

EXPLORING THE CHALLENGES FOR ONLINE EDUCATION DURING COVID-19 PANDEMIC: A CASE STUDY FROM A UNIVERSITY IN KARACHI

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ABSTRACT

The current study aimed to explore the challenges faced by university students in Karachi while receiving online education during the COVID-19 pandemic. The study employed qualitative research methodology to gain the in-depth knowledge of the issue. Individual interviews of university students were conducted to collect data. The findings of the study revealed that difficulties in time management, lack of interaction with teachers, exertion in maintaining focus, and technical barriers were the major challenges faced by students while receiving online education. Additionally, the students reported feeling physically exhausted and missing the classroom setting. Moreover, students who come from isolated villages with poor internet access had trouble following online lectures. The study suggests the need for universities, governments and NGOs to provide support and resources to help students overcome these challenges and ensure the accessible and effective online education for all students.

Keywords: COVID-19, pandemic, online education, smart classrooms digital literacy.

INTRODUCTION

COVID-19 pandemic has shaken economics, politics, social, cultural and religious practices of the people across the globe. In addition to being a worry for worldwide public health, the pandemic also affected education systems at all levels. Everywhere on the surface and even deeper, we can see cracks. The break in the global learning systems of more than a billion students is one of the more significant flaws. According to UNESCO, the COVID-19 pandemic has affected about 1.6 billion pupils in more than 190 countries and created the worst disruptions to educational systems in history. 94% of the student population altogether in the world and up to 99% of those in low- and middle-income countries have been affected by school closures

(Nations, 2020). About 23.8 million more children and teenagers will leave school because of the pandemic's effects on the economy alone (Sadeque, 2022).

When the pandemic of SARS COVID-19 struck the world and students were unable to cope with it, most institutions struggled to maintain high standards of education. To accommodate the students, educators around the world were forced to adapt to the challenge and change their instructional approach. The moment had come for a quick adjustment. As a result, the educationist quickly turned the situation around and headed in the direction of online education. However, offering or receiving education was not without its difficulties for both students and institutions. Following are some problems faced by students who take online classes:

- a. Electricity problem
- b. Voice Distortion
- c. Time wastage
- d. Poor Assessment of knowledge
- e. less confident student
- f. Poor network connection

There is a dire need to seek the challenges associated with online teaching and learning mode that was adapted by numerous organizations during the pandemic.

LITERATURE REVIEW

Ever since pandemic struck the world, the education sector had to deal with grave changes that needed to be implemented in order to keep providing education to the population. The World Health Organization (WHO) declared as a pandemic when it had spread to 150+ countries on March 11, 2020 (Sadeque, 2022). With the abruptly changing world, the education system had to keep up the pace and bring adequate changes to combat the situation which forced educators worldwide to shift to an online mode of teaching overnight (Dhawan, 2020).

Globally, the need and availability of education at every level has significantly risen during the past 50 years (Kimmons & Irvine, 2021). As highlighted earlier, pandemic was the biggest obstacle faced by these

expanding national education systems. As soon as the virus was declared a pandemic, multiple countries, including Pakistan, enforced complete lockdowns to deal with the disease spreading. Since education had come to a halt, institutions had to stop offering in-person education and had to switch to online mode of learning overnight.

This sudden switch was a novel approach/solution to the circumstances which troubled all, students, teachers, and institutions. Irrespective of the level, program and course of study, students' lives were greatly disturbed by the pandemic which not only resulted in sheer confusion among parents and students but also caused students to suffer from anxiety. All related people were worried and concerned about when things will get back to "normal" and the adaptations they would have to make meanwhile. It was considered the institutions' responsibility to communicate with parents and students and place the highest focus on reassuring them regarding the implementation and adjustments necessary for the updated mode of teaching.

Education

Unlike other forms of socialization, education is the field of study focused on how to teach and learn in formal settings such as classrooms. The educational experience becomes less connected to real-life situations, less about hands-on learning in the context of the working world, and more about abstract concepts, as society becomes increasingly complex and schools become more institutionalized. (Naka, 2022).

Higher Education in Pakistan

Higher education is any education completed after secondary institutions (i.e., school and college) that gets awarded as a degree, diploma or higher education certificate. One of the most part of higher education are universities (Khan, M., 2021). Currently, there are 174 universities recognized and affiliated with Higher Education Commission (HEC) Pakistan, including 85 public sector universities. A total of 10 universities in Pakistan are featured in QS University Rankings: Asia 2016, that includes top 350 universities in Asia. Moreover, 6 universities also lie in QS World University Rankings of 2016. (Top Universities, 2022).

Online Classes

As the number and diversity of online course offerings and degree programs continue to expand, it has become clear that online learning plays

a crucial role in higher education. Students now have access to a broad range of online options across various subjects and disciplines, including standalone courses and full online undergraduate, certificate, and graduate programs. With so many options available, it can be difficult for students to determine which one aligns best with their academic and professional goals. According to Wang Tao, Vice President of Tencent Cloud and Tencent Education, “online education is poised to become an integral component of school education as the integration of information technology in education continues to accelerate.” (Online Education, 2022).

Online Tools

To participate in online learning and complete coursework, students must have access to the necessary equipment. Online programs typically use digital platforms to deliver lectures and course materials over the internet. While the technology requirements may vary depending on the program, a reliable internet connection and a functioning laptop or desktop computer are generally sufficient. (Online Education, 2022).

Online Learning Accreditation

Any kind of degree programs should take institutional accreditation, which is managed by seven regional bodies, into account. It provides reassurance that the institution providing the program complies with or exceeds industry norms for integrity and quality in higher education (Online Education, 2022).

Distant Education Accrediting Commission (DEAC)

A private, nonprofit organization called the Distant Education Accrediting Commission (DEAC) was established in 1926 and serves as an institutional accreditor of distance education institutions. All distance learning programs offered by an institution are covered by DEAC certification, which is available to institutions awarding professional doctoral degrees as well as secondary schools. All states in the United States as well as foreign sites are included in the DEAC’s geographic region of accreditation activities. All people interested in distant education accreditation can find information on our website, including students, faculty, administrators, and the general public (DEAC, 2022).

Asynchronous Classrooms

One of the key adjustments for educators used to teaching in-person classes

is to incorporate asynchronous learning. This method allows for flexibility in learning and teaching, as participants do not have to communicate in real-time. Asynchronous learning can be done in digital formats, and allows teachers to prepare learning materials at their own pace and for students to access them on their own schedule. It also enables students to balance their home and study responsibilities. The best way to implement asynchronous learning is through digital tools such as wikis, blogs, and email, where teachers can monitor student participation and schedule virtual appointments for students with specific needs or questions. (Daniel, 2020).

Synchronous online education

Synchronous online learning (SOL) gives teachers the chance to communicate with their students in real time even when they are physically separated (Georgousis , Savelidi, Savelides, Holokolos, & Drinia, 2021). In synchronous learning, students are required to login to video conferencing applications (e.g., Zoom, Google Meet), and participate in the class at the same time. Students virtually attend lectures and engage with the instructor along with their classmates real-time, similar to conventional in-person classes. Assignments and tasks are given to students by their teachers, which they are required to turn in in a given time-frame (Scheiderer, 2022).

Conventional mode of education in Pakistan

Due to the current situation, learning programs and courses are being delivered online instead of traditional classroom settings. Institutions have shifted to virtual environments from traditional in-person teaching methods to foster learning. The traditional education system is a means for skill development that can enhance social awareness and skills.

In Pakistan, HEC is committed to ensuring the success of e-learning in the wake of the COVID-19 pandemic. Only the Open University has made some prior efforts in this regard, and some universities have already started offering online courses. Slack-tie students are using the summer break to get ready for the switch to online learning.

Since these closures affect 90% of the world's population, UNESCO shared recommendations for uninterrupted online learning during the lockdown period (UNESCO, 2022). However, critics argue that online teaching is difficult because of the dire economic conditions in middle-income countries, forgetting that Facebook is widely used in Pakistan (Mumtaz & Saqulain, 2021).

Pakistan's online education landscape

According to the Human Development Report 2019, Pakistan is ranked 152 out of 189 countries on the Human Development Index (HDI). Regrettably, Pakistan has not seen growth in key education indicators such as literacy rate, overall enrollment ratio, or education investment, unlike other countries in the region. The literacy rate in Pakistan, at 57%, is significantly lower than that of neighboring countries. Given that primary education lays the foundation for learning, the high dropout rate of 22.7% (third highest in the region, behind Bangladesh and Nepal) is a cause for concern. Despite this, Pakistan has one of the most extensive higher education systems in the world, including a growing online education sector offering training for competitive exams, courses to improve technical proficiency, and other non-academic subjects. (Rehman, 2020).

COVID-19

The COVID-19 pandemic has presented a significant challenge to the national education systems that were expanding. Many governments have ordered universities to stop offering in-person instruction to most of their students and instead shift to online learning and virtual education almost immediately. Over the past 50 years, access to education at all levels has increased globally. However, the COVID-19 pandemic has presented a significant obstacle for these expanding education systems. Many governments have mandated that universities shift to online learning and virtual education, disrupting the education of many students. Depending on their level of study, course of study, and stage of their program, students are experiencing anxiety and uncertainty. Clear communication and information from institutions about replacement exams and changing admissions procedures can help alleviate these concerns. Institutions should communicate frequently with parents and students, and teachers and school counselors can provide additional support for students in low-income environments. Additionally, support services and tools outside of the educational system can help students manage emotional and psychological difficulties. Teachers and school counselors may be better able to allay students' fears in impoverished environments than parents. However, everyone has access to support services and tools outside of the educational system that are focused on managing emotional and psychological difficulties (Daniel, 2020).

Pandemic

The World Health Organization declared it as a pandemic on 11th March

2020 (Cucinotta & Vanelli, 2020). This situation challenged the education system across the world and forced educators to shift to an online mode of teaching overnight (Dhawan, 2020). According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), 90 percent of the global student population has been affected by the pandemic, with 800 million of them being girls.

Education and COVID 19

Academic institutions are forced to deal with the growing shadow of digital infrastructure, bandwidth, and licensed software applications due to the potential of viral transmission. Therefore, a revitalized HEC began educating and training faculty and staff on the use of online modalities at all levels, from undergraduate to doctoral, by creating a supportive environment (Mumtaz & Saqulain, 2021). The COVID-19 pandemic has forced all schools and institutions worldwide to temporarily close to prevent the spread of the virus. As a result, remote learning has become as prevalent as traditional classroom instruction in 2020. Online learning is delivered through the internet, and while it can offer cost-saving benefits such as reducing travel expenses, it also has its drawbacks. It's important that both teachers and students have the necessary technological literacy to access and participate in online courses and navigate a computer.

The Success of Online Distance Education

Paul VanPortfliet and Michael Anderson state that educators have traditionally been skeptical about the ability to achieve similar results as traditional in-person instruction through online distance learning. They note that studies have shown that academic achievement and retention tend to be lower for students in distance learning programs compared to those in traditional classroom settings. The perceived ineffectiveness of online learning has been attributed in part to the lack of interaction between students, their teachers, and their peers in the online environment. (VanPortfliet & Anderson, 2013).

Despite these challenges, some studies have found that outcomes between online and traditional schools are comparable. For example, a meta-analysis by Cathy Cavanaugh and colleagues, published in 2004, found no significant difference in outcomes between online and traditional schools. The analysis included data from 14 K-12 web-delivered distance learning programs

between 1999 and 2004 (Cavanaugh, Gillan, Kromrey, Hess, & Blomeyer, 2004).

Why is the sense of presence crucial in the online setting? When instructors actively engage and interact with students in a traditional classroom setting, the class forms a group dynamic and creates intellectual and personal connections. The same type of community-building can occur in the online environment when instructors consistently maintain a strong presence.

The research on virtual learning highlights the importance of maintaining a connection between students and teachers. Without a “live” component, this connection may be lost. While there may be psychological benefits from knowing that the teacher is available, it’s not necessary for every session to include a video meeting. Instead, regular online interactions, such as face-to-face chats or discussion threads that remain open throughout the class, can serve the same purpose. However, if video conferencing options are available, students should be encouraged to use them rather than solely relying on email communication.

Virtual schooling has the potential to provide many benefits such as expanding educational access, high-quality learning opportunities, improved student outcomes and skills, and greater educational choice, as well as administrative efficiency. However, research supporting these claims is limited. The challenges associated with virtual schooling include the fact that the students who tend to be successful in online learning environments are typically those who have an independent approach to learning, are highly motivated by intrinsic factors, and have strong time management, literacy, and technology skills. These characteristics are typically associated with adult learners. This is because research and practice of distance education has been mainly focused on adult learners. (Barbour & Reeves, 2009)

Challenges associated with Online Education

Accessibility

Barriers to technology access can be prevalent in developing nations, with as many as 80% of students lacking access to computers or the internet. Rural students in these nations often require affordable and durable equipment to participate in online education. The impact of lock-downs on the poor and middle classes in Pakistan has been significant, with many people struggling to access basic necessities, including internet and devices. Unfortunately, the

government has not prioritized the educational sector, rather than promoting an inclusive virtual learning environment, they have left vulnerable populations behind. The shift to online education has also led to a change in the relationship between teachers and students, as professors may not be able to provide the same level of individual attention and support that is needed in this format (Mumtaz & Saqulain, 2021).

Furthermore, students reported that online learning was not meeting their needs. The increased demand for teachers to provide videos, Power Point presentations, and electronic notes added to their workload. Limited mobile data and a lack of high-speed internet connection also became an issue. Both teachers and students reported feeling physically and mentally exhausted from the online format, and longing for the traditional classroom setting. Additionally, students from isolated villages with poor internet access had difficulties keeping up with online lectures, and found it hard to maintain focus and attention during the classes (Khan, Kamal, Illiyan, & Asif, 2021).

Technologically advanced learning environments offer students the chance to develop their self-regulation skills and for some, it can provide an opportunity to apply those skills to acquire knowledge. (Bernacki, Aguilar, & Byrnes, 2011).

Digital Literacy

Another barrier in technology access and improvement is lack of digital literacy. In a developing country like Pakistan where most of the population accounts to youngsters, it is upsetting to know that the rate of digital literacy is alarmingly low. A study conducted by GSMA states that approximately 40% people who own a mobile phone do not have mobile internet and difficulty in operating their handsets (Observer Pakistan, 2020). Hence, for a country that has such lower digital literacy, it is unlikely for teachers and students to have a quick grip and switch to online teaching and learning easily.

Technological Literacy

Technological Literacy is the ability to work with the latest digital tools in a team or independently (Khan U. Z., 2020). This, along with the familiarity with digital equipment, is a big challenge for particularly the teachers. In a developing country like Pakistan, training in technologies is not provided to teachers until the past decade. Hence, the staff who may have much more experience in the education field, suddenly started having difficulty learning technology.

Statement of the Problem

The learning process is drastically different for students when they go from traditional classrooms and in-person teacher instruction to computer-based training in a virtual classroom. Considering the underdeveloped and developing countries, many students may not have access to the high bandwidth or reliable internet connection required by online courses, which may cause them to fall behind in their virtual lessons. Still, the absence of computer education is a significant issue for many students in countries like Pakistan. Due to the substantial time commitment and effort required for online courses, time management may also be difficult for university students. Venkataraman (2020) expresses that Online learners are lacking in effective communication abilities. Considering all the previous studies and observations, there is a dire need to seek the challenges university students are facing in online learning.

Research Objective

The current study focused to explore the challenges university students are facing while attending online classes and to suggest the ways to reduce the inconvenience.

Research Question

What are the challenges students face while taking online classes at university?

METHOD

Research Design

The present study employed a qualitative research design to seek the in-depth knowledge of the issue. The study focused only the university students in Karachi who have been attending online classes after the beginning of the pandemic. For data collection, detailed individual interviews were conducted through semi-structured questionnaire. The interviews were recorded and transcribed. The data were analyzed through coding; themes and sub themes emerged and led for the conclusion and recommendations.

Population

The group of people about whom you want to draw conclusions is known as the population. The specific group from which you collect data is called a sample. The sample is always smaller in size compared to the

entire population. For the current study, university students in Karachi with experience of online classes were the population in this study.

Sampling

Sampling is the process of choosing the group from which you will actually collect data for your study. Purposive and convenience sampling were employed for collecting in-depth knowledge of the issue. The students from a private university of Karachi with the experience of online classes were randomly chosen for the study. The interviews started after the participants signed the consent forms.

Sample Size

The sample size refers to the number of individuals or observations included in a study. 10 students randomly selected to be the part of this study who showed their consent for the individual interviews.

Research Tool

A semi-structured questionnaire was prepared for the detailed individual interviews. Twelve items were prepared considering the literature review and then the expert opinions were also taken from two experienced professors. The items were open-ended which covered the issues related to time management, teachers' competence and effectiveness for online teaching, fatigue in taking online sessions, stress due to pandemic, the effects of online sessions on pupils' physical and mental conditions, the sudden use of modern technology for teaching and learning process specifically evaluation and assessment, the effect of pandemic on students' ability to handle their academic affairs, the problems related to connectivity, audio-visual distortion or any other technical difficulties and factors to choose/not to choose online educational programs.

Data Collection

The participants consent was taken before the beginning of interview process, Data were collected through individual interviews which span approximately 70 minutes long for each participant. Data were recorded and transcribed for taking out themes and sub-themes.

Data Analysis

Data analysis is the systematic application of logical and/or statistical techniques to describe, summarize, and evaluate data. Category construction

(Merriam, 1998) was utilized in the present study for the purposes of organizing and analyzing the interview data. This is a technique in which the researcher, after reading, reviewing, and re-reading the data, creates categories of data that are then used to sort, analyze, and compare.

FINDINGS

As discussed earlier, the challenges of online education for university students in Karachi were explored through qualitative analysis of data collected from university students. The data was analyzed using content analysis and themes were identified. The main challenges identified were:

Access to Technology and Internet

Many students in Karachi face challenges in accessing reliable technology and internet, which is essential for online learning. These challenges are particularly pronounced in low-income areas and rural areas. Irrespective of online learning being synchronous or asynchronous, access to adequate technology and internet is an essential requirement without which online learning is nearly impossible. Some students reported experiencing voice distortion during online classes, technical difficulties, such as internet connectivity issues and difficulty using the technology required for online classes, which made it difficult to communicate and understand the material.

Limited Interaction and Engagement

Online education often lacks the face-to-face interaction and engagement that is present in traditional classroom settings. This can make it difficult for students to stay motivated and engaged in their studies. During the data collection, it was observed that lack of interaction made it difficult for students to achieve proper understanding of the taught concepts since a communication barrier was felt. Students also had reservations on how they felt the class to be dull due to minimal interaction and that too through a screen.

Difficulty in Understanding the Material

The aforementioned challenges faced by the students eventually led to difficulty in understanding the material / lecture delivered. As per the students' responses, online education can be challenging for students who have difficulty understanding the material or require more personal attention from the instructor. This can lead to a lack of understanding and poor performance.

Lecture Preparation and Delivery

A majority of students felt that their teachers were well-prepared for online lectures, but some students reported that some teachers were not as well-prepared as others, which led to confusion and difficulty understanding the material. Similarly, most students reported that teachers were available during the scheduled times, but some students reported that teachers were not always able to respond in a timely manner, leading to confusion and frustration.

Limited Access to Resources and Mismanagement:

Online education can also be challenging for students who have limited access to resources, such as textbooks and other materials. This can lead to a lack of understanding and poor performance. Some students reported experiencing mismanagement and lack of organization when learning online, such as confusion over assignment deadlines and poor communication from teachers.

Time Management

Online education demands a high level of self-discipline and time management. Many students find it difficult to balance their studies with their personal and professional responsibilities.

Lack of social interaction

According to the responses and analysis, online education can be isolating for students, as it does not provide the same opportunities for social interaction as traditional classroom settings. This can lead to feelings of loneliness and disconnection. The students felt the pandemic condition increased their stress and anxiety.

Health Issues

One of the most highlighted responses was that of health issues, students reported experiencing eye strain and fatigue from prolonged use of screens, which can negatively impact eyesight over time. Others also said that talking classes seated at one place only with inaccurate postures caused them to stay lazy and have issues like backpain which were often avoided in physical classes due to constant or often physical activity.

Overall, it can be concluded that online education presents a number

of challenges for university students in Karachi. These challenges are particularly pronounced for students from low-income areas and rural areas, students with limited access to technology and internet and students with additional support needs. The university or higher education commission needs to address these challenges by providing students with the necessary resources and support to succeed in an online learning environment along with devising plans that would cater to all the aforementioned issues in order to avoid inconvenience and hinderance in the process of learning.

RECOMMENDATIONS

As a results of the qualitative analysis on the challenges of online education for university students in Karachi, some recommendations can be incorporated by the respective universities, higher education commission and/or the relevant competent authorities to improve the online learning experience for students.

The institutions should work to provide students with reliable technology and internet access, particularly for students from low-income areas and rural areas. This could include providing laptops or other devices, as well as subsidies for internet access. As a support for students who have difficulty understanding the material or require more personal attention from the instructor, extra help sessions could highly benefit them along with increased access to resources, such as textbooks and other materials, to ensure that all students have the tools they need to succeed.

The relevant authorities should also cater to the issues faced by the students by conducting regular check-ins with students to understand how they are coping with online learning, and provide support accordingly. Use of diverse methods of assessment to evaluate student's understanding and progress, to be more inclusive and fairer along with providing regular feedback to students on their performance, would help them understand their strengths and weaknesses and to improve their sense of inclusiveness amidst switching to this new mode of learning. To fully ensure proper learning activity, its efficiency and student participation among the online class, the university should monitor online classes i.e., the sound and video quality is good and that the teachers are conducting the class well.

Lastly, based on the students' responses and its analysis, it is highly recommended that the university should be flexible and make necessary

adjustments to the online learning experience to meet the needs of the students, along with encouraging students to take care of their physical and mental well-being during the online learning experience by providing resources and guidance for self-care. It is important for teachers, administration and competent authorities to realize how difficult and different it may be for students to switch from conventional mode to learning to the online teaching and learning methodology, which brings its own challenges (as discussed above) along with the technological advancements and improvements around the globe.

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