



Sustainability of Higher Education Through Distance and Online Learning during Global Educational Lockdown in Pakistan: A Case Study of Women University Multan

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ABSTRACT

In light of the COVID-19 Pandemic and its primary impact on day-to-day activities worldwide, numerous regulations required modification to combat this Pandemic. The lockdown began in Wuhan, China, and spread to other parts of the world, affecting the economy, education, entertainment, and government policies. This paper assesses the sustainability of higher education through distance and online learning on global educational lockdown at Women University Multan, Pakistan. A sample of 320 students from each department of Women University Multan was taken through a stratified sampling technique. A questionnaire with 18 statements was developed on Google Forms, and data was collected from the University students. The findings revealed that most students started taking online lectures using live and recorded classes. Zoom was the most frequently used platform for providing support to students, and the majority of them rated their interactions as moderate, while others rated them as excellent or good. Regarding preferences, many students preferred combining traditional learning with online learning because they were dissatisfied with their experience. The government and educational institutions need to work towards creating a sustainable education system that can adapt to changing circumstances and cater to the needs of all learners.

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1. Introduction

Higher Education (HE) in the 21st century is confronted with numerous obstacles. In today's world, Higher Education Institutions (HEIs) are facing ever-increasing demands. The most basic issue has been the expansion of students' enlistsments in essential, auxiliary, and tertiary training. Higher education institutions are not increasing sufficiently to provide residential education to all enrollments. Consequently, alternatives to residential education must be investigated and implemented specifically for higher education (Gaba, Bhushan, & Rao, 2021). As a result, distance learning has proven to be the best option for providing students with higher education. In over 150 countries, education has been disrupted by the COVID-19 Pandemic, affecting 1.6 billion students. Numerous nations responded by introducing online and distance education. The schooling reaction during the beginning stage of the Coronavirus zeroed in on executing distance learning modalities as a crisis reaction (Insorio & Macandog, 2022). Although they were meant to reach all students, not all of them were successful. Responses to the Pandemic have also changed over time, as has education. Universities and colleges are currently partially or fully open to numerous stimuli.

Education through distance learning is completely different. It directly opposes residential education, which requires students to attend classes regularly and on time. Time and

space separate the student and the teacher. Garrison, Anderson, and Archer (2003) says different methods, like computers, broadcasting, printed materials, and audio-visual aids, are used to teach distance learning. Similarly, each student receives individualized instruction through self-study at work or home. In today's world, the approach of distance learning is extremely important. It facilitates the easy enrollment of secondary school students in HEIs. These graduates can get degrees from universities worldwide and continue their education without leaving their homes. Compared to residential learning, Open and Distance Learning (ODL) offers more independent research, modern pedagogy, and virtual access to the world's top faculty. Individuals are allowed to learn new research methods and pedagogical skills independently. The COVID-19 Pandemic has accelerated the spread of online education at all educational levels, from kindergarten through higher education. Several colleges offered online education before the epidemic. However, due to the epidemic, several governments instituted mandatory distance education instead of traditional classroom instruction.

The Coronavirus issue adversely affected the world's school system. Subsequently, instructive organizations all over the planet fostered another strategy for conveying information (Tal, Tish, & Tal, 2022). In light of the risk of being unable to restart face-to-face education, most nations have sought to increase their use of distance education and make it mandatory. The ODL offers opportunities to all individuals who cannot join institutions formally and cannot participate in residential modes of education. As per Holmberg (1995), distance learning works with students who cannot proceed with full-time training. Before the innovations of new advancements, distance learning was bound to correspondence. Present-day advancements present satellite transmission, sound audiotape, radio, tape, and so on. in distance education. The development of distance learning received a new shape thanks to the microcomputer's invention. Kerka (1996) defines ODL as using electronic and printed communication to deliver instruction when students and teachers are separated. In this regard, Filipczak (1995) explains that ODL refers to a methodical learning process that connects teacher and student through various resources. According to this definition, ODL primarily targets students. In the past, those who received their education at home or work were known as distance learners. The students' increased responsibilities prevented them from regularly receiving education (Bates, 2000).

In the event of a Pandemic, all educational establishments close their doors to students, and educational establishments switch to web-based learning. Before the lockdown, there was a growing demand for ODL due to its novel benefits and quality that were difficult to quantify due to a lack of data. However, in the year 2020, the Coronavirus Pandemic accelerated the use of online education to the point where it became the only viable and practical method of education and communication (Viktoria & Aida, 2020). As a result of advancements in digital technology, educators and lecturers now require e-learning platforms (Benadla & Hadji, 2021). In distance education settings for higher education, activities are frequently divided into synchronous course sessions and asynchronous activities and tasks. In synchronous courses, students participate in focused, interactive experiences that teach them the fundamentals of technology-enhanced education, course design, and effective online instruction. On the other hand, asynchronous activities and tasks include tests, group work assignments, group discussions, feedback, and projects. Asynchronous tasks and activities are also completed through facilitator meetings, live webinars, interactive video-based activities, keynote speakers, and other methods (Debeş, 2021).

As a result of technological advancements, we can now employ various content creation methods online. It is essential to consider students' first choices and perceptions when designing online courses to make learning efficient and productive with the resources at their disposal. The factors that influence a student's readiness for online learning and their readiness to participate in collaborative learning are linked. As per Warner, Christie, and Choy (1998), the concept of readiness for online learning was first proposed in Australian vocational education and training. They mostly talked about three things: 1) how students favor it over eye-to-eye study hall guidance; 2) the student's confidence in the use of electronic correspondence for learning, which demonstrates competence and confidence in the use of PC-based and Web-based correspondence; and the capacity to learn on one's initiative.

Online physical education classes may be more effective if students observe their classmates' actions. In physical education classes, students receive individual feedback on their motor skills and athletic performance. In contrast, students cannot alter their actions while

watching a video from them because their input is minimal. Students' enthusiasm for success is expected to grow due to immediate feedback. Over time and space, participants provided online input; However, due to the ineffectiveness of the online approach in fostering fundamental connections between teachers and students and between students themselves, it was a cult issue. Physical activity was frequently prioritized in online classes due to the lack of interaction between instructors and students.

The instructor got input by verifying student success electronically. There was an interaction between teachers and students. This participation has become a benefit for immersive physical training and physical education classes geared to the task. However, it was because fundamental relationships were not established online. The lack of contact between the instructor and students in online classes often meant that physical activity was very important. The relationship between the teacher and the pupil becomes vital in realizing the importance of physical education, as is the product of the profound interview with the teacher.

The study aimed to assess the sustainability of higher education through distance and online learning during the global educational lockdown at the Women University Multan, Pakistan.

2. Research Methodology

2.1. Participants

In this study, all the students of graduate and postgraduate level were included from ten departments, including Education, Mass Communication, International Relations, Psychology, Sociology, Physics, Chemistry, Environmental Sciences, Mathematics, and Pharmacy of the Women University of Multan. Total 3189 students enrolled in these departments, including 2135 males and 1054 females. A total sample of 320 students of Bachelor, Master, and MPhil levels (male = 214; female = 106) was selected using a stratified sampling technique (see Table 1).

Table 1: Description of the Respondents

Faculties	Departments	Male		Female		Total Sample
		N	n	N	n	
Social Sciences	Mass Communication	112	11	68	07	18
	Education	242	24	128	13	37
	International Relation	095	10	55	06	16
	Psychology	193	19	116	12	31
	Sociology	174	17	076	08	25
Applied Sciences	Physics	296	30	104	10	40
	Chemistry	326	33	204	20	53
	Environmental Sciences	247	25	153	15	40
	Mathematics	324	32	076	08	40
	Pharmacy	126	13	074	07	20
Total	10	2135	214	1054	106	320

2.2. Research Instrument

A self-developed questionnaire was used to collect information from the participants regarding the role of distance and online learning during COVID-19 at the Women University Multan, Pakistan. The questionnaire consisted of 18 closed-ended items designed on five points Likert Scale, i.e., SA (Strongly Agree), A (Agree), UD (Undecided), SDA (Strongly Disagree), DA (Disagree).

2.3. Validity and Reliability

The validity of the self-developed questionnaire is crucial for reliable results; therefore, it was imperative to validate the questionnaire before distributing it among the participants. Five experts in the relevant area validated the self-developed questionnaire. They raised some minor observations regarding grammatical and linguistic errors. In addition, some items were suggested to rephrase for a better understanding of the participants. Therefore, the observations were incorporated to make it more valid.

In addition to validity, it was also crucial to ensure its reliability. So, test-retest reliability was performed to confirm its reliability. In this way, the researcher collected data from the participants as a pre-survey which was not included in the sample. Similarly, the data from the

same participants were collected after 12 days as Post-Survey. Pearson' Product moment correlation was applied to these scores of pre-Survey and Post-Survey scores. The correlation coefficient was 0.93, which showed that the questionnaire was reliable (See table 2).

Table 2: Pearson's Correlation between Pre-Survey Scores and Post-Survey Scores

	Pre-Survey Scores	Post-Survey Scores
Pre-Survey Scores	1.00	0.911**
Post-Survey Scores	0.911**	1.00

***. Correlation is significant at the 0.01 level (2-tailed)*

Correlation Strength: $r \geq 0.70$ =Strong; $0.40 \leq r \leq 0.69$ =Moderate; $0.01 \leq r \leq 0.39$ =Weak

2.4. Data Collection and Analysis

A structured questionnaire was developed with the help of a literature review and casual conversations with the students currently enrolling in online classes. Twenty people participated in the pilot test, and their responses were measured to design the final questionnaire. Data was collected through a Google Form link sent to the sample students through their WhatsApp numbers. After fifteen days, data from 288 students was received, with a 90% response rate, and the link was disabled. Data was generated, organized, tabulated, and analyzed based on descriptive analysis, i.e., mean and standard deviation.

3. Results

Table 3 indicates descriptive analysis with the mean and standard deviation of the respondents.

Table 3: Descriptive Analysis of the Responses Regarding Sustainability of Higher Education Through Distance and Online Learning on Global Educational Lockdown

S. #	Statements	Mean	SD
1.	Online learning is cheaper than conventional learning	4.40	0.92
2.	I was easily able to assess the Internet during my online classes.	3.42	1.38
3.	I was able to manage my time effectively and complete assignments on time	4.23	1.22
4.	It was easy for me to learn with technology and learning modes of online education	3.95	1.14
5.	I was able to communicate in an online class with confidence rather than in a physical classroom	3.14	1.32
6.	Online learning is more time/resource-consuming for students than conventional learning	3.69	1.29
7.	It's difficult for students to learn through a printed form of notes rather than PowerPoint presentations and Word files.	3.03	1.54
8.	Instructors stimulate students to focus on online lectures instead of other phone and home activity	3.25	1.19
9.	Students are well aware of the necessity of continuing the teaching-learning process during Covid and all circumstances.	4.28	1.25
10.	Students had to face lots of sound problems due to lower quality of the Internet or Network issue during online lectures	4.50	0.78
11.	Concepts of different topics cannot be clear to the students during the online session. We need to meet our instructor physically	4.07	0.67
12.	The instructor gives abundant attention to the questions asked by the students in online sessions	2.62	1.29
13.	Instructor easily explains the diagrams and graphs by screen sharing on MS Teams during Online Lecture	3.70	1.31
14.	During the lockdown, as all the physical and academic activities were motionless all over the world, only the online educational system was evidenced blessing for students	4.48	0.54
15.	All students should provide an opportunity to continue online educational sessions after Covid	3.65	1.28
16.	Online Classroom or education session is difficult to understand for students who do not have an educational background	3.99	1.16
17.	No matter how hard I try, there is some content I shall never understand in an Online Classroom Environment.	4.15	1.23
18.	In public sector universities, the online system is a financial burden for teachers and students as well	2.71	1.14
Overall Mean		3.66	1.15

According to the mean values in the table, it has come to light that respondents agreed that online learning is cheaper than conventional learning. They were easily able to assess the Internet during their online classes. They were able to manage their time effectively and complete assignments on time. It was easy for them to learn with technology and learning modes of online education. They could communicate confidently in an online class rather than in a physical classroom. Online learning was more time/resource-consuming for them than conventional learning. It is difficult for them to learn through a printed form of notes rather than PowerPoint presentations and Word files. Instructors were found to stimulate students to focus on online lectures instead of other phone and home activities.

The respondents further explained that Students were well aware of the necessity of continuation of the teaching-learning process during COVID and all types of circumstances. They had to face many sound problems due to lower quality of the Internet or Network issue during online lectures. Concepts of different topics cannot be clear during the online session. They need to meet their instructor physically. The instructor gives abundant attention to the questions the students ask in online sessions. Instructors were found to explain the diagrams and graphs easily by screen sharing on MS Teams during Online lectures. During the lockdown, as all the physical and academic activities were motionless worldwide, only the online educational system was evidenced blessing for students. They further responded that all students should be allowed to continue online educational sessions after COVID. Online Classroom or education session was found difficult to understand for students who do not have an educational background. No matter how hard the students try, there is some content they would never understand in an Online Classroom Environment. In public sector universities, the online system was a financial burden for teachers and students.

4. Discussion

Online and distance learning have become integral components of the education sector worldwide, especially since the COVID-19 Pandemic, which forced a global shift towards these modalities. For countries like Pakistan, where there are significant disparities in access to education and resources, the sustainability of higher education through these methods plays a crucial role. But unfortunately, many students lacked in knowledge to learn online with a new tool. After some time, most students have solved most of the technical questions connected to online learning systems. But online learning during the epidemic remains challenging with the constraints of learning. These findings add to the increasing literature on important problems students encountered when the COVID-19 Pandemic suddenly transformed online learning and the steps required to facilitate online education and resolve these reporting problems. All students, instructors, and families have seen total disruption as a preventative step for COVID-19 owing to the national blockade and social distance. This has kept everyone away from the spot where they spent as much time as possible (viz., schools, colleges, workplaces).

The results showed that online learning is less expensive than traditional learning. Online learning led to significant cost savings for students because it eliminated the need for commuting, lodging, and physical textbooks, among other things (Clinefelter & Aslanian, 2015). In their online classes, students had little trouble evaluating the Internet. They have good time management skills and can finish work on schedule. With the aid of technology and online schooling, they found learning simple. When compared to a traditional classroom, they felt more comfortable communicating online. Indeed, technological advancements and the rise of online schooling have made education more accessible to many students. Online learning can offer students flexibility, allow for self-paced learning, and provide access to many resources that might not be available in a traditional classroom setting. As noted by Means, Toyama, Murphy, Bakia, and Jones (2009), a meta-analysis found that, on average, students in online learning conditions performed modestly better than those receiving face-to-face instruction.

The findings also revealed that online learning required more time and resources than traditional schooling. They find learning from printed notes rather than PowerPoint presentations and Word documents challenging. It was discovered that instructors encouraged pupils to concentrate on online lectures rather than other phone and home activities. Contrary to the assumption that online learning saves time, certain studies have indicated that online education may require more time investment from students than traditional in-person education. This could be due to factors such as self-paced learning, lack of direct supervision, and the potential

for technical issues. For example, according to a study by the U.S. Department of Education's Office of Educational Technology (2010), online learning can provide more flexibility but can also be more time-consuming. The students often have to manage their time more rigorously to complete online coursework. While online learning might save on some traditional resources, such as physical infrastructure and commuting costs, it can also require additional resources. These might include costs for technological infrastructure, reliable internet access, and digital learning materials.

The results also showed that students understood the value of carrying on the teaching-learning process under any conditions, including COVID. They encountered several sound issues during online classes due to poor Internet or network quality. Technical issues, including sound problems, are significant challenges students face during online learning. This can be due to poor internet connections, inadequate audio-visual equipment, or software issues. For instance, a study by Tichavsky, Hunt, Driscoll, and Jicha (2015) found that technical issues were one of the main challenges' students face in online learning environments, impacting their ability to participate and engage in the class fully.

The results also revealed that students need to meet their teacher to understand the concepts of various topics throughout the online session. The instructor provides the questions posed by the students during online sessions with a lot of attention. During the online lecture, the instructors discovered that screen sharing on MS Teams helped them explain the diagrams and graphs more clearly (Kotera, Taylor, Fido, Williams, & Tsuda-McCaie, 2023). Only the online educational system was a clear boon for pupils during the lockdown when all physical and academic activities were halted globally (Di Malta, Bond, Conroy, Smith, & Moller, 2022). The results also demonstrated that all students should be allowed to continue their online education beyond COVID. Students without a background in education found it challenging to grasp online classrooms or instruction sessions. Students could never grasp certain stuff in the online classroom environment, no matter how hard they tried (Brown, Lawrence, Basson, & Redmond, 2022). The cost of the online system in public institutions affected professors and students (Clark & Barbour, 2023).

5. Conclusion

The findings suggest that online learning is cost-effective compared to traditional methods. Students found it convenient to access the Internet for their classes, manage time effectively, and submit assignments on time. Learning with technology in online education was easy for them, leading to confident communication in virtual classes. However, online learning proved to be more time- and resource-consuming than conventional learning. Students faced challenges with printed notes and preferred PowerPoint presentations and Word files. Instructors encouraged students to focus on online lectures and were responsive to their questions. The COVID-19 Pandemic highlighted the importance of continuous online teaching-learning processes. Technical issues, such as internet quality problems, hindered some students' learning experiences, and some found it difficult to grasp concepts in the virtual environment. However, students appreciated the use of screen sharing on platforms like MS Teams to explain diagrams and graphs. After the Pandemic, students believe that the option to continue online educational sessions should be provided. Notably, students without an educational background found online education challenging to understand. In public sector universities, the online system posed financial burdens for teachers and students.

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