

The Effect of Online Learning on Quality Education Amid Covid-19

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Abstract

This study aims to provide us with knowledge about online learning and how it has affected the quality of education. As coronavirus hit the world, disrupted many people's lives, and changed daily life operations, it affected the quality of education. It made the learning process different from before. Studies have shown that course structures, student engagement in the class, learner interaction with the instructor, self-directed studies and teacher attendance are responsible for significant differences in student satisfaction. We aim to find the validity of these issues with the help of quantitative research. We tend to observe the short-term and long-term effects of online learning on education. This paper will help us understand the factors which have affected the student's satisfaction with online learning and how educational institutions have overcome those issues so that they could formulate helpful learning strategies which provide easier access towards learning. The impact of online education on students' performance, their preferences for the mode of learning and which mode of learning they find easier for them will also be discussed in this paper with the help of questionnaires. Students who win this paper will be the targeted population so their experiences can help us find the validated results. As people are getting familiar and comfortable with the new normal and they have started accepting the way things are, students have also found ways to efficient online learning. Educational institutions have also stepped forward towards effective online learning.

Keywords: Online learning, Education, Quality, Covid

Introduction

The year 2020 has been a difficult time for all the countries in the world because they had to face a situation which was never seen before. It was drastic as it hit all the sectors in the Country. It disturbed the economy and made people worried about their existence. In this situation, ensuring the availability of quality education was as difficult as managing the healthcare resources for the Country. Due to the Coronavirus (COVID-19), parents were worried about the availability of quality education for their children, and meanwhile, online learning appeared as a sigh of relief. Global pandemics have hampered many aspects of human endeavour, and many changes must be made for a healthy and secure lifestyle. As education was wholly stopped for some weeks to figure out what should be done for effective learning, effective planning was done for the survival of the educational system.

The management of higher education institutions and leadership had no choice but to use internet technologies to continue learning online with the cooperation of students and teachers. Teachers were provided with basic knowledge of how to manage the resources and make education available with the help of student-teacher interaction (Thongbunma, Nuangchalem, & Supakam, 2021). E-learning became an established learning program which enabled the educational system to start working again on their purpose of making education available. Online education has both theoretical and pragmatic appeals. The goal of this study is to record the data accurately with the help of students from different backgrounds, which supports the predictions made in this research paper and proves the results recorded by other researchers to confirm the validity of the evidence. The primary goal of e-learning is to use the available resources to teach the students with the help of different activities that help their learning process.

The Covid-19 pandemic, which has been drastic and disrupted education worldwide, has hampered students' lives and, unfortunately, is likely to have a lasting impact on their future university life because of the ineffective learning and knowledge they got. What went relatively unnoticed was that it caused a lot more problems in countries like Pakistan, where the economy and educational resources were limited. People were still struggling, unlike the other countries. Pakistan had to face this situation on a whole different level than others. Online learning and courses are increasingly becoming part of the education system worldwide. The online channel made education convenient and accessible during the lockdown. Although online and distance learning courses have been around for a long time, it is only in recent years that the need for an online mode of learning was felt, and it was given importance because there was no other source of learning in those difficult times. So online teaching had the edge over traditional face-to-face teaching in schools, Universities and colleges. Indeed, underdeveloped countries already lack educational resources like internet access, e-learning solution providers and training for teachers to interact better with students. Government policies to develop localized educational technologies as the government was facing the economic downturn alongside increasing health concerns and the number of death rates, as well as personal resources among students (Anwar el al, 2021; ul Mustafa, Abro, & Awan, 2021).

When schools had to be closed because of the increased cases in the Country, Pakistan looked for alternatives to the globally adopted policy of “stopping classes without stopping learning” (2020). So that the students could get an education and enable themselves to understand the learning outcomes, another idea was to create a national education television channel that would provide equal educational opportunities to all students who were learning with the help of government assistance as the students learning in government schools mostly belonged to the poor sector of Pakistan. They did not have technology available, so it was found to be an efficient way of making education available for all. Pakistan has the second highest number of children who cannot attend a school or receive a quality education in the world: 22.8 million children between the ages of 5 and 16 were unable to receive education, and 40% of Pakistan's school-age children also experienced the same. According to Jou, Mariñas, & Saflor, (2022) who conducted a study on K-12 students revealed that students’ background, experience, behaviour, and instructor interaction positively affected their satisfaction. While the effects of the students’ performance, understanding, and perceived effectiveness were wholly aligned with their academic achievements.

Pakistani institutes lack technically trained teachers to ensure the smooth running of online courses. To strengthen blended calendars and distance and online learning, there was a dire need to create more awareness and accessibility towards e-learning among the staff so that they could keep an eye on their student’s progress. Pakistan is a country where many students find it challenging to access the Internet. This, in turn, leads to problems in attending discussions and attending online class sessions; poor internet connection is making e-learning difficult to adapt among students.

Online courses are a newly introduced form of courses and are not part of regular courses as the contents included in an online course are different from the face- to face content because both require different resources and different outcomes. Researching and analyzing how online education is perceived and experienced by students and faculty from various colleges and universities in Pakistan will help us to have a clear understanding towards the aspects that need to be improved. Education professionals need to understand the needs of teachers and students and make changes to address them to make e-learning effective for students. Colleges and universities are now emphasizing the versatility of online programs. They are rapidly adopting online courses to meet the demand of students around the world as they have realised the importance of e-learning and the future requirements of education. Therefore, educational institutions and higher management need to look into the problems, and we tend to state those problems as future hurdles in education. They need to understand better how students and teachers perceive and respond to online education as a mode of learning to apply an online approach most effectively. Developed countries with technologically advanced management and resources have innovative, modern and advanced e-learning systems that allow them to stay up to date and keep the learning flow active in this academic year with much fewer issues than underdeveloped countries. But in Pakistan, e-learning is still in its infancy as it is pretty new to

many institutions. Having started as emergency distance learning, the government needs further investment and cooperation to create greater acceptance and overcome limitations.

This study will enable us to understand the drawbacks of online learning and the hurdles that create problems in effective learning—shifting towards e-learning suddenly, managing everything and looking into the smooth flow of learning so that students don't get affected by the sudden change in their lives. Being inexperienced in providing online learning, the educational institutions had to face many difficulties in implementing online learning across the Country. Moreover, underdeveloped and developing countries found it a great difficulty to provide resources to every student in the Country to ensure the availability of education during the lockdown.

Having fewer resources and experiencing a downfall in the economy because of the Covid-19 situation, the Country had to compromise on the quality of education as it was challenging to provide an even distribution of education throughout the Country as the poverty rate is relatively high in underdeveloped countries. They cannot afford technological advancement, which is mandatory to gain an education. Teachers struggled because they could not maintain discipline, and the interaction was much lower than in face-to-face classes. It disturbed the whole educational process, and the Country took time to manage its resources for educational purposes. However, due to the economic downfall, the government is still struggling with even the distribution of education. We tend to find the reasons that disrupted the learning process and the hurdles that students and teachers face collectively during the knowledge exchange. This study will help us to prove the effects caused because of Covid-19 on the learning sector of the Country.

This study will help us analyse the student's point of view regarding online learning, how they want it to improve, and what changes will be helpful in the proper availability of education as the coronavirus is not going back too soon. We will have to adjust our lives according to this situation, as discussed by (Awan, Abro, & Mustafa, 2021; Koris, et al., 2021) that the behavioural and cognitive aspects of adaptation the online education in the case of international Erasmus students.

The objective of this study is to discuss one of the destructions caused by the coronavirus. The educational system was poorly hit because of Covid-19. All the institutions had to shift online as the coronavirus spread rapidly across the Country. It was essential not to stop the education process because of this situation, as the University of London introduced distance learning in the 1800s, which shows that this mode of learning was not new. However, it was not so adaptive because it didn't become as popular and approachable. Developing and underdeveloped countries were unfamiliar with how to implement this mode of learning in their Country, so it was a significant issue when coronavirus hit the Country with all its might. The Country had to adopt sudden strategies to tackle the situation. As Covid-19 has disturbed every sector in the world and has made irreversible changes, it is the same in the case of education. Students

learning online have many issues with online learning. With the help of students' perspectives and available research, we will continue conducting our research to avail an authentic result.

Online learning was adopted worldwide once the Coronavirus hit the world and caused the shutdown of all institutions as cited in (Abro, ul Mustafa, Ali, & Nayyar, 2021; Rana, Garbuja, & Rai, 2021). Online learning was the only option left because no other means of education was left. The Country had to shift to e-learning, but because the minimum resources and the greater need for resources conflict with each other and made access to learning difficulties. The coordination between the student and teacher was also challenging, so effective learning became very difficult. We need to find the causes of the non-efficient delivery of education during e-learning and the student's perspective regarding the shift of education towards online.

Education is the only thing which differentiates between a human and an animal. It spreads awareness, makes people stand tall in society, and helps shape our character. If the education process is ineffective, then all the learning outcomes will not be achieved and will have long-term effects on the nation. Educating students is essential for the success of any country. Covid-19 had long-term effects on the economy of the Country. For the country's stability, we need to educate our children so that they can work for the betterment of the Country. Online learning benefited when there were no other education means, but it is not as effective as face-to-face learning. We tend to find the perspective and choice of students to find the issues they face during e-learning.

This paper attempts to answer the following questions:

Does Interaction between the learner and teacher is essential to achieve the learning outcomes?

Does Online learning an efficient source of learning, and has it become a substitute for physical learning?

Has online learning affected the quality of education because there is less interaction between students and teachers?

This research will help us develop a deep understanding of the hurdles affecting the effective learning process. For example, students cannot communicate with their instructor and have a good learning interaction between the student and the teacher. Online education is not a modern invention but took off on a much larger scale at the start of 2020 due to the Covid pandemic. However, especially in underdeveloped countries, very few institutions were familiar with e-learning and all the contents needed for e-learning (Buabeng-Andoh, C. 2012).

Literature Review

Covid-19 has caused a drastic change in the education system in Pakistan and worldwide, but the way it hit underdeveloped countries was more severe than that of developed countries. As a result, educational institutions across Pakistan and worldwide have moved to virtual classes suspending physical classes because of the fear of Covid-19 and implementing preventive measures.

The lockdown after the COVID-19 outbreak harmed the economy and shut down all educational activity, resulting in a significant gap in learning and understanding among students worldwide. (Turi, 2019). Online education in Pakistan is at an early stage of development as it is still new in Pakistan, and people are less familiar with e-learning in the Country. Third-world countries like Pakistan have been the hardest hit as they were not equipped for online education during the COVID-19 pandemic. Acquiring this new technology from student to teacher has faced several challenges. (Aziz ur Rehman,2020) In Pakistan, on the other hand, this shift from physical classes to online classes has been a mix of ups and downs for educational institutions, as educational management is still on the learning curve. While technology makes things more accessible and more manageable, the availability of technology is also a significant concern for low-income parents. It can also limit and prove an online education's drawback, especially in Pakistan, where many students struggle to access the internet. They don't have access to a strong internet connection and advanced gadgets for attending online classes.

In 2018-19, student enrolment grew to 1.86 million. 53.6 million students are expected to be enrolled in schools, colleges and universities in 2018-19, with 563,300 teachers working across the Country (Pakistan Economic Survey 2018-19). The availability of technical resources in Pakistan is much more complex, considering the country's economy. The non-availability of good quality technology is impossible to provide at this high level. This, in turn, leads to problems in attending online class sessions, participating in discussions and making it challenging to adapt to online educational channels. At 57%, Pakistan's literacy rate lags far behind neighbouring countries. The primary school dropout rate is 22.7% (the third highest rate in the region after Bangladesh and Nepal), which is alarming as it is at the formative learning stage. Due to covid-19, many students had to stop going to school because of the higher poverty rate since they could not afford the fee and technology which e-learning wanted the students to have.

Meanwhile, the quality of teaching is much better when the teaching mode is physical. Teachers can look after the students in physical classes in a better way as they examine the behaviour of the students, make them understand every little point, students can ask the same question multiple times and clear their confusion about the topic without the concern of weak internet, delivery of ideas, and experiences gained through the learning. In a classroom, a teacher can observe students' body language. The attentiveness and interest the student is paying in the class and these non-verbal expressions help the teacher adjust their teaching approach, improve the learning outcomes, and better meet students' needs. Additional questions and individual attention in the classroom environment to get a more detailed idea of the student's clarity with the concepts being taught is a significant advantage over online channels.

The learning outcomes which can be easily achieved and discussed in class require a little more exploration and vigilance in an online course. Examining and analysing how online education should be designed and organised and how the learning process can become more effective, in this research paper, we will consider the perspective of students and teachers to conclude results.

It will prove an integral part of building online teaching and learning methods. A Gallup poll shows that 74% of parents approve of lifting the curfew (Sattar, 2020). The interaction between students and teachers is a critical activity in the physical teaching mode when teachers play a significant role. With a blended learning environment, also adopted in Pakistan, learners play a central role, and the interaction between teacher and students becomes more flexible in many forms. Kang and colleagues (Kang & Im, 2013) stated that interactive activities between teachers and students impact student learning outcomes when they implement learning activities such as learning support, learning and social intimacy, communication and questions and answers in class, and teacher presence and pedagogical support.

For this particular research, we will use Johann Pestalozzi philosophy of education and Lev Vygotsky's sociocultural theory of cognitive development. Both indicate the value of education and the importance of self-directed learning. The theory stresses the importance of learners' interaction in the learning process in which they try their best to understand the ongoing conversation. Ley's theory was convincing that effective learning could only be possible through interactions and the interactions are only possible and efficient when they can meet face to face. The student teacher is essential in overcoming the barriers of education. He found that teachers can control many factors in an educational setting, including assignments, behaviours and responses. The theory states the importance of more interactive activities to promote cognitive growth, such as productive discussions, constructive feedback, and collaboration with others.

And this wasn't easy in the Covid-19 situation, where the whole educational system had to switch to online learning, which removed the interaction process between the students and instructor. Johann pesalozzi's philosophy of education states that students need an emotionally secure environment to learn efficiently. This shows that the environment in which we study is really important. Students need to be stress-free and have a proper learning environment which enhances their skills and interest in learning. Covid-19 negatively impacted many students, and they couldn't learn efficiently in that problematic situation. Our survey results will support these theories in a much better way.

This study deals with the impacts of online learning on quality education during the Covid-19 situation. One of the challenges of online learning is that students feel disconnected from their classmates and teacher. As a result, they cannot express their concerns regarding their learning process. However, by offering a variety of topics relevant to current issues in the field and allowing students to combine practice, in this case, their work experience, with theory, and course content, learners become more involved in discussions and course tasks, as well as their peers (Shearer, 2003).

RQ₁: Does Interaction between the learner and teacher is essential to achieve the learning outcomes?

RQ₂: Does Online learning an efficient source of learning, and has it become a substitute for physical learning?

RQ₃: Has online learning affected the quality of education because there is less interaction between students and teachers?

Research Methodology

For this research paper, a survey method has been used to draw results according to the responses and in the light of theories which we used to support our research's objective. The issue has been addressed with the help of fifty-seven responses collected from university students studying at different levels regarding their online-learning experiences.

Data was collected from all the students experiencing online learning at a university level. A total of 57 students were invited to participate. They recorded their responses in an online survey designed to gain information about online learning amid covid-19. The survey captured information regarding learner interaction and the quality of learning in an online learning module during Covid-19.

The targeted population was people from the 16-46 age group; some graduated, some were pursuing their bachelor's, and some were masters in a university. All are facing the same situation while learning online. The included gender in the research was predominantly male. The questionnaire was formulated according to the previous research having multiple options, out of which the participants had to choose one option according to their perspectives about online learning.

The samples collected for this research were from university students. They encouraged them to share their honest opinions and perspectives about understanding the effects of coronavirus on online learning and educational processes. Fifty-seven students took part in this survey, conducted online amid the coronavirus situation. The sample selection was based on a non-probabilistic purposive sampling technique with a specified range of age and study in a university.

Online and distance learning modes were not new, as it was already been introduced in developed countries, and it was quite an old method first used at the University of London. As Covid-19 struck the world and forced the whole world to lock themselves in their houses, in that situation, it wasn't easy to carry on with physical learning. So, an online mode of learning had to be adopted. Underdeveloped countries like Pakistan had to face this situation. Fewer resources and inexperienced staff were significant hurdles in the learning process. The analysis was done based on online information and the researcher's personal experience. Online surveys were also used to analyse the data, find the answers to the problem, and meet the study's objectives. The survey was constructed on the literature review and the problem of statements to meet the study's objective.

Results and Discussion

Table 01
 Demographic Trands

Demographics	Category	Frequency	%
Age	16-26	48	84.2
	27-36	8	14
	37-46	1	1.8
		57	
Gender	Male	41	71.9
	Female	16	28.1
		57	
Education	College	2	3.5
	Undergrad	36	63.2
	Graduate	15	26.3
	Masters	4	7
		57	

Source: Developed by Author

The demographic classification of the respondents based on age shows that majority of the respondents are young and fall in the age group 16 to 26, followed by other age groups. Since a high proportion of the respondents consists of youngsters, they are university undergrad students followed by graduate students. In addition, the respondents have a higher proportion of male students. Interestingly, the highest age group, i.e., 37 to 46 consists of only one respondent; similarly, only four are studying at the master's level.

Table 02
 Discription of Reults

Description	Response	Frequency	%
Online Learning affected Education Quality	Yes	39	68.4
	No	10	17.5
	May be	8	14.1
Online learning is comparatively easy	Yes	22	38.6
	No	26	45.6
	May be	9	15.8
Connection with the instructor during online learning	Excellent	4	7
	Good	9	15.8
	Average	31	54.4
	Poor	13	22.8
Faced problems during online learning	Yes	36	63.2
	No	12	21.1

	May be	9	15.7
An online learning environment is helpful	Yes	19	33.3
	No	27	47.4
	May be	11	19.3
Participate in online learning	Yes	29	50.9
	No	15	26.3
	May be	13	22.8
Self-learning plays an essential role in online learning	Yes	36	63.2
	No	9	15.8
	May be	12	21
Technical issues become hurdles in online learning	Yes	46	80.7
	No	6	10.5
	May be	5	8.8
Times you felt on-campus classes	Always	27	47.4
	Often	19	33.3
	Rarely	11	19.3

Source: Developed by Author

About the effect on a quality education due to online learning, 68.4 per cent of the participants think that the quality of education has been affected due to online learning, they don't find online learning convenient coupled with 45.6 per cent of the participants think that online studies are not an easy and efficient way of learning. Moreover, 54.4 per cent of the respondents believe that they have established an average connection with their instructors during online classes, and 22.8 per cent have a poor connection. A substantial group of 63.2 per cent of participants faced problems during online studies, whereas only 21 per cent of respondents were comfortable with the online setting.

Only 33.3 per cent of the sample agreed that the online learning environment was helpful, whereas 47.4 per cent disagreed as they found the online environment non-helpful. In addition, half of the respondents answered affirmatively in response to whether the students participated during online classes, yet the remaining half didn't participate. Moreover, 63.2 per cent of the respondents believe that there is self-learning in the online setting, and they must proceed independently.

Technical issues like internet, hardware, and software play herald in online learning in the opinion of 80.7 per cent of participants, whereas 10.5 per cent of the respondents were comfortable and had no technical issues. As a result, 47.4 per cent of the students are always, and one-third are often of the opinion to have on-campus classes and go back to the vibrant campus life.

This study deals with the factors which affect learning outcomes and student satisfaction in online learning, ultimately affecting the quality of education. A survey was carried out with the

help of an online portal, and fifty-seven respondents participated. Student satisfaction with online learning was examined in this study as we collected all the drawbacks mentioned in the existing literature, which developed an understanding of the factors that affect online learning and do not provide a helpful environment for the students so that they could learn and interact effectively. The results are in alignment with (Simsek, Kucuk, Biber, & Can, 2021). The responses to online education prove that online learning has affected the quality of education. It is also found that low-income students cannot afford technology and a stable internet connection. Interaction between student and teacher was also rated so low that it convinced us that interacting with students and teachers provide an effective learning environment which can be seen in physical classes. Student engagement also plays an essential role in learning. Course structure and exciting topics and discussions can prove beneficial in increasing the quality of education. The factors affecting a student's learning process have been discussed in this study.

Conclusion, Limitations and Recommendations

In a nutshell, Covid-19 has been devastating for all sectors, including the educational sector, as the less developed countries were not ready to face this massive challenge of learning online because of the unavailability of resources, student and teacher interaction, technical problems and mismanagement of course content. Many factors affect student learning outcomes in online learning. We determined those specific factors with the help of previous studies and survey results. Then, we considered the magnitude of their impact on learning outcomes and related them to online learning. Pakistan is an underdeveloped country where most children cannot get an education because of poverty.

Regarding online learning, many of the students were unable to afford technology for the sake of online learning. The student-teacher interaction was shallow in online learning, and most students were convinced that online learning was not helpful. But several students used self-directed studies and did not stop their interaction with teachers by participating in online classes. The study concluded that online learning and interactive factors affect student learning outcomes and the quality of education adversely.

The study was undertaken on a trim level where most students did not find e-learning helpful. We could not include the teachers in our study as we only wanted to examine the quality of education from a student's perspective. The limited data may prove to be a limitation of this study. These results demonstrate the importance of physical classes, learning interaction and outcome, course content and technological advancement in other online learning environments. However, students were asked to complete the survey online. Therefore, it was an options-based questionnaire in which the statement's opinions were not present for the future betterment of e-learning. This is another limitation of this study.

Higher education needs to train the staff and instructors to deliver lectures better with the help of well-structured lessons, maintain regular communication, interact with the student, and adopt

effective engagement policies, which will undoubtedly enhance online learning efficiency. This can lead to a better perception of student learning and satisfaction with online learning, and the quality of education can be improved this way.

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