KAP Analysis of Students Regarding E-Learning during Covid-19 in Universities of Lahore

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Abstract

This research was conducted to explore the KAP analysis of students regarding e-learning during COVID-19 in the universities of Lahore and it examined the increase of online learning among university students due to COVID-19 lockdown. The research was supported by Technology Acceptance Model. The quantitative research approach was used as a method of inquiry. Two private universities in Lahore were selected as the target population. A simple random sampling technique was used to draw the sample from the required population. The drawn sample size was 103 university students that were currently attending online classes in universities. An adopted well-structured questionnaire was used to collect the required information. Quantitative analysis was done through SPSS version 26. Regression analysis is used to test the hypothesis. The questionnaire's reliability was tested by Cronbach's alpha test. A number of associations were found between sex and education of students and knowledge, attitude, and practice of students regarding online learning. It has been revealed that the knowledge, attitude, and practice of students towards online learning is transformed during this COVID-19 and most students gave preference to online learning in lockdowns and restrictive circumstances.

Keywords: E-learning, KAP, COVID-19, lockdown, Pakistan

Introduction

The main purpose of education is to shape an individual to be the best. Learning gives a complete strategy to draw out the best in individuals. Education gives the pathway to learners to arrive at their pre-determined destinations. Education helps in socializing individuals too. The principal purpose of education is to learn. Learning is a method of obtaining abilities and information through exposure and investigation or being instructed. Any mishap that occurs on the planet will consistently leave its effect on education. Thus the pandemic of Covid-19 has its impressions on education.

Education is one of the vital elements in building a progressive country. Covid-19 has forced the overall lockdown making an extremely terrible impact on educational practices everywhere in the world. This wave of Covid-19 has made a lot of inevitable changes in the educational cycle. It has worked as a catalyst for the

educational institutions to utilize online stages with advancements, which were not utilized in past. The education sector is fighting to wash away the crisis with a completely alternate methodology and shifting towards digitizing the educational process in this danger of the pandemic.

A bunch of patients with an epidemic of respiratory disorder of unfamiliar origin was observed in Wuhan, China in late December 2019. (Zhu et al., 2020). Coronavirus-2 was distinguished as the reason for the coronavirus infection in 2019 which was later named COVID-19. The virus rapidly spread in other domains of China and as well as other countries hence human transmission was proved (Wang et al., 2020).In this reaction to the pandemic, on the 13th of March 2020 authorities in Pakistan shut down all the educational institutions throughout the country and the Federal Government of Pakistan issued the instructions to the Higher Education Commission of Pakistan to give orders to all higher educational intuitions to start making for distance modes of education, rearrange the examination and facilitate the learners online until COVID-19 crisis remained same (Ali, 2020).

The pandemic has caused all education sectors ranging from colleges, universities, and schools all over the world to be forced to close their pages to reduce the level of social interaction (Toquero, 2020). Because of forced lockdown for quite a long time, the actual access to educational institutions has been restricted. About every school, college, and universities students are not going to their institutions because of the pandemic crisis (Chan et al., 2020).

Alternatively, one type of education during the emergency crisis of Covid-19 is online education, online learning can be defined as the kind of learning in which we use internet networks including features of connection, accessibility, flexibility, or the authority to bring up a variety of learning environment (Firman & Rahayu, 2020). Kumar et al. (2018) defined that E-learning is likewise considered as a concept used for formal coaching or a community where records are sent through digital sources to a huge audience. The main factors that make sure the functioning of such structures are computer systems and the internet.

Raheem (2020) declared that giving a wide scope of opportunities for sharing data and transferring documents with various formats, E-learning has certain highlights that work with and sustain the learning-instructing process. Since it is an electronic framework, the installation of extra learning software isn't needed, and once uploaded on the internet; the content is accessible for users anytime. Vitoria et al. (2018) highlighted that thinking of learner's perception on the execution and coordination of E-learning programs while, using the TAM model as a hypothetical background, told that all learners thought that the E-learning module they took was valuable and simple to utilize, expressing that they got the information, and explored and accessed documents easily.

Al-Jedaiah (2020) identified many universities and teaching institutions have emerged into blended learning where traditional teaching is combined with E-learning. The introduction of E-learning in the twenty-first century has made learning more active and students rely more on themselves where teachers became facilitators. E-learning system success rate depends on the inputs that academic staff applies in the system and how students react to the system outputs. Hence, universities should improve their e-learning system by focusing on scientific material and system capabilities that can measure students' performance.

Rizki et al. (2020) suggested that students become fairly independent which they can study and read based on their own time. E-learning can be used in an academic institution to improve the efficacy of academic deliverance and make the learning sessions more captivating and retainable. Tanhan et al. (2020) found that online study to be perhaps the main facilitators for certain learners while it was the main hurdle for some others during the COVID-19 emergency. The COVID-19 pandemic may compel us to move toward this issue with an urgent need to keep moving.

Almaiah et al. (2020) said that a reasonable drawback has been recognized in the information on the basic difficulties and elements of the e-learning process during this pandemic. Mailizar et al. (2021) recommended that student voices are essential in this issue, especially for students who are in areas far from the capital and not from wealthy families. The learning process must hamper what is even having to postpone school during the pandemic because of the missing online learning facilities. Making students understand the importance of learning and improving student learning motivation is very important in this pandemic period. Therefore, paying attention to the condition of students in learning must be done. Further examinations are expected to investigate the difficulties using e-discovering that prevent students from achieving their learning goals.

Kumar (2018) suggested that the spread of COVID-19 has prompted the closure of universities and colleges everywhere in the world. This tried the readiness of colleges and universities to manage an emergency way of study that needs the support of online innovations including software and hardware to empower effective web-based learning. Such closure speeds up the improvement of the internet learning conditions so that education would not be stopped.

Brooks et al. (2020) suggested educators should give email direction inside and after the class just as online general media mentoring. It is consistently fitting to embrace not many measures for the improvement of students top to bottom interest in online classes. This would help in age great cooperation of students. Undergraduate's emotional well-being ought to be mulled over and different reasonable measures ought to be taken by the teachers to calm their psychological pressure and tensions during the COVID-19 emergency, to guarantee that the students could routinely, successfully, and effectively partake in their online learning sessions.

Because of the pandemic, colleges had to do their activities with learners completely on the web media (Sobaih et al., 2020). E-learning can be explained as a system with an expanded number of classes through the internet and online meetings and so on. It is particularly noticed that the world is totally dependent on information technology during this emergency (Soni, 2020). The Covid-19 pandemic has caused numerous changes in instructing and learning methodology in education departments of higher levels and has impacted the communication among scholars and learners. E-learning platforms are playing an essential part during this emergency situation; it plans to help researchers and colleges 5 to assist students' education during times of institution closure. Additionally, the majority of this online stuff is free which can help in getting constant education during this coronavirus crisis (Almaiah et al., 2020).

Murphy (2020) stated that pandemics and the requirement for academic continuation colleges and schools have moved quickly to distance and web-based learning. While general health authorities to a great extent concur that the overall danger of COVID-19 is best battled with proportions of social distancing, the particular demonstrations of instituting crisis E-learning points don't change the actual pandemic, however just in a roundabout way by restricting regular learning teaching methods. Radha et al. (2020) suggested that E-learning is very easy to execute. The use of a workplace, personal computers, mobile phones, and online apps shapes a valuable role in this educational strategy. E-learning is quickly adopted and ends up being awesome in all fields, especially in education during the COVID-19 lockdown.

Allo (2020) Investigated learners' insight about internet picking up during the Corona infection, he showed that learners had an uplifting perspective towards Elearning, thinking of it as useful and helpful in the time of the emergency made by the COVID-19 pandemic. Purwanto et al. (2020) highlighted that the effect was significantly felt by learners, parents/guardians, and instructors. For this situation, unpreparedness to do web-based learning is the justification of inefficient learning, it is based on the grounds that web-based learning is viewed as something that is hard to carry out, need a few components to have the option to do it like offices, web access, status to learn (instructor and learners) and parent joint effort.

Hypothesis

H_1: There is an association between KAP of the students and E-learning.

Theoretical Framework

As indicated by the Technology Acceptance Model (TAM), the genuine use of a program is influenced by the recognized ease of use of the tools given by the program and by the recognized usefulness of those tools. In this way, the purpose of using E-Learning programs is affected by the recognized ease of use of the instruments provided by the programs and by the recognized usefulness of those instruments. Concerning this model, the learners didn't experience problems while

utilizing these instruments given by the E-learning programs, because these are being instinctive and easy to run and control by those learners and vice versa.

The utilization of E-learning in higher education and learner's impression of the helpfulness of this kind of learning became a new interest for some analysts and scholars. Significant in researching the utilization of E-learning is the TAM (Technology Acceptance Model), which ends up being useful in dissecting and understanding the manner in which learners are utilizing E-learning programs. The model was created by Fred Davis, who said that the degree to which individuals accept the combination of technology can be a fundamental factor for the achievement of information networks. The model gives information and clarifies the relations behind the characteristics of an Internet network, the manner in which individuals react while utilizing it, and the attitude that individuals may have towards utilizing the internet network which is affected by recognized helpfulness and usability.

Objectives

1. To determine students' perceptions regarding E-Learning during COVID-19.

2. To highlight the challenges faced by students regarding online education.

3. To find out some suggestions to cope with the challenges faced by students regarding online classes.

This study can be viewed as an additional worth to the current writings, through distinguishing the fundamental aspects about learner's knowledge, attitude, and practice of E-learning during the COVID-19 pandemic. This examination gave some significant commonsense experiences into the utilization and adoption of the E-learning framework in developing countries just like Pakistan. The current study aimed to find the learner's point of view regarding the E-learning experience during the COVID-19 pandemic for the improvement and strengthening of the E-learning framework. In another sense, this research will examine how the learning process in higher education was continued during the period of Covid-19 and will investigate the learner's point of view regarding the use of E-learning platforms in higher educational institutions and how these online technologies affect their understanding of information. Moreover, the purpose behind this study is the identification of the fundamental troubles that learners experienced while learning online.

Methodology

This research is based upon the quantitative research design to identify the KAP analysis of students about online learning in the pandemic situation. This was a cross-sectional study. The survey was conducted through the online questionnaire due to the feasibility of the targeted population in the situation of Covid-19. The population of the research was composed of the BS and M.Phil. Students which were

enrolled in universities of Lahore that were offering online education in the situation of COVID-19. Following universities were selected through a simple random sampling technique to collect the sample size: • Lahore Leads University • Minhaj University Lahore.

Simple random sampling technique was used to collect the data. A sample of 103 respondents was drawn through Taro Yamani Formula. All the respondents in the survey were currently attending online classes during the Covid-19 pandemic. Tools used for data collection was the survey method in which data was collected through an online questionnaire. The participants in this study were informed at the beginning of the questionnaire about the purpose of the study to take their consent. This study was included a personal information form. The personal information form was based upon five questions including gender, school of study, and level of study, semester, and cumulative grade point average. An online learning achievement scale was used to assess the effectiveness of online learning during the pandemic situation. The scale was designed by Bernard et al., (2004).

Results

Table 1: Cronbach Alpha Test

Reliability Analysis	
Cronbach's Alpha	No. of Items
0.881	25

Table 1 presents the reliability results of the questionnaire tested through Cronbach's alpha. That shows the value of reliability of the total number of questions used in the present research. According to the results in the above table, Cronbach's alpha value is 0.881 which shows the collected information is reliable, suitable for further statistical analysis, and belongs to a good reliable category of reliability rules of data.

Table 2: Chi-Square Test

Chi-Square Test			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	78.184[a]	82	0.599
Likelihood Ratio	82.716	82	0.457
Linear-by-Linear Association	0.137	1	0.711
No. of Valid Cases	103		

a. 125 cells (99.2%) have an expected count of less than 5. The minimum expected count is .08.

Above table 2 contains chi-square test that is known as a bivariate test of analysis. It shows results by comparing two variables and in this research targeted variables were (SSE) students' sex and education, and KAP analysis of students. The results show significant association and impact between both variables. According to statistical analysis, there is a strong association between both (SSE) students' sex and education, and KAP analysis variables. The significant value is 0.599 that is less than the probability value which indicates a strong association.

Table 3: Regression Analysis Test

Regression Analysis				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.037[a]	0. 599	0.597	6.52030
a. Predictors: (Constant), Student's Sex and Education				

Above table 3 shows regression analysis results. According to the table, R square value is 0.599 that describes the total impact of the dependent variable KAP that is caused by the independent variable student's sex and education (SSE). Moreover, this test explains how much contribution of KAP is caused by (SSE) students' sex and education to change the KAP of students in the present research. Hence, it is proved in the regression results that R square value is 0.599, which means the independent variable student's sex and education (SSE) caused a 59.9% change in the KAP analysis of students as a dependent variable.

Table 4: ANOVA Test

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	37.130	1	37.130	611.152	.001[b]
	Residual	27564.967	101	272.920		
	Total	27602.097	102			
a. Dependent Variable: KAP						
b. Predictors: (Constant), SSE						

Table 4 shows ANOVA results that explain the relationship association between the dependent variable, student's sex, and education (SSE) and independent variable KAP analysis. According to the results, the probability value is 0.001 is less then alpha value of 0.05 which means the relationship is significant.

Table 5: Coefficients

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	54.843	8.238		6.657	.000
SSE	1.065	2.888	0.037	0.369	0.713
a. Dependent Variable: KAP					

Table 5 consisted of coefficients results, that shows beta value is .037 that prove the change in the independent variable that is student's sex and education which bring about the change in the dependent variable that is knowledge, attitude, and practice (KAP) of students by .037 units. Moreover, it shows that if a student's education level increases of both sexes by one unit the KAP analysis will also increase by 37 units. Hence, it indicates that the beta value is positive which indicates the positive relationship between KAP and student's sex and education.

One Sample t-test

One sample t-test is used for one sample and tests whether the sample mean value is equal to a specified value or not. The variable that is under test should have some characteristics. The testable variable should be a scale variable, normally distributed, outlier and data are independent. The undertaken variable had each characteristic, normality, and outlier proof are given below:
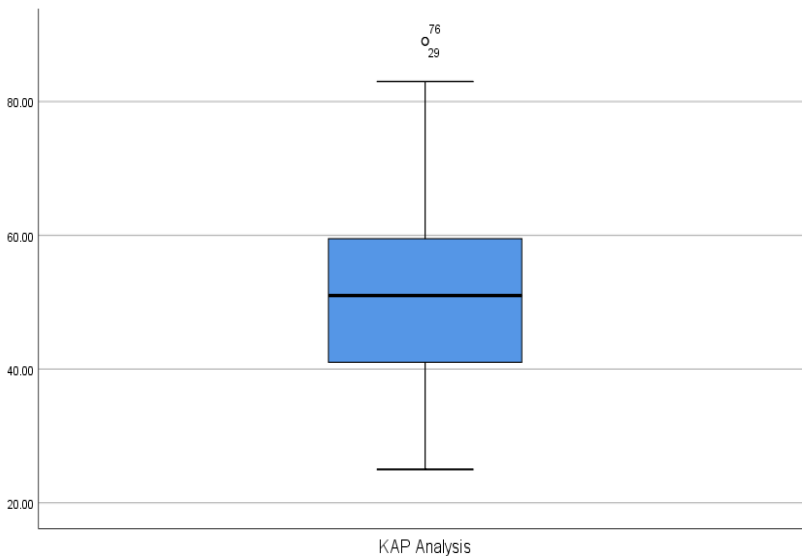
KAP Analysis

Table 6: Test of Normality

Test of normality of KAP analysis is presented below:

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
KAP Analysis	.080	103	.105	.963	103	.006
a. Lilliefors Significance Correction						

Table 6 presents the normality test of KAP analysis that shows data is distributed normally and suitable for the t-test. It also shows that test was done on accurate data and obtained results are correct.

Table 7: Z-scores

Z-score for the mean of KAP analysis required for t-test mentioned below:

Z-scores for KAP					
	No.	Minimum	Maximum	Mean	Std. Deviation
KAP Analysis	103	25.00	89.00	51.8641	16.45019
Valid N (listwise)	103				

After adding and testing all the essential requirements for the test, a t-test was obtained to check KAP analysis.

Table 8: One-Sample Test

One-Sample Test						
	Test Value = 51					
					95% Confidence Interval of the Difference	
				Mean		
	T	df	Sig. (2-tailed)	Difference	Lower	Upper
KAP Analysis	.533	102	.595	.86408	-2.3509	4.0791

Table No.4.35 presents the results of one sample t-test that shows the probability value is higher than 0.05. That means there is a difference in assumed means from population and actual KAP analysis means. As this test is used to compare means difference that concluded as Null hypothesis is rejected and alternative is accepted. That means there is a difference in means. The statistical way to mention it is as below: t (df) = 54.366, p = 0.595.

Conclusion

Based on the results it was concluded that the majority of respondents were willing to learn electronically. It was also observed that the pandemic situation really had a positive impact on the learning behavior of university students because most of them were used to effectively learning by themselves. Online learning was also a challenge for minority of the students because of the limited access to the internet and lack of technical knowledge. The respondent's knowledge, attitude practice of online learning reveals that the respondents perceive online learning as very helpful in the COVID-19 pandemic.

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