online classes from teachers on student's academic performance.

Hypothesis

- H_{a1}: Online teaching mode significantly affects the student's academic performance.
- H_{a2}: lack of resources in online classes significantly affects the student's academic performance.
- H_{a3}: Assessment method of teachers in online classes significantly affect the academic performance of students.

Literature Reviews

After the closure of all educational institutes due to lockdown because of Covid-19 pandemic around the globe there was no alternative way in this catastrophic condition to provide quality education but to shift education from traditional face to face learning to online distance learning. This transitioning posed significant challenges for both learners and educators and they had to adapt this mode of education in a very short period of time. During this pandemic Most of the E learning platforms have played a significant role in facilitating both educators and learners to use them as a communication tool for virtual classes Subedi et al., (2020) several other studies have also been conducted around the globe to identify other challenges in transitioning from physical education to online distance learning Armstrong-Mensah, Ramsey-White, & Alema-Mensah, (2019) finds out that students indicated their academic workload have increased in online education. Nevertheless zoom video conferencing was used mostly around the world especially for online classes (Mohammad, & Rashid, 2020) conducted a study to find out the students perception about communication tools used by teachers during covid-19 pandemic their

findings suggests that most of the students were satisfied with the zoom meeting approximately 39 percent while 30% students were not satisfied with the zoom meeting although it was found to be difficult in the beginning of online education. Even with the availability of many online platforms which can be used for educational purpose both students and teachers had to face a vast variety of challenges and a number of researchers around the world have identified some of the most common issues. Such as lack of affordability of quality digital devices,, lack of accessibility of stable internet connections, flexibility of timings, difficult pedagogy, and educational policies, Murgatrottd, (2020) whereas PinakiChakraborty, Prabhat Mittal, Manu Sheel Gupta, Savita,Yadav,& Anshika Arora, (2020) argued that techniques like case study, flipped classroom and gamification need to be introduced in online education. It can also be argued that due to the large number of student population appropriate ways to check plagiarism is not available in so many educational institutions and Errors in online student assessments are creating confusion and uncertainty among teacher students and parents United Nations, (2020). Furthermore (Gopal, Singh, & Aggarwal, 2021) concluded that quality online lectures and to understand the psychology of students is directly linked to the satisfaction and performance of students in online education system. Moreover, if the instructors can design the course content after getting the students feedback they can further increase the performance and satisfaction level of students in online classes.

Theoretical Framework

Theory is a set of concepts principles and explanation of some aspects of human experiences Littlejohn & Karen (2011). The researcher found knowledge gap theory relevant to this study.

Knowledge Gap Theory

The test the hypothesis tichenor, Donohue, and olien's knowledge gap theory was found suitable for this study the theory was originated in 1970, the theory argue that the knowledge is distributing throughout the society unevenly as wealthier people tend to have the access of information then poorer people (Tichenor. Donohue & Olien.1970 p.162). In the context of this study poorer people are facing the difficulties of internet access, quality digital devices problems and load shedding problems while rich people have the access of every information easily.

Methodology

Research methodology defines the procedure and techniques which explains what methods will be used to analyze and investigate the information in a research. The methodology presents the answer of two main questions of the study, how data was collected and how it was analyzed Martin, (n.d.).

**COMPREHENSIVE IMPACT OF ONLINE LEARNING MODES ON STUDENTS' EDUCATION IN
KARACHI'S GOVERNMENT UNIVERSITIES: INTEGRATING ISLAMIC PRINCIPLES**

Quantitative Research Method

Data are compiled and numerically analyzed in quantitative research. It can be applied to recognise trends, provide a method for forecasting outcomes, verify the validity of casual associations, and extrapolate findings to larger populations. Scribbr (2020). In this paper Quantitative research method was followed to find out the problems faced by students in online classes and how much online education was effecting their academic performances.

Sample Size

By selecting data from the subgroup rather than the entire population, sampling techniques offer a variety of ways to help researchers collect less data. (Saunders. 2007) In this paper sampling technique is used by the researcher to investigate the challenges face by 200 students 100 from University of Karachi and 100 from Federal Urdu University Karachi.

Convenience Sampling

Convenience sampling or haphazard sampling involves only those respondents of the population that are easiest to access for the data collection from the population (Saunders 2009). Due to SOPs restrictions and an unavailability of a sample frame convenience sampling technique was used in this study to collect the data in an easiest way from 200 students 100 from University of Karachi and 100 from Federal Urdu University Karachi.

Survey

Survey is one of the most common strategies applied in research in answering what, where, who, how much and how many questions. It is commonly utilized to conduct descriptive and exploratory studies. They are also very cheap but they require a significant amount of time to collect a large volume of the data to come up with the same Saunders, et al (2009) survey strategy was used to collect the data on the 200 respondents 100 each of students of University of Karachi and Federal Urdu University Karachi.

Findings

Teachers are responsive in online classes and it is affecting the academic performance of students.		
	Frequency	Percent
Strongly Disagree	35	17.5
Disagree	62	31
Neutral	26	13
Agree	50	25
Strongly Agree	27	13.5

The above table 1 shows that 31% students disagree that teachers are responsive in online classes whereas 17% shows strongly disagree while 13% students were neutral and 25% students agree while 13.5% were strongly agree that teachers were responsive in online classes.

Learning Material/recorded lectures in online classes are difficult to understand		
	Frequency	Percent
Strongly Disagree	40	20
Disagree	68	34
Neutral	13	6.5
Agree	54	27
Strongly Agree	25	12.5

Table 2 shows that 34% students disagree that recorded lectures in online classes are difficult to understand while 20% strongly disagree with this statement whereas 6.5% were neutral while 27% were agreed and 11.5% were strongly agreed with the statement.

Online education is very economical for government university students.		
	Frequency	Percent
Strongly Disagree	22	11
Disagree	80	17.5
Neutral	26	13
Agree	35	40
Strongly Agree	37	18.5

Table 3 presented that 40% student agree that online education is economical whereas 18.5 were strongly agree whereas 13% were neutral while 17.5% student were disagreeing with the statement and 11% were strongly disagree.

Attendance of government university students are lesser in online classes.		
	Frequency	Percent
Strongly Disagree	18	9
Disagree	49	24.5
Neutral	37	18.5
Agree	58	29
Strongly Agree	38	19

Table 4 demonstrates that 29% student agreed that attendance is lesser in online classes while 19% were strongly agree whereas 18.5% were neutral and 9% were strongly disagree while 24.5% was disagree.

**COMPREHENSIVE IMPACT OF ONLINE LEARNING MODES ON STUDENTS' EDUCATION IN
KARACHI'S GOVERNMENT UNIVERSITIES: INTEGRATING ISLAMIC PRINCIPLES**

Practical subject classes in online education are less effective in terms of skill building for the students.		
	Frequency	Percent
Strongly Disagree	22	11
Disagree	32	16
Neutral	20	10
Agree	73	36.5
Strongly Agree	53	26.5

The above table 5 shows that 36.5% students agreed and 26.5% strongly agreed that practical subject classes in online education are less effective in terms of skill building whereas 10% were neutral and 11% were strongly disagree while 16% was disagree with the statement.

Communication between teachers and students are not fluent in online classes and it is affecting the academic performance of students.		
	Frequency	Percent
Strongly Disagree	20	10
Disagree	36	18
Neutral	37	18.5
Agree	79	39.5
Strongly Agree	28	14

Table 6 presents that 39.5% students agree and 14% students strongly agree that communication between teachers and student are not fluent in online classes whereas 18.5% was neutral while 18% were disagree and 10% was strongly disagree with statement.

Lack of technology awareness in teachers is making online education more challenging and it is affecting the academic performance of students.		
	Frequency	Percent
Strongly Disagree	9	4.5
Disagree	28	14
Neutral	33	16.5
Agree	90	45
Strongly Agree	40	20

Table 7 shows that 45% students agree and 20% strongly agree that lack of technology awareness in teachers is affecting their academic performance while 16.5% were neutral and 14% disagree and 4.5% strongly disagree with the statement.

Lack of digital devices is making online education more challenging and it is affecting the academic performance of students.

	Frequency	Percent
Strongly Disagree	15	7.5
Disagree	30	15
Neutral	9	4.5
Agree	97	48.5
Strongly Agree	49	24.5

Table 8 shows that 48.5% student was agreed while 24.5% strongly agreed that lack of digital devices effecting their academic performance whereas 4.5% were neutral while 15% disagree and 7.5% strongly disagree with the statement.

Lack of stable internet connection is making online education more challenging and it is affecting the academic performance of students.

	Frequency	Percent
Strongly Disagree	10	5
Disagree	28	14
Neutral	80	9.5
Agree	63	31.5
Strongly Agree	19	40

The above table 9 shows that 31.5% student agree and 40% strongly agree that lack of stable internet connection is affecting their academic performance whereas 9.5% were neutral while 14% disagree and 5% strongly disagree with the statement.

Electricity load shedding is making online education more challenging and it is affecting the academic performance of students.

	Frequency	Percent
Strongly Disagree	16	8
Disagree	27	13.5
Neutral	9	4.5
Agree	100	50
Strongly Agree	48	24

Table 10 shows that 50% student agree and 24% strongly agree that electricity load shedding in online classes is affecting their academic performance whereas 4.5% were neutral while 13.5% disagree and 8% strongly disagree with the statement.

**COMPREHENSIVE IMPACT OF ONLINE LEARNING MODES ON STUDENTS' EDUCATION IN
KARACHI'S GOVERNMENT UNIVERSITIES: INTEGRATING ISLAMIC PRINCIPLES**

Assessment method of online education system significantly effecting the academic performance students of government universities.		
	Frequency	Percent
Strongly Disagree	16	8
Disagree	17	8.5
Neutral	27	13.5
Agree	95	47.5
Strongly Agree	45	22.5

Table 11 shows that 47.5% students agreed while 22.5% strongly agreed that assessment method of online education system is affecting their academic performance whereas 13.5% were neutral while 8.5% disagree and 8% strongly disagree with the statement.

Teaching mode in online classes significantly affect the academic performance of students of government universities.		
	Frequency	Percent
Strongly Disagree	30	15
Disagree	30	15
Neutral	20	10
Agree	65	32.5
Strongly Agree	55	27.5

The above table 12 shows that 32.5% student agree and 27.5% strongly agree that teaching mode in online classes is affecting their academic performance whereas 10% were neutral while 15% disagree and 15% strongly disagree with the statement.

Hypothesis Testing

Regression Model 1

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.305 ^a	0.09	0.09	0.66

a. Predictors: (Constant), online teaching mode

The R and R^2 values were reported in the model summary table. The R value, which stood in for the basic correlation, was 0.305, indicating a weak association. The R^2 measured the extent to which the independent variable, online teaching mode, could account for the whole variation in the dependent

variable, student academic performance. In this instance, $R^2=0.088$ revealed that the very weak independent variable, online teaching mode, could only account for 8.8% of the total variance in the dependent variable, student academic performance.

ANOVA ^a					
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	17.497	1	17.497	39.901	.000 ^b
Residual	174.527	198	0.439		
Total	192.023	199			

The ANOVA table indicated that the regression model significantly and accurately depicted dependence variable. This was an indication of the statistical significance of the regression model. In this case, the regression model was significantly able to statistically predict the dependent variable since the p-value was 0.000 which was below 0.05.

H_{a1}: Online teaching mode significantly affects the academic performance of students.

Coefficients ^a					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.97	0.21		9.29	0.00
ONLINE TEACHING MODE	0.18	0.06	0.30	6.32	0.00

The **Coefficients** table provided with the necessary information to predict student academic performance from online teaching mode, as well as determine whether online teaching mode contributed statistically significantly to the model. Coefficient of online teaching mode was 0.177 which suggested that the relationship between online teaching mode and student academic performance was positive and the p-value = 0.000 provided the evidence that this coefficient was statistically significant. Therefore the alternative hypothesis H_{a1} is accepted.

Regression Model 2

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.368 ^a	0.09	0.08	0.67

a. Predictors: (Constant), Lack of Resources for online classes

**COMPREHENSIVE IMPACT OF ONLINE LEARNING MODES ON STUDENTS' EDUCATION IN
KARACHI'S GOVERNMENT UNIVERSITIES: INTEGRATING ISLAMIC PRINCIPLES**

The R and R^2 values were reported in the model summary table. The R value, which stood in for the simple correlation, was 0.368, indicating a weak association. According to the R^2 , the independent variable, a lack of resources for online classes, accounted for a certain percentage of the overall variation in the dependent variable, student academic performance. In this instance, $R^2=0.092$ revealed that the extremely low independent variable, Lack of Resources for Online Classes, might account for 9.2% of the total variation in the dependent variable, students academic Performance.

ANOVA ^a					
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	15.953	1	15.953	36.061	.000 ^b
Residual	176.07	198	0.442		
Total	192.023	199			

According to ANOVA table, the regression model was significant to predict the variable, and it predicted the dependent variable accurately. This proved to be the statistical meaningfulness of the regression model. In the current case, the regression model statistically had a high degree of precision in predicting the dependent variable as the p-value was 0.000 and it is below the standard criterion of 0.05.

H_{a2}: Lack of Resources in online classes significantly affect the academic performance of students.

	Coefficients ^a					
	Unstandardized Coefficients		Std. Error	Standardized Coefficients	T	Sig.
	B			Beta		
(Constant)	2.02	0.22		9.37	0.00	
LACK OF RESOURCES FOR ONLINE CLASSES	0.40	0.06	0.29	6.01	0.00	

The **Coefficients** table provided with the necessary information to predict student academic performance from lack of resources for online classes, as well as determine whether lack of resources for online classes contributed statistically significantly to the model. Coefficient of lack of resources for online classes was 0.398 which suggested that the relationship between lack of resources for online classes and student academic performance was positive and the p-value = 0.000 provided the evidence that this coefficient was statistically significant. Therefore the alternative hypothesis H_{a2} is accepted.

Regression Model 3

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.305 ^a	0.10	0.09	0.66

a. Predictors: (Constant), Assessment method in online classes

The R and R^2 values were reported in the model summary table. The R value, which stood in for the simple correlation, was 0.398, indicating a weak association. The R^2 measured the extent to which the independent variable, the assessment method used in online classrooms, could account for the whole variation in the dependent variable, student academic performance. In this instance, $R^2=0.095$ indicated that the relatively low independent variable, Assessment methods in online classes, could only account for 9.5% of the total variance in the dependent variable, student academic performance.

ANOVA ^a					
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	16.433	1	17.497	39.901	.000 ^b
Residual	155.347	198	0.439		
Total	187.053	199			

According to the ANOVA table, the regression model was significant and it accurately predicted the dependent variable. It proved the statistical significance of the regression model. In this case, the regression model also statistically significantly predicted the dependent variable with p-value of 0.000 which was less than the level of 0.05.

H_{a3}: Assessment method of teachers in online classes significantly affect the academic performance of students.

	Coefficients ^a				
	Unstandardized Coefficients	Std. Error	Standardized Coefficients	T	Sig.
	B		Beta		
(Constant)	1.87	0.21		9.29	0.00
ASSESSMENT METHOD IN ONLINE CLASSES	0.17	0.06	0.10	6.32	0.00

The **Coefficients** table provided with the necessary information to predict student academic performance from assessment method in online classes, as well as determine whether assessment method in online

COMPREHENSIVE IMPACT OF ONLINE LEARNING MODES ON STUDENTS' EDUCATION IN KARACHI'S GOVERNMENT UNIVERSITIES: INTEGRATING ISLAMIC PRINCIPLES

classes contributed statistically significantly to the model. Coefficient of assessment method in online classes was 0.167 which suggested that the relationship between assessment method in online classes and student academic performance was positive and the p-value = 0.000 provided the evidence that this coefficient was statistically significant. Therefore the alternative hypothesis H_{a3} is accepted.

Discussion

RO1: To examine how much student's academic performance was effected from online teaching mode.

The purpose of this study was to examine how much online education is affecting the academic performance of government university students. Therefore the study was based on three objective the first objective was to find out how much online teaching mode was affecting the academic performance of students findings suggests that more 60% of the students reported that online teaching mode is affecting their academic performance.

RO2: To find out how much students face difficulties of lack of resources in online classes that affect their academic performance.

The second objective of the study was to find out how much student faced difficulties in online classes that affect their academic performance findings suggests that students reported significant challenges of unstable internet connections, electricity load shedding problems and lack of digital devices these challenges are significantly affecting their academic performances.

RQ3: To examine how much student's academic performance is affected from the assessment method of teachers in online education.

The third objective of the study was to find out how much assessment method of teachers in online classes is affecting the academic performance of students findings of this study suggests that 70% of the students reported that their academic performance is affected significantly from the assessment method of teachers in online classes.

Conclusion

Education plays a key role in the development of a country after the outbreak of covid-19 pandemic but since this mode of education is quite new for the government university students it was eminent that these students will face significant amount of challenges so the study tried to find out how much government

university students of university of karachi and federal urdu university faced difficulties and challenges and how much it has affected their academic performances findings of this study suggests that students reported that lack of digital devices, electricity load shedding, less communication fluency in online classes and assessment method in online classes has affected their academic performance.

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**COMPREHENSIVE IMPACT OF ONLINE LEARNING MODES ON STUDENTS' EDUCATION IN
KARACHI'S GOVERNMENT UNIVERSITIES: INTEGRATING ISLAMIC PRINCIPLES**

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