Research Article

Online learning amid the COVID-19 pandemic: Students' perspectives

Muhammad Adnan[1] and Kainat Anwar[1]

[1]Department of Mass Communication, National University of Sciences & Technology, Pakistan.

Correspondences hould be addressed to Muhammad Adnan   iD   madnan.mmc19s3h@student.nust.edu.pk

This research study examines the attitudes of Pakistani higher education students towards compulsory digital and distance learning university courses amid Coronavirus (COVID-19). Undergraduate and postgraduate were surveyed to find their perspectives about online education in Pakistan. The findings of the study highlighted that online learning cannot produce desired results in underdeveloped countries like Pakistan, where a vast majority of students are unable to access the internet due to technical as well as monetary issues. The lack of face-to-face interaction with the instructor, response time and absence of traditional classroom socialization were among some other issues highlighted by higher education students.

Keywords: COVID-19, online learning, higher education, Pakistan, internet issues

I. Introduction

The World Health Organization (WHO) declared COVID-19 as a global public health emergency of international concern on 30th January 2020 as well as a pandemic on 11th March 2020 (Cucinotta & Vanelli, 2020). The first two cases of COVID-19 in Pakistan were confirmed by the Federal Health Ministry in Islamabad and Karachi on 26th February 2020 (Saqlain, Munir, Ahmed, Tahir, & Kamran, 2020). As of 19th June 2020, the total numbers of cases of COVID-19 in the country were 165,062 with 3,229 deaths (Covid-19 Stats, 2020). In reaction to the COVID-19, Pakistani authorities closed all educational institutions across the country on 13th March 2020 (Ali, 2020). As per the orders given by the Federal Government of Pakistan, the Higher Education Commission (HEC) issued directives to higher education institutions to start preparing for distance learning (DL) modes, reschedule the ongoing exams and assist their students online regularly until the COVID19 crisis remains unchanged (Ali, 2020)

Certainly, like many other aspects of everyday life, COVID-19 has had a serious impact on students, instructors, and educational organizations around the globe (Mailizar, Almanthari, Maulina, & Bruce, 2020). The pandemic caused schools, colleges and universities across the globe to shut down their campuses so that students could follow social distancing measures (Toquero, 2020). That being said, moving smoothly from an environment of conventional education to distance and virtual learning could not happen overnight. This rapid transformation is linked to various obstacles and challenges at this point (Crawford, Butler-Henderson, Rudolph, & Glowatz, 2020). But because nobody knows when this pandemic will disappear fully, educational institutions across the globe decided to use the already available technical resources to create online learning material for students of all academic fields (Kaur, 2020).

This was not the first time when conventional education activities were suspended. SARS coronavirus (SARS-CoV) also negatively impacted conventional education activities of a large number of countries around the globe and not just SARS- CoV but H1N1 Flu outbreak also negatively impacted education activities in 2009 (Cauchemez et al., 2014). Similarly, Covid-19 compelled academic experts to reconsider the traditional way of face to face learning and they started considering distance learning as a feasible option to fill the classroom void for duration of three to four months, thus reducing the risk of infection for students before conventional activities are resumed (Kaur, 2020). Online courses are provided by hundreds of institutions but two problems exist. First, from a macro viewpoint, very little is established regarding the effects and efficacy of online education (McPherson & Bacow, 2015). Second, the capacity to successfully teach digitally is likely to differ

based on the wide range of learning goals that guide our instructional and educational priorities (Liguori & Winkler, 2020).

Online learning can be effective in digitally advanced countries (Basilaia & Kvavadze (2020) which is why in Pakistan it is ineffective. However, in Pakistan, a significant deal of learning and teaching, as well as administrative activities of academic institutions are handled manually (Salam, Jianqiu, Pathan, & Lei, 2017). Lack of access to fast, affordable and reliable internet connections hinders the process of online learning especially for those who are living in rural as well as marginalized communities of Pakistan (Wains & Mahmood, 2008). Students who access the internet through smartphones are unable to take advantage of online learning because a significant amount of online content is not accessible via smartphones.

The unexpected change to online learning became a measure of organizational agility (Wu, 2020), with several academic institutions primarily focused on the transfer of educational content to the digital world and not specifically on online teaching and delivery methods. Nonetheless, it was a reminder of the lack of resources in academic institutions and the social marginalization of students, where insufficient access and availability of the internet and the lack of latest technology affected organizational responsiveness and students' capacity to participate in digital learning (Zhong, 2020). Lack of proper interaction with instructors is another major concern associated with online learning. Additionally, concerns regarding any content of the online course are usually discussed with the relevant course instructor by e-mail, which requires response time (Zhong, 2020). Virtual classes cannot be of interest to students who are tactile learners. Conventional classroom socialization is another major missing in online learning. Students only communicate with their fellows digitally and never see fellow students in person, and thus the real-time sharing of ideas, knowledge and information is partially missing from the digital learning world (Britt, 2006).

The current circumstances are unique; unlike normal digital learning situations, as some might argue, it is more accurately crisis learning (Pace, Pettit, & Barker, 2020). There is a stronger need for academic organizations to improve their curriculum and the usage of new instructional methods and strategies should be of utmost significance (Toquero, 2020). Educational institutions are also the focal points of social activities and interactions. If educational activities are suspended, many children and young people will miss social interaction based activities that are necessary for growth and learning. Students should continue to learn, particularly underprivileged children and young adults, both of whom are impacted by schools suspension, so this is a huge issue to be tackled. While short term closure of academic institutions as a consequence of emergencies is not recent, the global scope and pace of present-day educational instability are sadly unparalleled and, if sustained, may inflict psychological distress and misery at various levels (McCarthy, 2020).

Even though we know that ICT adoption is unavoidable in higher education, but due to the limited budget for higher education in Pakistan (Abbas, Ahmed, Khalid, & Yasmeen, 2017), no special funds are allocated for latest technologies and ICT initiatives in the education sector (Kayani, 2005). Just after the closure of educational institutions across the country, all licensed higher education institutions in Pakistan were told to use e-learning and management systems to conduct online classes (Ali, 2020). Majority of educational institutions were forced to suspend their online classes for a limited time due to the unavailability of learning and management systems. Only a few higher-ranked universities of the country were able to start their online classes immediately.

Majority of Pakistan's based research on e-learning challenges and opportunities adoption has been conducted in a normal situation and context (e.g., Ali & Ahmad, 2011; Bukhsh, 2007; Farid et al., 2015; Yousuf, 2007), where e-learning was a non-compulsory method to amplify the learning and teaching cycle and interactive technology was utilized by very few national academic institutions. Some Pakistani academic studies undertaken in the past have also documented promising findings of distance learning. Ali and Ahmad (2011), concluded that, just like conventional learning, there is satisfactory interaction in distance education among instructors and learners, the content is well-designed and up-to-date, the instructors are committed, and trained with the skills and possess the required knowledge. However, the present-day situation is entirely different from the normal distance learning programs, where all higher education institutions across Pakistan are forced to implement distance learning methodologies regardless of limited resources and funds.

A few recent research studies have explored the challenges and opportunities associated with e-learning during pandemics (Mailizar et al., 2020). Researchers are trying to explore the advantages and challenges of recent e-learning initiatives from the perspective of various stakeholders. The study conducted by Mailizar et al., (2020), suggested that students' voices are important on this issue, therefore, future research should investigate students' opinions regarding online learning to examine the challenges faced by students. More research is needed to explore the challenges of utilizing e-learning that hinders students from achieving their learning goals. Basilaia and Kvavadze (2020) also suggested that the quality of learning online should be investigated in future research studies.

1.1. The Aim

This study aims to determine:

(1) To know the effectiveness of online learning in Pakistan from higher education students' perspectives

(2) To highlight the challenges and obstacles of online learning faced by higher education students in Pakistan

2. Method

2.1. Sample

The key purpose of this research study was to find the general attitudes of Pakistani higher education students towards compulsory digital and distance learning university courses amid Coronavirus (COVID-19). The sample of the study included 126 higher education students: 84 female and 42 male participants. The participants included undergraduate (N = 64, 50.8%) as well as postgraduate (N = 62, 49.2%) students. All the students participated in the survey were currently attending online courses or included those who finished their last semester virtually.

2.2. Survey

An online survey technique was used to gather data about the attitudes of Pakistani higher education students regarding online teaching. A modified version of Bernard, Brauer, Abrami, and Surkes (2004) 38-item questionnaire was used to assess the effectiveness of online learning. A pilot test of the survey was administered to students of National University of Sciences & Technology (NUST), Pakistan. Appropriate revisions were made based on their comments and suggestions. Necessary modifications were made based on their ideas and feedback.

2.3. Data Analysis

The data obtained through an online survey were analyzed by frequency of common students' responses and were stated in percentages. Demographic data were obtained using the Likert scale and is reported in percentage of students' responses.

3. Results

Undergraduate students represented 58.8% (n = 64) of study sample, whereas 49.2% (n = 62) were postgraduate students. Of the total 126 students, 7.9% (n = 10) were between the age range of 16-20, whereas 92.1% (n = 116) were between the age range of 21-25. 73% (n = 92) reported that they have proper access to the internet, 9.5% reported no proper access, while 17.5% (n = 22) reported that they have limited access to the internet through a mobile phone or handheld device.

As shown in Table 1, 51.6% students reported that signals availability/strength are the major problems behind limited internet access, 11.1% consider internet services too expensive for regular online connectivity, 34.9% reported other reasons for limited internet access. In examining whether students feel qualified to use a computer/laptop for online learning, 71.4% of students feel that they are well qualified to use computer/laptop for online learning. 61.1% of students reported that they are comfortable communicating digitally, while 11.1% feel that they are face problems in digital communication.

While responding to the question whether online and conventional learning is same, 67.5% reported that online learning is way different from conventional learning mode, while 18.3% feel that there is little difference between online and conventional learning. Only 10.3% of students feel that online learning is more motivating than conventional learning, while the majority of the students (71.4%) feel voted against the notion that online learning is more motivating than conventional learning. When exploring the opinion of higher education students about the completion of entire university courses through the internet without difficulty, 50.8% students reported that it is not possible to effectively complete entire university courses through online means, while 18.3% reported that it is possible to complete an entire course through distance learning. 42.9% of students reported that they feel difficulties while doing group projects or assignments through distance education, while 34.1% of students feel that group projects and assignments can be completed digitally. While reporting about the effectiveness of face-to-face interaction, 78.6% of students feel that face-to-face contact with an instructor is necessary for learning and distance learning.

Table 1
Students Attitudes Regarding Online Learning

Attitudes	No. (%)*
The main reason for limited Internet access	
Cost/Too Expensive	14 (11.1)
Signals availability/strength Problems	65 (51.6)
Don't know how to use it	3 (2.4)
Other	44 (34.9)
I feel qualified to use a computer/laptop	
Agree	90 (71.4)
Somewhat Agree	34 (27)
Disagree	2 (1.6)
I am comfortable communicating electronically	
Agree	77 (61.1)
Somewhat Agree	35 (27.8)
Disagree	14 (11.1)
No difference between online and conventional learning	
Agree	17 (13.5)
Somewhat Agree	24 (19)
Disagree	85 (67.5)
Online learning is more motivating than conventional learning	
Agree	13 (10.3)
Somewhat Agree	23 (18.3)
Disagree	90 (71.4)
Complete university courses can be completed effectively through internet	
Agree	23 (18.3)
Somewhat Agree	39 (31)
Disagree	64 (50.8)
It is easy to complete group projects/assignments digitally	
Agree	43 (34.1)
Somewhat Agree	29 (23)
Disagree	54 (42.9)
Face-to-face contact with the instructor is necessary for learning	
Agree	99 (78.6)
Somewhat Agree	16 (12.7)
Disagree	11 (8.7)
*Percentages based on the number of respondents answering the question.	

4. Discussion

Majority of the surveyed higher education students have reservations about online/digital learning. Lack of access to internet facilities, lack of proper interaction and contact with students and instructors and ineffective technology were among the major challenges faced by higher education students of Pakistan. The sudden shift from traditional classrooms and face-to-face learning to online learning has resulted in a completely different learning experience for students. Most students do not have access to high speed or reliable internet services and are thus struggling with online learning. Students from underdeveloped areas of former Fata, Balochistan, Chitral and Gilgit-Baltistan are deprived of internet facilities (Ahmad, 2020).

Owing to the limited resources of educational institutions, only several institutions were able to introduce effective online classes during the initial months of COVID-19. The research also indicated additional challenges faced by students like lack of campus socialization, group study issues and instructors response time. Survey participants also reported that traditional classroom learning was more effective as compared to online learning or distance education. Thus it can be concluded that online learning cannot produce effective results in underdeveloped countries like Pakistan, where a vast majority of students are unable to access the internet due to technical and monetary issues.

One of the less discussed areas of online education is the need of motivation for online learning. In traditional classes, students usually actively participate in academic activities due to their face-to-face engagement with instructor and class fellows. 71.4% of students reported that learning in the conventional classroom was more motivating than distance learning. As indicated by the majority of the students, they can manage their study time effectively online and can easily complete assignments in time but complete courses cannot be completed online.

To ensure an effective and productive online program, students must not only know how to cope up with the fast-paced online classes but they also need to have a sound computer and technological skills to learn from online lectures. For such students managing study time effectively is possible and they do not face any difficulty but when it comes to doing group assignments without face to face discussion with the group members, they face a lot of problems as reposted by 42.9% of respondents.

5. Conclusion

COVID-19 impacted the conventional learning method of academic institutions across the world. The administrations of schools, colleges and universities opted for online lectures/classes as an alternative way to resume education. Although online learning is proving helpful in safeguarding students' and faculty's health amid COVID-19 pandemic, however, it is not as effective as conventional learning. Online learning cannot produce desired results in underdeveloped countries like Pakistan, where a vast majority of students are unable to access the internet due to technical as well as monetary issues. This study addressed the effectiveness of online versus traditional classes especially for students of higher education. As per this study, 73% of students had proper internet facility and 71.4% students felt that they were well qualified to use a computer/laptop for online classes even then 78.6% respondents felt that conventional classes were more effective as compared to online learning.

Apart from technical and monetary issues students also reported a few other difficulties like lack of interaction with the instructor, response time and absence of traditional classroom socialization. The lack of on-campus socialization has caused difficulties for students to do group projects in distance learning mode as reported by 42.9% of students. The result of this study also indicated that educational organizations need to improve their curriculum and design appropriate content for online lectures. Due to the above-mentioned difficulties, 50.8 % of students voted against the possibility of effectively completing entire courses through online learning. While comparing the effectiveness of conventional and online learning, 78.6% of students felt that face to face contact with their instructor was important for effective learning which is missing in distance learning mode. As per the instructions of WHO, we now have to adjust our daily activities with COVID-19 for some time at least, which means that educational institutions have to design appropriate and effective content, arrange an effective

delivery system and provide digital literacy training to their current faculty so better learning outcomes can be achieved.

6. Limitations

Small sample size and non-random selection were some of the major limitations of this research study. The non-random selection limits the ability of generalization of the results. Future researches should either increase the sample size or use random selection techniques. As the results are only based on students' perspectives, the inclusion of faculty opinions in future studies might help in understating the issues faced by instructors regarding online education. The conclusions of the study are mainly based on the opinions of students higher-ranked universities of Pakistan, analyzing the opinions of low ranked universities with less access to the latest digital technologies might produce more critical results.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

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