IMPACTS OF VIRTUAL TEACHING ON SKILL DEVELOPMENT AMONG THE STUDENTS OF QUAID-I-AZAM UNIVERSTIY, ISLAMABAD

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Abstract

The question of how to ensure the quality of online learning in higher education institutions has become increasingly important in recent years. While various studies have focused on faculty and administrator perceptions of online education quality, there has been a dearth of study on students' perceptions of online education quality. This study used quantitative methodologies to investigate the impacts of virtual teaching on skill development of students' impressions of the quality of online education based on their own online learning experiences at the Quaid-I-Azam am university, Islamabad. Questionnaire was drafted and data was collected from 100 students. Students' positive experiences were found to be flexibility, cost-effectiveness, electronic research availability, simplicity of connection to the Internet, and a well-designed class interface, according to the findings of this study. Delays in receiving feedback from instructors, a lack of technical help from instructors, a lack of self-regulation and self-motivation, and a sense of isolation, boring instructional methods, and poorly designed course content all contributed to the students' unfavorable experiences.

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Chapter No 1

INTRODUCTION

Virtual or online learning is one of the imminent trends in the education sector around the globe. This mode of learning is done through the internet. With advanced and upgraded technologies, this mode of learning has been made simpler. Online Education is also preferred in higher learning Institutions. In E-learning, the students study from home or any other place, that is most convenient for them. They can acquire learning material online. The study materials in online education could be texts, audio, notes, videos, and images. However, the method of study has its benefits and various drawbacks too. Online education is suitable for those who can not visit or obtain the traditional education method for one reason or the other. Online education provides a myriad of advantages for people, as well as companies because it allows for, among others, flexibility. A great way to benefit more from online education is to consolidate online education and traditional ways of teaching.

Punit, (2020) online teaching amid the pandemic had been an awful experience for the teachers. Online teaching refers to the medium through which the instructor could teach their students in the online classes based on internet. There is no face-to-face interaction with their students. This new mode of online world was not effective in the skill development processes of the student because of weak internet connection, lack of training, expensive devices which were not affordable by the lower middle-class students and lack of clarity of time table.

According to (Joshi, Amit; Vinay, Muddu; Bhaskar, Preeti, 2020), amid the covid-19 pandemic, despite of complete lock down across the country, the closure of all the economic, social and as well as educational activities completely. But this was the temporary closure of the educational institutes because of sudden shift from physical to online mode of teaching. This article was about to measuring the impacts of online education over the skill development among the students that how effective this new mode of learning was. According to a report of

UNESCO, (2020) almost 63 million teachers got affected amidst the pandemic in 165 countries and 1.3 billion students all across the world had not gone to the school. Online teaching requires three main keys through which students got the best quality of education. The first one is the institution, the second is the instructors and the third is the learners. They all could be subject to quality online education without any flaws. Students could not satisfy with online teaching as with face-to-face learning. The government had started education on different platforms but online teaching was a critical system but due to the high rates of cases across the country, so it was the need of the hour to close the educational institutes and commence some alternate initiatives to resume the educational activities from home.

Alexia (2020). The research examines the major difficulties that students who attend online programmer from home encounter. It describes the feelings of students who have taken online classes. How worried are students about online education, which was discovered in 2009 as well? It will also pay special attention to the difficulties that students experience in the online learning environment in Pakistan. In this way, the encyclopedia interprets educational anthropology, which is strongly related to Margaret Mead's early work. Educational anthropology studies schooling in different civilizations, educational diversity, cultural pedagogy, and older literacy and socialization methods. On the other hand, online education is a type of educational delivery that involves learning that takes place via the internet. In most fields, the number of eLearning and online degree programmers is steadily rising.

According to Splendour (1963) the investigation of frontier territory and the application of anthropology to education, are two elements of education and culture. This study looks at the transfer of culture, specifically the values connected with educational activities and educational surroundings. Education is considered a priority in an equitable cultural setting.

The covid-19 crises have had an unprecedented impact on education. The education of more than 90% of students globally was disrupted by institutional closure. When the pandemic struck, the education system was not prepared to continue any type of academic activities and had to look for an immediate alternate solution. Virtual learning was the preferred option but still, there were so many issues to be weed out.

Carey (2020), the major part of the globe is on quarantine because of the intense occurrence of this world pandemic Covid-19 and thus several cities have changed into phantom cities and its effects will be seen in colleges, colleges, and universities too. Between all this online teaching and online learning will be termed because of the cure for the crisis. The Corona Virus has created establishments to travel from offline mode to online mode of pedagogy. This crisis can create the establishments that were earlier reluctant to vary, to just accept fashionable technology. This catastrophe can show the USA the profitable aspect of online teaching and learning. With the assistance of online teaching modes, we will educate an outsized range of scholars at any time and in any part of the globe. All establishments should scramble completely different choices of online pedagogic approaches and take a look at to use technology a lot ably. Several universities around the world have digitalized their operations understanding the dire want of this current state of affairs. Online learning is rising as victor ludo rum amidst this chaos. Therefore, the standard sweetening of online teaching-learning is crucial at this stage. Online education in Chinese universities has augmented exponentially once the Covid-19 occurrence. There was an associate degree nightlong shift of traditional school rooms into e-classrooms, that is, educators have shifted their entire pedagogic approach to tackle new market conditions and adapt to the dynamic things. Throughout this robust time, the priority isn't regarding whether or not online teaching-learning strategies will offer quality education, rather, however, educational establishments are going to be able to adopt online learning in such a colossal manner.

In the aftermath of several natural calamities like floods, cyclones, earthquakes, hurricanes, and so on, information delivery becomes a difficult task. These hazards disrupt the academic processes in colleges and schools in many ways. Sometimes, it results in the closure of schools and colleges that creates serious consequences for college students and deprives them of their basic right to education, and poses them to future risk. "100 million kids and teenager's area unit plagued by natural disasters per annum. Most of them face disruption to their schooling" (World Vision). Things of crisis and conflicts area unit the most important hurdles within the path of education. Several students and lecturers additionally face psychological issues throughout the crisis—there is stress, fear, anxiety, depression, and sleep disorder that result in a scarcity of focus and concentration. Disasters produce disturbance within the lives of individuals (Di Pietro, 2017). With dynamic weather patterns and rising international temperatures, associate degree increasing range of utmost weather events became the new norm. Such events caused varying amounts of loss to life and property. Their education got noncontiguous in midway. Once disasters and crises (man-made and natural) occur, colleges and schools ought to be resilient and may realize new ways that to continue with teaching-learning activities (Chang-Richards et al., 2013).

Baytiyeh (2018) "Disruption of education will leave kids in danger of kid labor, early wedding, exploitation, and accomplishment into armed forces". As public administration programs extend their online education offerings to reach additional time- and place-bound students, and as authorized establishments become inquisitive about documenting teaching and learning effectiveness, the degree to that online student are fortunate as compared to their room counterparts is of interest to teaching college et al. charged with assessment. Concurrent with the growth of online education, pedagogy programs nowadays are wrestling with the way to answer ever-increasing responsibility demands.

Suskie (2004) this issue includes the federal government's concern with accrediting bodies manufacturing proof that students reach articulated learning goals. These widespread interests and pressures push instructors to document learning effectiveness moreover on maintaining their efforts at continuous improvement of learning outcomes. The development of those 2 trends merging within the up-to-date education setting raises a matter concerning the effectiveness of online courses, as compared to ancient room learning and in relevancy individual student desires, perceptions, and learning outcomes.

Results and discussion are bestowed following the investigation, drawing conclusions on vital problems and presenting lessons learned and directions for future analysis As public administration programs extend their online education offerings to reach additional time- and place-bound students, and as authorized establishments become inquisitive about documenting teaching and learning effectiveness, the degree to that on-line students are fortunate as compared to their room counterparts is of interest to teaching college et al. charged with assessment. Concurrent with the growth of online education, pedagogy programs nowadays are wrestling with the way to answer ever-increasing responsibility demands.

1.1 Online Education

Online education is known to offer the benefit of synergy. Here, the format employed makes room for dynamic communications between students and the teachers. Through these communications, sources are shared, and an open-ended synergy evolves through a learning process. When each person bestows a view or opinion through discussions and comments on others' work course, it benefits the student to learn better. This unique advantage is manifested in a student-centred virtual learning environment that online learning format alone can contribute.

Nambiar (2020) Online education became the essential part of daily life and had rapidly transformed from traditional to online learning. Online

education has been receiving an overwhelming response from across the world as it tends to eliminate such factors where ease and comforts exists.

Most importantly what really has convinced the people to go for it is that there is no hassle in pursuing online education and moreover the cost of online education is low as compared to the traditional mode of learning. It also cut down the transportation for those who don't come from well privileged family.

1.2 Role of online teaching

Yao, Rao, & Jiang (2020) A Chinese researcher identified in his research paper that the teacher has a very crucial role in the skill development of the students. His teaching method has a direct impact on student performance. Teachers should have the guts to transform effective learning skills to the students in the online classroom. Teachers should have to provide opportunities to the students where they could express their feeling and opinions.

In the modern world, fundamental changes are taking place in world as modern technology, building the industrial society of the twentieth century, is rapidly giving way to the information society of the twenty-first century. This is a dynamic process, fundamental changes in all areas of our lives, including the dissemination of knowledge, social interaction, business practices, political participation, mass media, education, healthcare, recreation, and entertainment.

1.3 Perception of students about online education

Owing to the spread of the COVID-19 pandemic, educational schools all over the world have been suspended, putting academic calendars on hold. To keep the research program running, most educational institutions have moved to online learning sites. However, issues such as readiness, architecture, and efficacy of online education are still poorly understood, especially in developing countries such as Pakistan. With the aid of a 20-student interview schedule, the study primarily focuses on understanding

students' perceptions of online learning. By investigating and analyzing how online courses should be designed and arranged, interviews should be an integral part of online teaching methodology.

In the last ten to eleven months, the worldwide transmission of the newest coronavirus has been termed the "cause" of a global pandemic disaster. As a result, education has become one of the most important fields or areas of activity, with educational institutions being expected to bring all curricular activities into the modern world using various interactive tools and social media. Due to the pandemic's rapid spread, local governments and public management authorities have been closing all higher education institutions around the world since the beginning of this year, with traditional educational practices being replaced by distance online education mediated by the internet climate. In contrast, the Romanian educational system, like that of other countries, has been entrusted with promptly responding to new pandemic threats.

According to Apostol (2020), over the last few decades, an increasing number of researchers from various domains have shown an interest in exploring how technical knowledge, technological connectedness, and digital tools might be fully integrated into curricular activities. Both contributions have gained increased significance in recent years, as the educational system has been obliged to respond to the current situation, whether willingly or reluctantly.

The global COVID-19 pandemic has had a profound impact on almost every aspect of life, including schooling. Indonesia, in particular, was not spared from the effects of these shifts. Because it was so difficult to stop the disease from spreading further, world leaders have set highly strict criteria to break the COVID-19 transmission chain. Some concepts, such as social and physical distance, as proposed by the World Health Organization (2019), have made determining which to implement in each location challenging.

The very important issue to the students is the interruption in the online lectures due to the poor internet connection and external constraints, such as students not being able to log into the school's account, to gain access to the news, the difficulties to log-in to your Google account, to start with, the events, and can be excluded from the Event, was also published by the university students. The technical issues have been repeatedly raised in the previous discussion. But during the semester, the students and the teachers will be able to solve these problems by rebooting your internet router, your browser is not clear to the evaluation of an event, sending out a call, or create a new one. When it comes to interacting with other people in the world, these interactions form the backbone layer, and technological skills to express yourself. In addition to foster, promote, and develop the critical conscious mind and teacher in the role of the teacher often involves the monitoring of all the unsolved technical problems in the classroom.

According to Asterhan and Schwarz (2010), it is only for the email to work, it is a complex task that requires training, academic education, emotional support, and administrative support. The students ' cooperation with different people, was also seen as a problem. All of the participants recalled their experiences in the past with synchronous tools, such as WebEx, which allows users to raise their hands. The lecturer, on the other hand, is the awareness that someone is waiting to talk to us and discuss the issue on the subject.

1.4 Traditional Classroom and Asynchronous Learning Comparisons

Teachers must collaborate with their students synchronously or asynchronously in online education models. Synchronous learning is described as the distribution of the material in real-time, typically through video conferencing services such as Zoom or Google Meet. Synchronous instruction, on the other hand, means that the content is delivered in real-time and in a physical classroom, so the teacher can create or film the video teaching earlier. As a result of these two experiences, it is predicted

that the bond between students' learning can be maximized by collaborative and communicative learning between students. Furthermore, teachers have gathered teaching material that is useful for tailoring the features of the internet in the network, such as the use of search engines or browsers, the uploading of video guides, the creation of simulations or computer games, the creation of interactive labs, and the use of electronic books. Students would be able to access these instructional resources as part of their online curriculum. Above all, in online education, not only students and teachers are pampered, but the assistance of fellow teachers or other teachers is often needed to provide guidance and feedback. Students, too, need guidance from their peers, friends, and other professional resources (peer, relatives, and professional support) to be encouraged to learn online. An online class is unquestionably different from a traditional classroom environment. In an online environment, the notable "at the moment" exchanges and dialogues that occur in a physical classroom setting are not as pronounced.

Students understand the gaps and obstacles to using such techniques, according to the comments. i.e., Google Hangout, which allows participants to engage in an intellectually stimulating conversation in this online educational setting. Students who had previously taken asynchronous online classes had gaps in class discussions in the asynchronous and synchronous environments.

This direct connection and extemporaneous nature of the exchange of ideas requires synchronicity and is a characteristic most respondents valued. More than 200,000 coronavirus cases have been reported in more than 160 countries, resulting in more than 8,000 deaths and leaving several states dealing with severe outbreaks. The COVID-19 pandemic will harm some governments' efforts to increase education spending. As a result, this is a crisis that requires immediate attention and coordinated action on the part of all governments, stakeholders, and communities.

Due to emergencies and ongoing humanitarian crises, millions of children miss school every day. The outbreak of COVI-19 has exacerbated the plight of students in countries that have experienced or are experiencing conflict or disaster.

Furthermore, participants were shown versatility in the approach, both in terms of time and place, as the most positive characteristic of online learning. We can work from home whenever we want because online learning does not require us to be in class at a certain time. This versatility can be associated with a favorable understanding and meaning as a

student's ability to choose when and when they want to study, putting them in control of their own learning experience. To be able to pause, rewind, and replay classes, this power stretches or expands. Online learning, which is synonymous with instant access to resources, allows students to choose when and how they access these hangouts. While encoding, control over the learning process tended to be supplemented by control over individual thinking, as online learning was internalized to enable learners to formulate their ideas without group intervention. Finally, eLearning was linked to a broader range of materialization opportunities, as students wanted to be able to rely on lecturers from all around the globe.

According to (Ward, Peters, & Shelley, 2020) a high-quality learning, it was the goal of the online education program, and it needs to be on a par with the quality of the ground-based training course program offered by a

college or university. The definition of the quality of online learning is to make an accurate, realistic, and reasonable structure, and the development of courses and programs. Because of the shift from offline to learn, online education is considered to be a difficult task, and in the interpretation of the students, will strongly impact the quality of the leather.

Most of the respondents are of the view that online education is difficult, and they think that there are no minds that it is all done in a private setting, we don't like to explore the surrounding area, and that it is not made by the requirements of the learning process, and that's just a formality, to connect using information and communication technologies, and that it is The Pakistani background to be completely different; students have to see in online, education systems, from a variety of perspectives. One of my respondents said that his father did not allow him to be an Android, and he was not for sale, I have an Android phone due to the coronavirus, but he's purchased a phone in front of his son by way of online systems, the education system in the face of the pandemic. In addition, most of the respondents, it is stated that the education system and is a lower level of education, and the sciences. The inability to assess spatial proximity is due to a lack of awareness within the digital system. Online education isn't so bad; if it is extensive, it can have many benefits. At the same time, there are a lot of benefits to attending a university, where students have the opportunity to meet people of all races and to learn from them. Not only is the attendance of the lectures, but it also important to look out for them because they can be useful for us. Any cause of action is different, and the practice is of crucial importance. For example, if a student wants to be a

chemist, that is, they need to have a laboratory to carry out practical training; they will not be able to do this and do it at home.

Students will develop learning styles that are considered as an important aspect of the impact that it has on their learning in an online environment.

Some students may find it difficult to rely only on the Internet, cafes, and write, read, online exercises, interactive e-magazines, newsgroups, and whiteboards. The lack of participation in activities, and more intimate and personal way of communicating with teachers and peers, as well as the visual stimulation, following some of the students, made it difficult for them to learn.

According to (Jafri, 2020) students to make a direct reflection of the teacher's online jobs that can bring in the right direction. This is a need for you to feel focused and seems to be related to the need for trust and confidence that the ideas, the correct interpretation, and implementation. As a result, it has the confidence of the potential for reduction of the students' feelings of alienation in the study online. If the students were depressed, or insecure, she felt less alone, but when they were told that they could complete such a task, they felt freer to engage in. Various organizations were forced to change their workflow strategies and adopt new technologies as a result of the pandemic. In most cases, these businesses did not have enough time to consider how new strategies and technologies should be introduced and integrated into their current operations (Carroll & Conboy, 2020). Universities all over the world followed suit. Because of the raging pandemic, Bao (2020) was perhaps the first to describe how universities were shifting from classroom-based education to online education.

1.5 Strengths and Weaknesses of Online Education

One of my respondents mentioned that we are in the digitalization age, that sophisticated media technologies exist, and that there are few positive and negative impacts on social life. And we all know; information technology is improving every day. Technology is everywhere, and everybody needs to use it to its full potential. Technology is a branch of knowledge that includes expertise and is very useful in our everyday lives. Education has benefited from technological advancements, and our approach to learning has evolved as a result. Thanks to the pandemic, schooling is being accessed by technologies all around the world so that students can pursue

their education. Students have faced numerous issues as a result of a lack of better apps; most students were unable to concentrate in class due to a lack of interest in online education; most students are unable to continue receiving education from their native location via information technology; they also face significant disruptions in their domestic lives in order to devote time to their studies; however, students are taking online classes and learning about h We must find a way so that students will not have this challenge in the future because they have not yet submitted assignments due to their inability to use technology effectively.

According to Lukos, (2020) Education is important for our personal and professional growth. Students must make sacrifices in order to obtain an education, such as travel, time, and leaving a significant amount of work while exams are scheduled; similarly, we must make several compromises during the pandemic phase. In the interviews I conducted, the students expressed their appreciation for online courses. Due to online classes, students do not have to travel.

1. Online education provided opportunity to use technology in a positive way.
2. Online education is affordable.
3. Students are happy that they do not have to get up early.

Furthermore, 90% of students are satisfied with the availability of online and physical forms for delivering lecturers and applications that are used to instruct and practice the technique. This is expressed in the following interviewing perspectives.

They demonstrated their familiarity with online classes by stating that they were physically at ease and that being in their comfort zone helped them to feel less anxious. They made the following remarks to express their opinions:

The students were polled on their priorities for the upcoming academic year. They expressed a range of emotions. The majority of them favored

online schooling, while others expressed a desire to take classes on campus. The below are some of the arguments in favor of on-campus classes:

Online classes, as compared to regular classes, are also proving to be harmful because the physical work is no longer needed. Technology plays an important role in education, but we all know the use of technology has negative effects on our bodies, eyes, and routine. I had a respondent tell me during the interview that I am being very lazy as a result of the online classes, competition, and interest. Standard classes and online courses are not compressed; however, there are several side effects that concern the student.

The immediacy of multi-media resources was seen as a possible distraction from learning. The opportunity to practice at one's own speed posed a challenge to procrastinators, who could leave much of the learning to the last minute. Similarly, others saw the space or field for independent thinking as representing a lack of participation, potentially isolating and limiting students who would not be able to benefit from their peers' experiences while they would be in a classroom setting. These long-term correlations were interpreted as a higher likelihood of having trouble interpreting anything, particularly if small clarifications or explanations were required before progress could be made. It would cause students to flail around on their own for prolonged periods of time, potentially jeopardizing their course performance and almost definitely their tension. Even if students were able to get answers to their questions, it was decided that these answers would be standardized and not personalized to students' backgrounds or reference points in the manner that could only be done in a classroom setting Participants argued that online classes are unacceptable as early stages of higher learning degrees, before social and other relationships are built within each other, due to internalized perceptions and a lack of social and other support. Finally, the students were worried

that employers would not accept online research credentials and would want to hire students who had completed residential learning in certain situations.

Ladyshewsky, (2013） Instructors that are passionate about their students' education have a beneficial impact on their satisfaction. One of the most important factors affecting student satisfaction and the success of the educational process is the instructor's quality. Assume the teacher teaches the class well and has a positive impact on the students' academic performance. This technique, in such situation, results in student pleasure and improves the learning process. Furthermore, the instructor's comprehension of the learner's needs improves student happiness.

According to Singh et al. (2016), student academic performance has a direct impact on a country's socioeconomic development. All faculties' principal priority is the academic performance of their students. Furthermore, a student's academic success is the primary foundation for learning knowledge and improving abilities. According to Narad and Abdullah (2016), periodical evaluation or examinations are necessary for assessing students' academic achievement over a period of time in order to achieve better outcomes.

Moore and Thompson (1990, 1997) Different academic curriculums yielded comparable performance results. The researchers analyzed a lot of this type of research from the 1980s to the 1990s and came to the conclusion that distant education was beneficial in terms of learning attainment, student and instructor attitudes, and return on investment. Harrington (1999) identified examined classroom and online statistics education for master's-level social work students, concluding that students who have previously excelled academically can do just as well using a distance learning strategy as they can in a typical classroom.

1.6 In Pakistani context

Iqbal, Farooq, Ahmed, & Rehman (2020), Teachers must collaborate (communicate) with their students synchronously or asynchronously in online education models. The COVID-19 outbreak has had an impact on traditional teaching methods around the world. Even an educational institution has chosen remote learning alternatives for learning purposes but to take risks, its students and faculty of health are the same as useful as traditional teaching methods. Particularly in the less developed countries like Pakistan, where virtual education may not produce the desired results. most students do not have access to a reliable internet connection and correctly, the technical specifications. In this case, the persistence is to consider the impact of Internet technologies on the performance of traditional teaching methods, especially for students, continuing education, and higher education. Based on the conducted research, 73% of students had access to the Internet system, and 72.5% of students could take part in classes using a COMPUTER/laptop. For comparison, we note that 67.5% of students believe that standard lessons were more productive, and this is, Internet or remote control, teaching and learning. In addition, students also have information, no technical and money problems, mutual delayed reaction, and failed socialization. According to 42.5% of students, difficulties in performing a group project arose due to social distancing. In this case, as in educational organizations, it is necessary to make some serious changes in the curriculum and design, as well as content aimed at the Internet. Based on the above-mentioned complications, 67.5% of students who supported the traditional approach completed the online training. 78.5% of students invited the need for personal interaction with teachers for effective learning, which is compromised at a distance. As recommended by the World Health Organization, people should adapt their activities for everyday life, which means developing appropriate training programs and useful content to deliver the necessary educational institutions. Digital technology also needs to be a teacher to get better results.

1.7 Statement of problem

This research looked into numerous aspects of the online education system's function, as well as technical equipment and compatibility with a certain region. The Apps were chosen for learning during the pandemic, the benefits and drawbacks of online education, and the challenges of adopting new teaching methods, such as the retention of information by students through online classes, in order to analyze the effects of online education in Pakistani society, with a focus on undergraduate and graduate students who are enrolled in online classes. The challenges of using applications and keeping track of time in order to properly attend class, as well as student class participation in an online education system, determining student performance and its implications on grading and learning Students' perceptions of online classrooms and various theories concerning the online education system were investigated.

1.8 Objectives of the study

The objective of the study is as follow;

1. To investigate the perception of students about virtual teaching on their skill development
2. To identify the issues facing by the students during virtual classes

1.9 Significance of the study

This study will better understand the impacts of virtual teaching and learning among the students of the Quaid-I- Azam University, Islamabad amid the covid-19 pandemic. This study will also focus on the problems and issues facing by university students. This study will facilitate the higher education commission to apply the best and effective system to eliminate the issues of the teacher and students and also suggest ways that would result in an effective learning environment. Additionally, this study will be very beneficial for the researcher who wants knowledge about the online education system and it will contribute to the academic purposes and all the literature regarding online teaching and learning during the

covid-19 epidemic. Every study has its significance so this study would also play a great role in the development of a virtual education system and will suggest better ways for the enhancement of the recently launched remote learning. This study will facilitate the higher education commission to apply the best and effective system to eliminate the issues of the teacher and students and also suggest ways that would result in an effective learning environment.

Chapter No 2

Review of the Relevant Literature

Virtual teaching work effectively in certain circumstances, as this medium of teaching is new and expensive, so both teachers as well as learners are not well aware to best use of new this technology, so it is not so effective than the face-to-face teaching in the class room.

(Jabeen, Din, & Sadiq, 2014) Wrote in an article (*Student Satisfaction From E-Learning Systems*) that the modern revolution of online technology had completely changed our education system and transform our ideal thinking into reality. This alternate mode of virtual education has a great impact on academic field. The advancement in this field had made the life of students very easy because every student can easily get proper education from home. Online education has gained immense popularity among the students pursuing higher education. It refers to the human computer-based interaction, which are highly deployable from the last decade. "Unfortunately, the significant increase in the number of students studying online has not been associated with corresponding advances in the preparation of educators to teach online, in pedagogy for online learning, or in other efforts directed toward improved learning outcomes and the overall quality of the online educational experience" (Duffy & Kirkley, 2001; Garrisson & Anderson, 2003).

An American researcher in his report (Simon, 2012) described that the discovery of internet in 1990's in North America for the first time had changed their daily way of life and made them advance in both educational field and other related to technology. Simon in 2000 wrote that Congress was called a virtual education commission to find out the impacts of the education system on their individuals. This report was aimed to help local communities and facilitate the educational institutes to get proper online learning through the internet. Ratio was increased more in the online enrollment than the face-to-face learning. This commission was aimed to repeal those rules which prevent citizens to take full access and use of this newly invented Internet for online teaching and learning. The rule that was

formed in America at that time that all the students had to make sure the 50% of face-to-face enrollment in the class room. Studies have demonstrated that online and traditional face-to-face methods are equally successful in terms of student academic performance. In many fields, however, it is still impossible to assess the attitudinal and skill domains of learning using the online technique. Online technologies make it difficult to conduct and assess practical sessions and hands-on activities. As a result, online platforms cannot guarantee the quality of instruction on courses that require practical demonstrations, such as most medical science courses.

2.1 Covid-19 and closure of educational organization

The outbreak of the recent epidemic disease covid-19 has hit the countries severely and become a pandemic all around the world. Government had ordered their citizen not to come out of their homes and almost more than of the countries had faced complete lock down across the country. Government had strictly ordered to follow all the precautionary measures to slow down the spread of this epidemic. These nationwide closures are impacting over 91% of world's student population (covid-19 educational distruption and response, 2020).

(Pokhrel, Sumitra; Chhetri, Roshan, 2021) Identified that the recent outbreak of covid-19 epidemic has caused countries a lot of challenges to be faced. Beyond health and economic crises, it had impacted educational institutes as well. Due to complete lockdown across the country, there were no single mean of earning left, which result increased in more poverty across the country. As before covid-9, there were a lot of different problems in daily life of an individual, but world had never faced such challenges as before, which leads to poverty, mental health problems and loss of interest in their daily life activities. Government had temporarily closed the educational institutes and it had changed the view of perceiving education around the world. The transition from traditional teaching to online programme and course delivery is ongoing. 5 Institutions have

ceased in-person teaching in favor of virtual settings to encourage learning, recognizing that traditional education is a skill development instrument capable of boosting skills and social awareness. In the aftermath of the COVID-19 pandemic in Pakistan, the Higher Education Commission (HEC) is committed to making e-learning a success, with only some previous efforts made by Open University6, while some universities have already begun online classes and stragglers are using the summer break to prepare for the transition to online academics.

2.2 Role of virtual teaching and its tools

Subedi et al., (2020) explained that e-learning tools have played a crucial role during this pandemic, helping schools and universities facilitate student learning during the closure of universities and schools. In least developed countries like Pakistan, where the virtual mode of teaching is not effective. Learning from home is not affordable for the students of low-income families. It required expensive internet devices and high-speed internet to attend the lecture properly and in effective manner. Remote and far-flung areas where the internet facility has not been provided to their residents. The sudden shift from the traditional class room, countries were not in a position to carry on the educational activities with an alternate mode. As before the covid-19 there were applications to have free access from home or anywhere like Bangalore based educational technology. Amid the covid-19 pandemic, in the developing countries like China had initiated Tencent classroom, through which billion of student could resume their education free from home. These new technologies have assisted parents to carry on their children study easily.

Serin, (2018); Mart, (2017) Education refers to the process in which one can learn and enhance their knowledge about the social world. If one has to learn about something then definitely, they would have to go to the educational institutes or any other place where knowledge is built. During the 21st century, the development in every field of the world made the life of everyone unique and advance. Like all other sectors, educational

organizations also get benefited. Researchers studied many online education platforms, which are conducting the online education through different teaching software's like zoom, Facebook live video and Microsoft team. These online teaching apps are heavy in use and required good quality gadgets to play the lectures without interrupting video. A study revealed that the learner feels more comfortable in the traditional way of learning then the online mode (Kamali, & Kiner, 2015). The participation of students in the class results in the improvement of their learning skills effectively.

Most of my respondents said we know that information of technology is growing day by day. Technology is available everywhere and everyone wants to take full advantage of it. Technology is a branch of knowledge skills etc. technology is very useful in our daily life routine. Technology has increased in education; our way of learning through technology has changed. Education is being obtained through technology all over the world due to pandemic period, so that students can continue their education. Students are facing a lot of trouble as well due to lack of physical technology. The students have faced numerous problems due to lack of better apps, but students are taking online classes and they come to know how to use it. Most of them have not yet submitted assignment because of not coming to use technology well, we have to find a solution so that students will not face this problem in future.

One of my respondents said education is very important for everyone and other hand health is more than important because poor health does effects on education directly. So that's why Higher Education Commission (HEC) of Pakistan is decided to start online classes with proper schedule.

Researcher purpose is to define in detailed about the perceptions of student who attended online classes in this pandemic period. Students face many problems which are described in the current research.

One of my respondents said most universities used this app including Quaid-e-Azam University Islamabad, is provided this app for online classes to students. MS team is quicker to communicate with all team member and supervisor at the same time. This app is very useful and collaborates in real time. This is a chat-based work space in office 365. In this app students collaborate internally and externally securely.

2.3 Blended learning

Ferrari, (2013) argued that the students of new age should give such practices related to their education learning that better asset them in their educational activities. More advancement needs in the digital online teaching in order to have an effective learning platform. The old traditional mode had a lot of advantages to boost the students learning skills but due to the recent pandemic COVID-19, it had closed all the educational organizations across the world to slow down the spread of novel corona virus. Countries had faced many challenges amid the pandemic and were not in a condition to get rid of that virus. So, they have to cope with the newly spread disease and had to implemented new alternate learning mode. The primary challenges that are predicted to develop are in areas that require clinical training, which requires both hands-on and interactive environments, and artificial cadavers, while not as effective through a digital interface, are a moot concern because they are already in use. The Online Learning Consortium's devotion resulted in two decades of research into how students define excellence in their learning environment. For a variety of reasons, student satisfaction with online learning is becoming increasingly crucial in higher education. The most significant factor is the widespread acceptance of this teaching and learning method in colleges, universities, and community colleges across the United States. A developing feeling of student agency in the educational process, on the other hand, is a mediating issue. Students can and do express their views on their educational experiences in a variety of methods, including end-of-course evaluation protocols.

Li and Ma, (2010) suggested that although the presence computer-based technology is there to facilitate students regarding their academic purposes but it is not enough to get more skills and progress in their studies. Researcher explained that to assist the teacher and students more with the digital technology, it needs to implement the new system of ICT in their teaching method   to help out the students in effective way. It was compulsory to made advancement in the digital literacy so that to brought competences among the learners in their studies. The Pakistani government has forced complete lockdown across the country. About 6 to 8 months, there were complete lockdown and were complete closure of schools and colleges. Over time, when there were control in the coronavirus spread and country were back to its normal life. Higher education had announced the hybrid mood of educational organizations. Students were going to school once or twice a week and rest of the week they have online classes.

According to Iqbal, (2020) Traditional face-to-face learning is combined with asynchronous or synchronous e-learning in blended learning. Because of the advantages it has over traditional learning, blended learning is a viable option for medical education. This learning method has quickly gained popularity in academics and is now extensively employed.

2.4 Learning Design

Adult learning concepts, distant learners, and their learning styles are all taken into account in the U21G learning design. When a subject is relevant to the learner's personal interests, significant learning takes ensue. Adult education programmers should make use of participants' prior knowledge. It's important to explain why some things are taught. Adults must participate in the design and evaluation of instruction. The foundation for learning activities is experience (including errors). Adults are more interested in things that are directly related to their jobs or personal lives. Adult education is more problem-based than content-based. Student satisfaction research has been transformed by online learning. It has

pushed the education research community to rethink long-held beliefs that learning takes place primarily within a metaphorical container known as a "course."

(Alexia, 2020) States that looking at the studies on student happiness from a factor analytic standpoint, one thing becomes clear: this is a complicated system with little agreement. Even the most current factor analytic research hasn't been able to reconcile the lack of agreement on the dimensions that underpin online learning satisfaction. The study reflects on the key issues that students who take online classes at home face. It explains how students who have taken online classes feel. It was also discovered that how concerned are students about online education? Furthermore, it will pay close attention to the challenges that students face in Pakistan's online learning environment. In this regard, encyclopedia interprets educational anthropology, which is closely linked to Margaret Mead's initial work. Educational anthropology focuses on schooling through societies, pluralism in education, cultural pedagogy, and older literacy and socialization approaches. Online education, on the other hand, is an educational delivery method that includes learning that takes place over the internet. Now the quantity of eLearning and online degree in most disciplines is increasing rapidly.

Splendour, (1963), explained that the exploration of a frontier region and the application of anthropology to education are two aspects of education and culture. The transition of culture, particularly the values associated with educational activities and educational environments, is the subject of this investigation. In an egalitarian cultural context, education is seen as a priority. As a result, the methodology is cross-cultural and comparative, thanks to the use of inference. Our educational system may be seen differently by people from various cultures. As a result, Jules Henry's semiurban elementary school in his book can be interpreted as a variation of several possibilities, such as a West African "Bush" School, a Japanese youth community, and so on.

(Richard, 2003) Stated that there are a variety of approaches to improve online learning engagement. Gamification is a relatively recent approach in which "game style sections are used in non-game settings." Gamification has been shown to be successful in many areas, including education, according to a systematic study published by (Apostol, 2020). Social and interactive learning may be another unique solution. Students would be able to engage individually with each other as well as professors using this approach. They will collaborate on ideas and express their experience in a public forum. The majority of people said that Twitter helped them learn more. Another strategy worth noting is branching scenarios, which enable students to put their knowledge to the test in a real-world setting. This type of learning requires the learner to make a decision and then follow up with it. Each choice creates a new set of challenges and options.

(Aleksander Aristovnik, 2020) Universities all over the world have demolished their physical classrooms in favor of online learning. For certain organizations, internet site learning was nothing new, but for others, it was the first time they had seen such methods of instruction. Students from developing, isolated, and rural areas, on the other hand, had a variety of issues with internet access or even a lack of electricity. Performance assistance and cognitive support are the two primary types of support offered to help learners achieve their learning objectives. Tools for the execution of certain tasks that are essential for obtaining certain objectives, either unique to a topic or segment of study, or general to the subject or course, are examples of performance assistance. Without having to first achieve "expert" status, a learner can aid in the development of others once they have established and expanded their knowledge base. Students learn from a variety of sources, and while the professor is one of them, Students are actively encouraged to use one another's skills, which they have gained through their experience in various roles and responsibilities. E-resources, which are actually and symbolically available

at the students' fingertips, give additional cognitive help. Each subject has its own library dedicated to it. Whether it's a credit-bearing or noncredit online course, the most crucial thing is that the online course's design meets its objectives. To assess success, we must first determine what task the student is hiring the course to do. These objectives will vary among and within credit-bearing and noncredit online courses. If I had to identify one thing that contributes to the success of online courses, it would be engagement. Learning will not occur if a learner is not engaged in the course, their fellow students, or the educator teaching the course.

Distance learning has long been associated with the concept of the "hermit learner," and an experience analogous to the "loneliness of the long distance runner," in which a student learns on their own, entirely isolated from other students. Because humans are social beings who seek a sense of belonging, insufficient connection with other learners might lead to alienation from the learning process. The conversational environment becomes even more important in these circumstances.

(Alexia, 2020) It mandates that payment for health-care programs, as well as services directly linked to the determinants of health, be founded on the concept of equality, meaning that these facilities, whether privately or publicly funded, be available to all people, including those who are economically vulnerable. In order to be equitable, disadvantaged families should not be overly burdened or stressed by health-care costs when compared to wealthier households Of course, the sheer existence of such tools does not guarantee active involvement by all parties involved, but the proactive approach taken by the faculty and student support services at U21G has helped to foster a culture where active participation is the norm rather than the exception. To this aim, the MBA program's attrition rate over a two-year period is under 5%, despite the fact that distance education is infamous for high drop-out rates, particularly in the case of more traditional, paper-based programme. Assignments are submitted to

instructors, and the learners receive a review of the submitted assignment within seven days.

(Means, 2020) Examining students' minds is no longer necessary for online learning. In cases where participants traditionally had to travel greater distances, it has proved to be a cost-effective form of communication. However, during the pandemic, the routine has continued, despite the fact that the participants include academics, professors, politicians, diplomats, technicians, and businessmen, among others. The importance and usefulness of dictionaries in language learning cannot be overstated. The evolving essence of online dictionaries and the influencing of how students learn a foreign language help knowledge acquisition. For the beginner, learning through the use of information technology was more successful. Colleges, professors, and students will have to live in "triage mode" starting in the spring of 2020. There isn't enough time to rebuild online courses using research-based practices for improved online learning outcomes. Furthermore, some universities prohibited their faculty or employees from using learning technology and remote learning activities that required fixed-time involvement in learning practices or wireless internet as part of equity agreements about putting some students at an unequal disadvantage. No one would have predicted that postsecondary classes would be entirely online by spring 2020, but we can learn new things from this crisis, which revealed the extent of structural or latent equity disparities, as well as the strengths and disadvantages of higher education's online delivery readiness. Gathering and synthesising these findings will lead to attempts to develop strategies for curriculum succession in the face of current and potential disruptions, as well as budget distribution to promote a resilient and inclusive online learning system.

2.5 Teaching in the digital age

According to (Lee et al., 2012) Teachers worked hard to make online classes as clear and systematic as possible to aid navigation and prevent students from becoming overloaded with information. Amid the covid-19 pandemic, there were many barriers to online teaching and the very important context was the teacher confidence to motivate their student regarding skill development. Teacher had to adopt those methods which were coherent to the students understanding. Strenuous endeavors of the teacher gave students a motivation to get succeed in achieving their future goals. Self-confidence of the teacher moves them to teach the students with enthusiasm and had influence the overall new method of teaching.

Dhawan, (2020) illustrated that the good efforts should be made by the higher education and teachers also to make the online education more engaging, interesting and meaningful. (Hodges et al. 2020) teachers of different ages and backgrounds have had to prepare and conduct classes from home, with all the practical and technological challenges that entails, and frequently without adequate technical support. The more important issue faced by the teachers was of their lack of pedagogical content knowledge and skills which were needed for their online teaching. The pedagogical content knowledge (PCK) includes all the instructional and administrative teaching method which could result in the effective learning for their students.

Henderson, (2021) Teachers, both current and future, must deal with the demands that technology advancements place on them. Teachers are expected to come up with new methods to use technology to enhance the learning environment and to effectively use technology to support their teaching and students' learning. At the same time, technology is a learning goal; teachers must encourage students' technological literacy in order to prepare them for working and learning in a "twentieth-century" society, as well as to assist them in developing the necessary skills for cooperation, communication, problem solving, and lifelong learning. In terms of their

professional life and work, teachers and teacher educators are migrating through a particularly unsettled period. Staff responsibilities have been greatly increased as they try to not only migrate instructional content and resources into the online arena, but also become sufficiently skilled at managing the needed software. The effect on staff and students is uneven and lasts for a long time.

(Bailey & Larry, 2012) According to research, an online degree has a poor importance in the eyes of hiring managers when it comes to handling the selection process. Analyzing the influences that affect recruiting managers' perceptions, and determining whether having a degree from a for-profit college has an effect on those interpretations, is important in the development of programs and courses. During times of pandemic outbreak, the online industry has gotten a boost. Companies provide programs to link participants who are earning while also advising that the globalized environment could stifle contact and socialization, despite the fact that it is possible to communicate and socialize while being remote and secure. The platforms offered by Microsoft Team Application and Zoom, which are the most common, are used to serve educational needs. In today's world, a well-established learning model is Online learning, which includes both theoretical and functional learning processes the purpose of literacy aims to consume in tough times, it will remain one of the most effective parts of the process, it depends on the foundations of communication mechanism, if anywhere unavailability of information technology progress dements, then this learning process will be strengthened, because education is the sole weapon for societal change. Various study areas have looked at eLearning. (Shwatz, 2018)

Several advantages of an online learning environment include the ability to train anywhere at any time, more time for searching and answering, and increased learning versatility. The results that did not require a long commute, regardless of location. To provide online education as a viable alternative to traditional classrooms. Moving offline conversation lessons

to a completely online community presents several difficulties, including locating online networking opportunities (e.g., videoconferencing sessions, conference phone calls, or chatrooms). Furthermore, in addition to studies done prior to the pandemic on online education, this study discovered that, in contrast to younger faculty, older faculty, with more experience, prefer online education in the midst of the COVID-19 pandemic because they might be mindful of and know that the risk of serious COVID-19 illness increases with age. Despite certain concerns, HEC's faculty are requested and required to depart from traditional residential and face-to-face education practices. Faculty must be provided with continuing and continuous assistance, preparation, and growth as they transition and adjust to the new standard in the higher education world and environment, where they must be provided with ways and ideas to truly appreciate and extend the possibilities and chances for delivering online education.

"Student engagement has been defined as how involved students are in their learning experience and how connected they feel to their classes, peers, and their institutions" (Axelson and Flick 2010). Researcher explained that the use of technology could assist and enhance the students in their academic activities. The core issue of the low student engagement in their online class room because there were not well aware about the use of Internet technology. As like in European countries, they had given the proper training of Internet usage and about the modern technology. They use these technologies from their play group and when they reached to college and university level, they had good idea of use of this modern technology.

In Pakistani context, students of the rural areas are not even know about the simple use of internet gadgets. Amid the covid-19 pandemic, when government had apply lockdown across the country and whole system of education was transform to virtual mode. Students were not able to connect themselves to the online class because of no proper use of modern technology. As like student response system (SRS), electronic tools which

had the great potential to assist students and engage them by asking questions by their teachers during the online class room. When a teacher asked question, a great number of students group could answered that question at a time. Consequently, this was the good way to engage student in the class room.

Herrington et al, (2003), defined that the student engagement in the online class room is very important, because the covid-19 pandemic had changed the traditional mode into the virtual completely. Students had no other means of learning except that virtual software likes Zoom, Microsoft Team and others. In Pakistani system, teacher was giving the online lectures and more than half of the students during the online class were not online in the virtual class. Others were just join the meeting and turned off their video and mic and then they went outside without listening to their lectures. The consequences of this least engagement of the students in their classes lead to the zero percent of quality and effective learning. Students were to first mentally ready for their online class by turning on their gadgets. They were feel boring by connecting themselves to the online class. About less than half of the students were not active during the class and that was the reason student feel alienation and boredom. Students had low consequences of achievement and consequently result in the dropout of more students from the class.

Khattak, (2020) shed lighted that Less engagement of students in the online class because of the too long lectures. Students had faced technical issues like low access of internet connectivity consequently interrupted the ongoing lecture. Engagement could be driven through the interaction of the students and teacher like physical classes, as online classes were remote learning and once the teacher was carry on with their lectures, no communication was held. If the students had to ask question during the lectures, the students were turned on their mics and they have different disturbing background noise it was result in the complete disruption in the

online class. Consequently, there were no participation of the students in the online class and it was result in the less engagement of the students.

Quality learning is the objective of any online education programme, and it must be on par with the quality of on-ground courses and programmes offered by any college or university. The definition of quality in online learning is an accurate, realistic, and sensible framework and organisation for designing courses and programmes. Since it was seen as daunting for them to transition from offline schooling to online education, students' interpretations were heavily influenced by quality learning.

Most of my respondents think online education is difficult; they believe there is no brain grooming, that it is all done in a closed atmosphere where we cannot experience the environment, that it cannot meet the requirements of the learning process, that it is only a formality to link one another through information communication technologies, and that it has turned into a network culture. In the Pakistani background, it cannot be entirely owned; students see the online education system from various lenses. One of my respondents said that his father forbade him from using an Android phone; he did not get me an Android phone because of the coronavirus; however, he would forcibly buy a cell phone for his son because of the online system launched to get education in the pandemic. Furthermore, the majority of my respondents said that the online education system has lowered the standard of education and learning. Inability to assess spatial proximity due to a lack of acculturation in the digital system. Online education isn't all bad; if it's enhanced, it can have a lot of benefits. Around the same time, there are many advantages of attending a college where students have the ability to meet individuals of all races and learn from them. It is not enough to simply attend lectures; it is also important to observe them because they are useful to us. Each profession is unique, and practise is crucial. For example, if a student wants to be a chemist, he will require a laboratory to conduct practicals; he will be unable to do so at home.

Amid the covid-19 pandemic, a temporary closure of educational institutes led the whole education system into virtual world. Government had order to strictly follow the SOPs to slow down the spread and maintain social distancing. There were different modern technologies to carry on the educational activities but still they had a lot of issues. Teachers had not given proper training to use the teaching platform effectively. Students faced many difficulties to take the classes like internet connectivity in the far-flung areas. Pakistan's entire education sector is suffering from a severe shortage of qualified subject teachers. In this aspect, OPF's educational system is not an outlier. The situation is particularly pronounced in OPF institutions located in rural areas of the country, where qualified personnel frequently migrate to larger cities in pursuit of better possibilities. To address these issues, educators around the world are incorporating effective use of Information and Communication Technologies (ICTs) into their classrooms to promote student-teacher engagement.

(Dhawan, Shivangi, 2020) Explained that there were different varieties of technologies on the market for on-line education however generally they produce tons of difficulties. These issues related to modern technology were downloading errors, problems with installation, login issues, issues with audio and video, and so on. Student finds on-line teaching to be boring and unengaging. Virtual learning had such a lot of your time and adaptability that students had no time to try and do it. Personal attention is additionally an enormous issue facing on-line learning. Students wish two-way interaction that generally gets tough to implement. The training method cannot reach its full potential till students follow what they learn. Sometimes, on-line content is all theoretical and doesn't let students follow and learn effectively. Mediocre course content is additionally a serious issue. Students experienced lack of community, technical issues, and difficulties in understanding tutorial goals were the foremost barriers for on-line learning (Song et al., 2004). In a study, students were found to be not sufficiently ready for equalization their work, family, and social lives

with their study lives in a web learning surroundings. Students were conjointly found to be poorly ready for many e-learning competencies and academic-type competencies. Also, there's a low-level readiness among the scholars regarding the usage of learning management systems.

2.6 Foster Collaboration

According to (Ahmad, 2020) Students benefit not only from developing relationships with their teachers, but also from developing relationships with one another. The classroom becomes a more respectful and productive environment when students are consistently given the opportunity to solve challenges and deepen understanding as part of a team. It can also create a friendlier atmosphere, which is especially beneficial for introverted students. A classroom can be scary for shy people, and putting a camera in one's face doesn't help with self-consciousness. A sense of community is formed when names are linked to faces, and faces are linked to real, imperfect, striving students. Students also had the opportunity to see their teacher assisting others, which can help educators show their sincere desire to assist and answer questions. It is simpler to retain engagement when students and professors collaborate in real time via videoconferencing. Teachers can keep an eye out for drowsy or distracted children, as well as whether they appear puzzled or enthusiastic. However, there are several drawbacks to using live streams and Zoom. Some students and teachers may be apprehensive about allowing outsiders inside their homes. When things are really noisy or dirty at home, these people may need to be granted a pass on occasion. Others may lack the necessary bandwidth or hardware to connect in real time. Schools and internet providers, on the other hand, are attempting to close the gap between the digital haves and have-nots. Meanwhile, teachers can broadcast video recordings of classes for students who are unable to attend class due to internet connection issues. According to Apostol (2020), over the last few decades, an increasing number of

researchers from various domains have showed an interest in exploring how technical knowledge, technological connectedness, and digital tools might be fully integrated into curricular activities. Both contributions have gained increased significance in recent years, as the educational system has been obliged to respond to the current situation, whether willingly or reluctantly.

According to Singh et al. (2016), student academic performance has a direct impact on a country's socioeconomic development. All faculties' principal priority is the academic performance of their students. Furthermore, a student's academic success is the primary foundation for learning knowledge and improving abilities. According to Narad and Abdullah (2016), periodical evaluation or examinations are necessary for assessing students' academic achievement over a period of time in order to achieve better outcomes.

Moore and Thompson (1990, 1997) Different academic curriculums yielded comparable performance results. The researchers analyzed a lot of this type of research from the 1980s to the 1990s and came to the conclusion that distant education was beneficial in terms of learning attainment, student and instructor attitudes, and return on investment. Harrington (1999) identified examined classroom and online statistics education for master's-level social work students, concluding that students who have previously excelled academically can do just as well using a distance learning strategy as they can in a typical classroom.

The global COVID-19 pandemic has had a profound impact on almost every aspect of life, including schooling. Indonesia, in particular, was not spared from the effects of these shifts. Because it was so difficult to stop the disease from spreading further, world leaders have set highly strict criteria to break the COVID-19 transmission chain. Some concepts, such as social and physical distance, as proposed by the World Health Organization (2019), have made determining which to implement in each

location challenging. This issue includes the federal governments concern with accrediting bodies manufacturing proof that students reach articulated learning goals. These widespread interests and pressures push instructors to document learning effectiveness moreover on maintain their efforts at continuous improvement of learning outcomes. The development of those 2 trends merging within the up-to-date education setting raises a matter concerning the effectiveness of on-line courses, as compared to ancient room learning and in relevancy individual student desires, perceptions, and learning outcomes.

Kim & Bonk, (2006) a lot of problems had hooked up to on-line education however we tend to cannot ignore the perks of it in times of such crisis. We will perpetually have solutions to mend these difficulties. Technical difficulties may be solved through prerecording video lectures, testing the content, and perpetually keeping arrangement and be prepared in order that the teaching–learning method can't be hampered. On-line courses ought to be created dynamic, fascinating, and interactive. Lecturers ought to set deadlines and reminders for college students to form them alert and attentive. Efforts ought to be created to modify the training method to the simplest extent attainable. Personal attention ought to be provided to students in order that they'll simply adapt to the current learning surroundings. Social media and numerous cluster forums may be accustomed communicate with students. Communication is that the key once it gets tough to undertake reaching intent on students via texts, numerous electronic communication apps, and video calls, and then on— content ought to be specified change students for follow and conjointly hone their skills. The standard of the courses ought to be improved unceasingly and lecturers should try and offer their best. On-line programs ought to be designed in such the way that they're inventive, interactive, relevant, student-centered, and group-based (Partlow & Gibbs, 2003). Educators should pay tons of your time in creating effective methods for giving on-line directions. Government should specialize in education

problems and emphasize cooperative learning, case learning, and project-based learning through on-line directions.

(Mahmood, 2020) Illustrated that in Pakistan, there are presently 177 universities and other higher education institutions. The public sector accounts for 58 percent of these 177 universities, while the private sector accounts for 42 percent. All of these higher educational institutions are required to obey the Higher Education Commission's rules (HEC). Pakistan's education authority, HEC, has instructed all universities to begin online classes on March 31, 2020. This was almost certainly viewed as a side effect of COVID19's spread. This measure will assist students in avoiding educational failure The Higher Education Commission (HEC) has encouraged universities to train their staff in online teaching through the internet. In addition, HEC recommended that workers be provided with the appropriate tools. This measure would assist in preventing more disruptions to student learning. In addition, HEC has announced the development of a databank or data base for online courses. This data base will be available to all universities. Aside from that, the World Bank is collaborating with education ministries in a number of countries. The World Bank is attempting to assist them in adapting to eLearning opportunities. This eLearning tools will assist students in conducting online learning in the event of a pandemic. Various universities in Pakistan have already begun their remote eLearning programmers, which will begin in March 2020. Punjab University has also begun offering students online learning opportunities. Punjab University is assisting students in obtaining course materials and recordings of lectures. These are only sent as attachments to emails or uploaded to apps. This is helpful in assisting universities in compromising education in the event of a pandemic. Apart from these, the University of Engineering and Technology (UET), Bah Uddin Zakariya University (BZU), and Lahore University of Management Sciences (LUMS) all assist students with remote learning. HEC would like to encourage LUMS and UET to assist other top universities in delivering

and maintaining their online environments. Many colleges will be able to boost their capability and web service as a result of this.

According to (Lee et al., 2012) Teachers worked hard to make online classes as clear and systematic as possible to aid navigation and prevent students from becoming overloaded with information... Amid the covid-19 pandemic, there were many barriers to online teaching and the very important context was the teacher confidence to motivate their student regarding skill development. Teacher had to adopt those methods which were coherent to the students understanding. Strenuous endeavors of the teacher gave students a motivation to get succeed in achieving their future goals. Lack of trust in computerized communication and learning procedures. As a result, students prefer to study in a regular (day-to-day) setting. Sorts of education and not in the traditional types of education. Form of instruction in a virtual environment. The absence of state-level standards for distance education and, as a result, the failure to issue a state copy diploma. As a result, a large number of distance learning certificates or diplomas are awarded to graduates of learning programme certificates attesting to their completion of this course. Furthermore, conventional education is beneficial and provides a high probability of obtaining the required degree of quality information. Every student or student will be able to work with teachers for an extended period of time in order to strengthen their acquired knowledge and obtain adequate answers to questions they do not understand, and there is no doubt that traditional education is preferred by a large number of people in Uzbekistan over online education.

Assumptions

Virtual teaching could negatively impact the student academic performance and have uncertainties of their future because the virtual classes had no quality and student faced so many issues of being connecting to the meetings. The teacher and student relation should be very close and strong so that student feels the teacher cooperative and supportive in order to enhance their learning skills. Their learning skills are decreasing because of low motivation from their teachers.

The student of Quaid-I-Azam University, Islamabad suffered due to this virtual mode of teaching and learning. The issues students were facing are the unavailability of teacher at time. This type of learning environment could result in the student hinder learning.

CHAPTER NO 03

THEORETICAL FRAMEWORK

In this theoretical framework the researcher used the online collaborative learning theory. Online collaborative learning (OCL) theory Harasim, L. (2012) was presented by Linda Harasim. This theory has prime focus on the facilities of the Internet to provide learning environments that foster collaboration and knowledge building. Due to the pandemic, education system completely transferred to virtual mode of teaching and online learning. Students work together in a collaborative environment which this theory talks about the methods of learning and teaching.

3.1 Online collaborative learning theory

OCL is also derived from social constructivism, because students are encouraged to address problems collectively through discourse, and the teacher serves as both a facilitator and a member of the learning community. This is a key feature of OCL, as well as other constructivist theories, in which the teacher is not viewed as a distinct entity, but rather as an active facilitator of knowledge construction... OCL is considered as to be one of the best teaching method in the development of the online education system, because in this learning method, in OCL system, students are exchanged their ideas and opinions with one another in an online collaborative environment and teacher also guide them in this method. OCL is difficult to scale up due to the importance of the teacher's involvement. Unlike connectivism, which is best suited for large-scale instruction, OCL works best in smaller classrooms. When looking for common ground in online education, this last point becomes particularly significant.

This theory has three phases of knowledge construction which are idea generating, idea utilizing and intellectual convergence. These factors the methods and way of teachers that could assist the students in their learning. OCL theory is derived from the constructionism which described that the students do their work in collaborative groups and team work on through the internet which results in the effective way of learning activities. Teacher would always be available from home or any other part

of the world through the internet network which will facilitate the students in solving their problems.

The main strength of this theory is that it is far more better than the face to face learning in the class room and it is also more expediting to assist the students because in the online class teacher deliver the lecture with the online teaching apps like Zoom and Micros soft Teams, so this lecture could be saved in the recordings section of the application. If a student had faced some issues while listening to the lecture, so they could easily go for the recording option and can listen to those saved recording at any time easily.

3.2 Applications of Online Collaborative Learning Theory

Collaborative learning is a method of teaching in which students of varying abilities work together in small groups to achieve a common goal. Students are both responsible for each other's and their own learning (Gokhale, 1995). Online collaborative learning is an approach that shifts collaborative learning from face-to-face to online.

Harasim (2012) established online collaborative learning theory (OCL) from foundations in computer-mediated communication and networked learning during the contemporaneous development of both constructivist learning techniques and the Internet (Bates, 2015).

While applying the Online collaborative learning theory presented by Linda Harasim found that the online teaching learning is the process where the teacher deliver lecture through any online teaching software and students help with the each other in a collective collaborative environment. This theory assist the teacher and students learning environment because if the students worked from home without face to face interaction like early classrooms environment so students would suffer a lot and faced issues because of the no support from their class mates and their as well. Teachers play a very important role in the assessment of the students especially in the remote learning. Students collaborate with their fellows

through the internet link and if they had to face any issues regarding their studies so the instructor would be available to guide and best help out them. This theory only talks about the online education so these all processes could be done through the internet and this teaching software requires the quality of internet access to both teachers and students.

It is critical to assist students in developing the interpersonal skills that underpin teamwork as part of their preparation for the workplace. Many instructors face a challenge in developing group-based activities that enable meaningful cooperation in surroundings that favor teamwork. This theory only talks about the online education so the all processes could be done through the internet and this teaching software requires the quality of internet access to both teachers and students. The goal of the collaboration of the students with each other's was to provide them best supportive experience project in which the students roles and responsibilities could be assured and provide them best effective environment.

Individual students participate in a group discussion of a certain topic or knowledge challenge as part of the idea generation process. Each member joins the discussion to share their initial thoughts on the topic. Through brainstorming, students are able to articulate their own thoughts and begin to produce a variety of opposing viewpoints. This is a highly democratic phase that leads to the second stage of discourse, idea organization. Students begin to interact with one another and think on the numerous ideas provided at this point.

Model of Online Collaborative Learning Theory

Concepts	Constructs	Propositions

Divergent Thinking Communication	→	Idea generating

- Comparing
- Analyzing
- Categorizing
- Discussing
- Arguing

Support of teacher

moderator

Idea Organizing
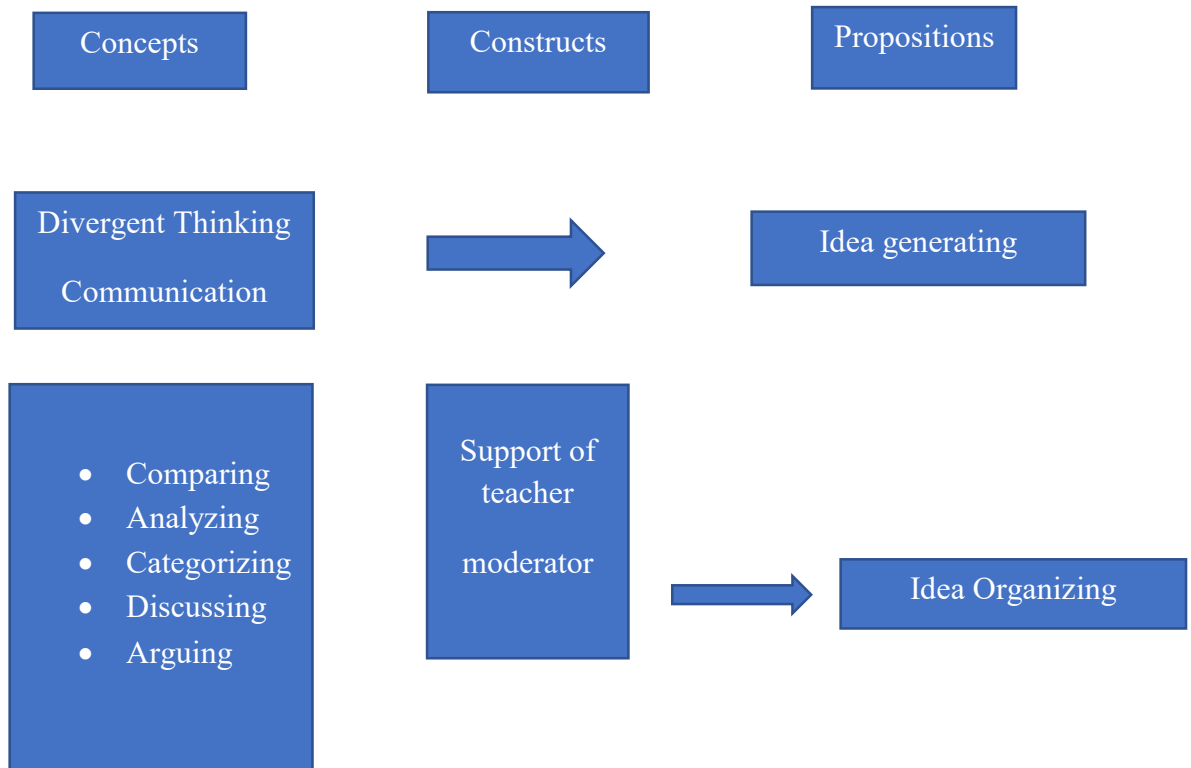
Bates, (2015) educators can use the OCL model to help them develop an effective teaching method, but they must also consider numerous design considerations while creating courses. Teachers can take into account proper tools, clear directions for student online behavior, student orientation and preparedness, defined instructional goals, and appropriate discussion subjects, for example. Furthermore, teachers may face cultural and epistemological concerns as they implement OCL. Students from various backgrounds may have varied attitudes and viewpoints regarding collaborative learning through discussion. The term learning environment refers to the set of tools that can be utilized to make a collaborative setting more efficient. Researchers should look into three areas of the OCL model to improve its effectiveness: the learning environment, learning interaction, and learning design.

CHAPTER NO 04

CONCEPTUALIZATION AND OPERATIONALIZATION

4.1 Conceptualization

Conceptualization and operationalization are the measurement tools through which a researcher formulate and clarify the concepts mentioned in his research. Social scientists use the tools to explain the variable of the research hypothesis. A researcher first has to find the key variable of his study and then he will be ready to collect the data regarding his research through questionnaires.

Conceptualization refers to what we actually mean when a researcher use a specific term while conduction his study. Its main purpose is the refinement of the abstract concepts of the study.

4.1.1 Virtual Teaching

According to (Janse van Rensburg, 2018) Effective online teaching practices can enhance student and educator performances in their academic studies.

According (Yen, 2004) a lot of the students of distance education are not traditional students. Some are adults seeking to build a second or third career ,while others are professionals seeking to advance in their current positions. Almost every new medium has had an impact on education in some manner, but distant learning is a re-invented rather than a new means of instruction. Correspondence education, televised courses, videotape collections, and cassette recordings were all used in the early days of distance learning.

According to top hat glossary (2012), Virtual teaching refers to a "flipped classroom" style of teaching. This is considered a form of blended learning and it involves giving students a first exposure to course content on their own before class through activities such as readings or watching short lecture videos. Virtual teaching also includes digitally transmitting course materials to students.

According to teach mint (2003), "Online teaching is the process of educating others on virtual platforms. This type of teaching involves live classes, video conferencing, webinars, and other online tools". The online applications are developed and designed to facilitate easy learning and better understanding.

4.1.2 Skill Development

According to IGI dictionary, "An ability and capacity acquired through deliberate, systematic, and sustained effort to smoothly and adaptively carryout complex activities or job functions involving ideas (cognitive skills), things (technical skills), and/or people (interpersonal skills)".

According to Collins dictionary,"A skill is a type of work or activity which requires special training and knowledge".

According to world bank organization, "Skills are the ability to do something well. While knowledge alludes to the way we realize, understand, and remember information, skills refer to the way that we choose, use, and apply knowledge in different circumstances, facing diverse and frequently unpredictable challenges".

4.2 Operationalization

4.2.1 Virtual teaching

Researcher had main focus on the issues regarding the online teaching and learning during the covid-19 pandemic. He finds out that the online learning has bad impacts on the students. Students have good interactions with their peers and other groups and they could learn many social activities in the face to face to class room. Students were of the view that they cannot explore the surrounding and get bored in the online class room. Different universities had used different teaching software for attending the online lecture in a virtual class environment like Zoom, Microsoft Teams and Meet. The institution where this study has been conducted had used the Microsoft Teams software. This software had both

positive and negative results. Students had the opportunity through this software to listen to the recordings which was saved directly after the lecture was over. So the students could better understand the lecture while playing those saved recordings in their desired time. The other scenario was that during the online class, students were create disturbance by removing the other participant from the meeting, which was result in the worse learning environment. This software had the option to make the students attendee so that no students could remove the other students from the meeting but the teacher had no proper knowledge of using this software and will result in the complete interruption in the class room.

In Question 7, 8,9,10, the researcher asking about the teacher method of teaching that during the online class, how teacher was managed the class for affective learning environment.

In Question 11, 12,13,14,15, the researcher asking about the virtual class environment that how virtual classes was for you with the scale of four points that poor, helpful, average and not helpful at all. The researcher also asking about online classes that was it easy to communicate with the teacher regarding the academic purposes and virtual classes is a good opportunity to maximize class attendance in a better way?

Skill Development:

Without direct physical contact and interaction with other learners or an instructor, online students can lose their interest or motivation mid-way through their course or program. Virtual teaching had both positive and negative impacts on the student's skill development in their academic purposes. The research investigated that the most of the student answered about the only skill that they had developed was the technology skill. According to this research report, students were of the opinion that before the virtual mode of learning they had no proper use and information about the computer technology. They did not use the computer for the academic purposes before. Initially, they have been facing certain issues while

submitting their assignment and paper but over time, they learned the proper use and acquired knowledge about this modern technology. E-learning is linked to a number of arguments. Some of the grounds for online pedagogy include accessibility, cost, flexibility, learning pedagogy, life-long learning, and policy. It is said that online learning is simple to use and that it can even reach rural and remote locations. In terms of transportation, lodging, and the overall expense of institution-based learning, it is considered to be a significantly less expensive way of education. Another appealing feature of online learning is the ability to arrange or plan one's time for completing courses offered online.

The students in this survey felt that online discussions with classmates and the instructor are an important element of the learning process. Instructors can encourage students to develop skills for getting the most out of online chats, which can improve a student's learning experience and help them succeed in the course. The successful online students who took part in this study felt that formulating and asking intelligent questions is an important method for engaging both fellow students and the instructor.

In question 27, 28, 29, the researcher was measuring the skill analysis of the students. The researcher was asking about the skill development of the students that during the online classes, by measuring the scale of 5 points strongly agree, agree, neutral, strongly disagree and disagree.

In question 36, 37,38,39,40, the researcher asking about the development of technical skills and the challenges that were facing by the respondents could improve their academic performance.

CHAPTER NO 05

RESEARCH METHODOLOGY

Social scientist used two types of research methods to conduct a study one is the quantitative and second one is qualitative research. Difference between qualitative and quantitative methods helps us to design our study accordingly. The quantitative study is based on the linear path and emphasizes objectivity. In this, we use standardized procedures which are set before conducting a study. I will add the example given by our man in class in the next procedure. In the qualitative study, we have no linear path. That is why it is flexible. We can change our path while conducting the study. This study is not preplanned and has no standardized procedures.

5.1 Research Design

Quantitative research methods have been used in this study. A quantitative research study has been conducted to investigate and explore the impacts of virtual teaching on the student's skill development.

5.2 Universe

The universe of the current research study was the Quaid-I-Azam University, Islamabad. The researcher has to investigate the impacts of online teaching among the students of Quaid-I-Azam University Islamabad.

5.3 Unit of Analysis (Target Population)

The unit of analysis for this research is the students (boys and girls) whose age is above 18 to 30. Data was collected from the department of social and natural sciences students. During the data collection, respondents were first permitted as a student for ensuring the authentication of data for this study.

5.4 Tools for Data Collection

A quantitative tool for data collection has been used for this study however its questions are close-ended.

5.5 Sample Size

The sample for the study consisted of the students who were studying at the Quaid-I-Azam University. A total of 100 respondents were sampled to the validity of the research. This data was sufficient for the research.

5.6 Technique for Data Collection

In this research, the data was collected based on quantitative research because quantitative research uses numerical analysis. Quantitative research is the easy way to analyze the collected data for the researcher and the researcher easily analyzes data by applying this method. It also saves time while quickly collecting the interview of respondents. Another major reason for using this method was that the above design helps the researcher to relate the cause-and-effect relationship between the dependent and independent variable and this design also helps to test the hypothesis.

5.7 Data Analysis

After the data collection, the researcher removed the missing data and questionnaire, and then the researcher used the SPSS software for data analysis. After that process, the data has been converted to MS word from SPSS for a further explanation of the data.

CHAPTER N0 06

FINDINGS

Table 6. 1 Gender of the respondents

Variables	Frequency
Male	61
Female	39

Table 6.1 explains that 61.0% of the respondents were male and 39.0% of the respondents were female.

Table 6. 2 Age of the respondents

Category	Frequency
18-24	5
25-28	61
29-32	12
33-35	9

Table 6.2 explains that 49.0% were 18-24 age and 30% of respondents were of the age of 25-28. The students of 18-24 have greater response than the rest of the all ages of the respondents.

Table 6. 3 Department of The Respondents

Department	Frequency	Percentage
Social Sciences	46	46%
Natural Sciences	34	34%
Biological Sciences	20	20%

Table 6.3 shows that the majority of the respondents were from the social sciences department that were 46% and 34% second highest numbers of the respondents were from natural science and 20% were from the biological sciences department.

Table 6. 4 Perceptions about to resume their study activities During Covid -19

Sr no	Respondents	Frequency
1	Strongly Agree	40
2	Agree	13
3	Neutral	10
4	Disagree	26
5	Strongly Disagree	11

Table 6.4 illustrates that 40% of the respondents were shown strongly agree about the resume of the study activities while, 26% of the respondents were strongly disagree against the resuming of study activities during the Covif-19 pandemic. That is huge number, which isn't willing to attend classes in this situation.

Table 6. 5 The Resuming of the Studies

	Respondents	**Frequency**
1	strongly Agree	40
2	Agree	13
3	Neutral	10
4	Disagree	26
5	Strongly Disagree	11

Table 6.5 perception about the resuming of the online classes explains that the 40% of the respondents were strongly agreed to the resuming of the online classes during the covid-19 pandemic and 11% were strongly disagreed about the resuming of the online classes.

Table 6. 6 The Teacher Method Regarding Organizing Of Online Class

	Respondents	**Frequency**
1	strongly Agree	20
2	Agree	5
3	Neutral	24
4	Disagree	22
5	Strongly Disagree	26

Table 6.6 explains that the face to face learning as like remote learning was same. 27% of the respondents were strongly disagree. They were of the opinion that the face to face was very different from the distance learning and 25% of the respondents were agree that there is no difference between the face to face and online class room.

Table 6. 7 The Instructor Communication during the Online Classes

	Respondents	Frequency
1	strongly Agree	28
2	Agree	34
3	Neutral	13
4	Disagree	19
5	Strongly Disagree	6

Table 6.7 identified that the instructor was very well communicate with the students and 34% of the respondents were agree to the instructor lecture and communication and 19% of the respondents were disagree to the above statement. The instructor was very well communicating with the students and 34% of the respondents were agree to the instructor lecture and communication and 19% of the respondents were disagree to the above statement.

Table 6. 8 The Instructor Method of Explaining the Lecture

	Respondents	Frequency
1	strongly Agree	8
2	Agree	37
3	Neutral	28
4	Disagree	22
5	Strongly Disagree	5

Table 6.8 explains that the instructor was very qualified and had good teaching method while delivering the lecture to them. 37% of the respondents were agree to the lecturer teaching method and 28% of the respondents were neutral and 22% were disagree to the lecturer method of teaching

Table 6. 9 The Teaching Environment In The Class

	Respondents	Frequency
1	strongly Agree	12
2	Agree	27
3	Neutral	18
4	Disagree	27
5	Strongly Disagree	16

Table 6.9 illustrates that 40% of the respondents were shown strongly agree about the resume of the study activities while, 26% of the respondents were strongly disagree against the resuming of study activities during the Covif-19 pandemic. That is huge number, which isn't willing to attend classes in this situation.

Table 6. 10 The Virtual Teaching to Assist Students

	Respondents	Frequency
1	strongly **Agr**ee	14
2	Agree	20
3	Neutral	12
4	Disagree	22
5	Strongly Disagree	32

Table 6.10 explains that the virtual teaching help the respondents in achieving their academic goals. 32% of the respondents were of the opinion that the virtual teaching did not help them in achieving their academic goals perfectly and 14% were agree to the virtual mode of achieving the good grades.

Table 6. 11 Solution to resume the academic activities

	Respondents	Frequency
1	strongly Agree	11
2	Agree	25
3	Neutral	15
4	Disagree	29
5	Strongly Disagree	20

Table 6.11 explains about the virtual classes that the virtual classes are the only option to resume the academic activities. 29% of the respondents were disagree to the resuming of online mode of learning and 25% were agree to the remote learning.

Table 6. 12 the virtual classes to maximize class attendance

	Respondents	Frequency
1	strongly Agree	19
2	Agree	27
3	Neutral	11
4	Disagree	30
5	Strongly Disagree	13

Table 6.12 explains that the virtual classes are a good opportunity to maximize the class attendance. 30% of the respondents were disagree to the virtual classes and 27% of the respondents were agree to the statement that virtual classes could maximize their class attendance even they were not active during the class.

Table 6. 13 The Communication during the Virtual Classes

	Respondents	**Frequency**
1	strongly Agree	16
2	Agree	16
3	Neutral	18
4	Disagree	28
5	Strongly Disagree	22

Table 6.13 identified that virtual classes are easy mode to communicate with other class fellow and their instructors. 28% of the respondents were disagree to the virtual mode of communication and 22% were strongly disagree.

Table 6. 14 The Deliverance of Knowledge in the Virtual Class

	Respondents	**Frequency**
1	strongly Agree	24
2	Agree	16
3	Neutral	10
4	Disagree	20
5	Strongly Disagree	30

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Table 6.14 explains that the virtual classes meet the deliverance of the general education standard. 30% of the respondents were strongly disagree to the virtual classes that they did not meet to the deliverance of online lectures properly.

Table 6. 15 the effectiveness of online classes for achieving good grades

	Respondents	Frequency
1	strongly Agree	24
2	Agree	30
3	Neutral	15
4	Disagree	20
5	Strongly Disagree	11

Table 6.15 illustrates that 40% of the respondents were shown strongly agree about the resume of the study activities while, 26% of the respondents were strongly disagree against the resuming of study activities during the Covif-19 pandemic. That is huge number, which isn't willing to attend classes in this situation.

Table 6. 16 the perception of students about resuming online classes

	Respondents	Frequency
1	strongly Agree	30
2	Agree	28
3	Neutral	16
4	Disagree	20
5	Strongly Disagree	9

Table 6.16 were explaining that respondents were satisfied with the academic scores while resuming on the online education. 30% of the respondents were agree about the satisfaction of their academic scores and 9% were disagree.

Table 6. 17 effectiveness of virtual teaching during convid-1

	Respondents	Frequency
1	strongly Agree	9
2	Agree	37
3	Neutral	10
4	Disagree	26
5	Strongly Disagree	18

Table 6.17 stated that virtual learning is stressful for the respondents during the covid-19. 37% of the respondents were agree to that the virtual learning was very stressful and 18% of the respondents were disagree to the statement.

Table 6. 18 the perception of students to manage their time

	Respondents	Frequency
1	strongly Agree	16
2	Agree	18
3	Neutral	17
4	Disagree	32
5	Strongly Disagree	17

Table 6.18 explains that respondents were satisfied with the academic scores while resuming on the online education. 30% of the respondents were agree about the satisfaction of their academic scores and 9% were disagree.

Table 6. 19 the performance of teacher in assisting students in the studies

	Respondents	**Frequency**
1	strongly Agree	31
2	Agree	29
3	Neutral	9
4	Disagree	23
5	Strongly Disagree	24

Table 6.19 explains the performance of teacher during the online mode of teaching. 31% of the respondents were strongly agree to the teacher performance and 24% were disagree about the method and performance of the teacher.

Table 6. 20 the perception of students about online class room environment

	Respondents	Frequency
1	strongly Agree	34
2	Agree	15
3	Neutral	24
4	Disagree	14
5	Strongly Disagree	13

Table 6.20 explains about the perception of students about online class room environment. 34% were strongly agree to the virtual classroom that it was very comfortable to communicate with the teacher and 13% were disagree and 24% were neutral.

Table 6. 21 the communication of students with their teacher

	Respondents	**Frequency**
1	strongly Agree	26
2	Agree	14
3	Neutral	14
4	Disagree	19
5	Strongly Disagree	27

Table 6.21 explains about the perception of students about online class room environment. 34% were strongly agree to the virtual classroom that it was very comfortable to communicate with the teacher and 13% were disagree and 24% were neutral.

Table 6. 22 The Difference in the Online and Face-To-Face Class Room

	Respondents	Frequency
1	strongly Agree	25
2	Agree	22
3	Neutral	09
4	Disagree	17
5	Strongly Disagree	27

Table 6.22 explaining that the face to face learning as like remote learning was same. 27% of the respondents were strongly disagree. They were of the opinion that the face to face was very different from the distance learning and 25% of the respondents were agree that there is no difference between the face to face and online class room

Table 6. 23 The Effectiveness of the Remote Learning for the Students.

Response	Frequency
to great extent	26
to some extent	53
not at all	21

Table 6 23 the researcher were investigating about the effectiveness of the remote learning. The highest value is 53% and the students were agree to some extent about remote learning.

Table 6. 24 The Effectiveness of Virtual Teaching to Transfer Knowledge

Response	Frequency
to great extent	20
to some extent	43
not at all	37

Table 6.24 stated that effectiveness of the virtual learning to transfer knowledge to the learner. 50% of the respondents were of the opinion that it was effective to transfer knowledge in a best effective way and 33% were response not at all.

Table 6. 25 Virtual classes had developed skills in studies

Response	Frequency
to great extent	17
to some extent	50
not at all	33

Table 6.25 researcher asking about the any type of skill development during the virtual learning. 43% of the respondents were response to some extent that virtual learning had developed some type of skills like technical skills. 20% of the students were respond to great extent.

Table 6. 26Virtual classes are a good opportunity to the students

Response	Frequency
to great extent	17
to some extent	43
not at all	40

Table 6.26 explains that the virtual classes are a good opportunity to the students who less engaged in the academic activities during the face to face class room. 43% of the respondents were response that they are agree to some extent and 40% response not at all about the virtual class activities.

Table 6. 27 Virtual classes helped in the development of technical skills

Response	Frequency
to great extent	17
to some extent	43
not at all	40

Table 6.27 researcher asking about the development of technical skills while resuming the online classes. 43% of the respondents were of the opinion that virtual teaching has developed their technical skills to some extent and 40% were respond to not at all.

Table 6. 28 The Challenges Students Face during Virtual Teaching

Response	Frequency
to great extent	18
to some extent	43
not at all	39

Table 6.28 illustrates that the challenges respondents were facing during the virtual class rooms could affect their studies severely. 43% of the respondents were respond that the virtual education effects their studies and had uncertainties about their future studies. Majority of the respondents also respond that virtual classes do not affect their studies.

Table 6. 29 Passing Course during the Virtual Without Any Teaching Assistance

Response	Frequency
to great extent	18
to some extent	43
not at all	39

Table 6.29 were stated that effectiveness of the virtual learning to transfer knowledge to the learner. 50% of the respondents were of the opinion that it was effective to transfer knowledge in a best effective way and 33% were response not at all.

Response	Frequency
to great extent	24
to some extent	43
not at all	33

Table 6.30 stated that the teacher giving them the test in their course could assist them in their final exam, 43% were of the opinion that the online test after each chapter could better prepare them in their final exam and 33% were respond to not at all.

Table 6. 31 perception about the course objectives

Response	Frequency
to great extent	30
to some extent	52
not at all	18

Table 6.31 explains that the course objectives given to the respondents during their virtual class room were very cleared and limited. 52% of the respondents respond that the course objective was so clear that they could understand them easily and help them in their studies.

Table 6. 32 during the online learning the development of extra reading skills

Response	Frequency
to great extent	39
to some extent	33
not at all	28

Table 6.32 illustrated that the virtual classes helped the students to read extra material over the time. 37% of the respondents respond that the virtual classes gave them enough time to read extra books easily and 41% respondent's states that it does not give them enough time read extra books.

Table 6. 33 Virtual classes lead to a great communication Gap between teacher and student

Response	Frequency
to great extent	22
to some extent	37
not at all	41

Table 6.33 illustrates that the challenges respondents were facing during the virtual class rooms could affect their studies severely. 43% of the respondents were respond that the virtual education effects their studies and had uncertainties about their future studies. Majority of the respondents also respond that virtual classes do not affect their studies.

Table 6. 34 Virtual classes has positive impacts on academic performance

Response	Frequency
to great extent	39
to some extent	33
not at all	28

Table 6.34 explains that the virtual classes meet the deliverance of the general education standard. 30% of the respondents were strongly disagree to the virtual classes that they did not meet to the deliverance of online lectures properly. Majority of the respondents respond that virtual classes had positive impacts on their academic performance and they were satisfied with the virtual classes.

Table 6. 35 skills to operate e learning platform

Response	Frequency
to great extent	26
to some extent	49
not at all	25

Table 6 35 illustrates that most of the respondents had positive response regarding the e learning operating system. Most of the respondents were of the opinion that the while using the operating system to take their online lectures, they had developed enough skills to operate the e learning system software's.

Table 6. 36 the skills of learning individually

Response	Frequency
to great extent	20
to some extent	50
not at all	30

Table 6 36 illustrates that most of the respondents had positive response regarding the e learning operating system. Most of the respondents were of the opinion that the while using the operating system to take their online lectures, they had developed enough skills to operate the e learning system software's.

Table 6. 37 learning well in online mode than the face to face

Response	Frequency
to great extent	14
to some extent	48
not at all	32

In Table 6.37 researcher investigated about the best mode of learning for the students. Majority of the respondents were of the opinion that virtual learning was effective than the face to face to learning in the physical class room. 48% of the respondents were agree to the virtual mode of learning and has satisfaction about the remote learning

Table 6. 38 Continuous Motivations from Teachers for Learning Online

Response	Frequency
to great extent	28
to some extent	52
not at all	20

Table 6 38 researcher asking about the motivation from the teachers to the students to continuing their studies via virtual mode. 52% of the respondents were have positive good response from the teacher side that the teacher had motivated them to continue their studies and the teacher were always available for them to ask any type of guidance regarding their studies.

Table 6. 39 Virtual Classes Helps To Listen To The Saved Lectures

Response	Frequency
to great extent	38
to some extent	47
not at all	15

Table 6.39 researcher was investigating about the saved lectures in the online classes' software's. Most of the respondents were of the opinion that it help them to some extent to listen the save lecture from the saved recording at any time and could easily understand the last lectures easily.

Chapter 7

CONCLUSION

7.1 Discussions

This research study was conducted among the students of Quaid-i-Azam University, Islamabad. Online education improves access and interaction with professionals and resources located around the globe that would otherwise be unattainable in traditional face-to-face learning situations. This research is conducted to find the impacts of virtual teaching on the skills development of the student that how much this new remote learning is effective for student learning in their academic purposes. Academic achievement is influenced by a variety of factors. Educational effectiveness and learning are national concerns, and online education has risen to prominence in recent years as higher education institutions shift their focus to remote learning. This research is carried out because teachers are still learning the ways to teach with effective methods. They are exploring new ways to teach in virtual classrooms for the best learning environment. Unequal access to gadgets, androids phones, and especially access to the internet has led to inequalities in pursuing online education.

While investigating its impacts on student skill development, this research finds out that the students have been faced many issues during attending online classes. They were bothered by the online education system and were afraid of their future uncertainties regarding their academic field. While conducting the online classes the major issue that was found was the poor quality of internet access. Teachers had no proper training and guidelines to deliver the lecture in a better effective way and are still exploring the new effective ways to deliver the lectures accordingly. During the COVID-19 epidemic, we gathered student feedback on online education. We invited the students to compare online education to classroom education and education via a survey. We recognize that the comparisons aren't perfect. On an online platform, the conversations and collaborative activities that take place in a physical classroom are impossible to recreate. They, on the other hand, supply students with information on a wide range of topics as well as cutting-edge technology that may not be available at their colleges.

7.2 Conclusion

The pandemic has forced many teachers to learn more about online teaching, learning, and pedagogy. One of the most important aspects of academic success is for students to establish a positive relationship with their instructors. This is especially true in the digital classroom, where studies show that students who have a positive relationship with their teachers are more likely to continue with a class and achieve good scores. I've noticed five activities that I feel all educators should take to improve relationships in their online classes as a community college instructor who has examined teachers' opinions on what it takes to establish a good report with students. The research considers the major challenges that students who take online programs from home confront. It describes how online students feel. How worried are students about online education, it was also discovered? It will also pay particular attention to the difficulties that students confront during learning online in Pakistan. Physical classrooms have been dismantled at universities all around the world in favor of online instruction. For some organizations, web-based learning was nothing new, while for others, it was the first time they had encountered such teaching approaches. Students from underdeveloped, isolated, and rural areas, on the other hand, faced a range of challenges, including limited access to the internet and even a lack of energy. The Pakistani government has forced complete lockdown across the country. About 6 to 8 months, there was a complete lockdown and were complete closure of schools and colleges. Over time, when there was control in the coronavirus spread and the country was back to its normal life. Higher education had announced the hybrid mood of educational organizations. Students were going to school once or twice a week and the rest of the week they have online classes. A classroom can be scary for shy people, and putting a camera in one's face doesn't help with self-consciousness. A sense of community is formed when names are linked to faces, and faces are linked to real, imperfect, striving students.

Students also had the opportunity to see their teacher assisting others, which can help educators show their sincere desire to assist and answer questions. It is simpler to retain engagement when students and professors collaborate in real-time via videoconferencing. Teachers can keep an eye out for drowsy or distracted children, as well as whether they appear puzzled or enthusiastic.

7.3 Recommendations

It is simpler to retain engagement when students and teachers collaborate in real-time via video conferencing. Teachers can keep an eye out for drowsy or distracted children, as well as whether they appear puzzled or enthusiastic.

Students benefit not only from developing relationships with their teachers but also from developing relationships with one another. The classroom becomes a more respectful and productive environment when students are consistently allowed to solve challenges and deepen understanding as part of a team. It can also create a friendlier atmosphere, which is especially beneficial for introverted students.

The Ministry of Education and Science's and the Bureau for the Creation of Education's universal resolutions should advance an elegant forum with a particularly given prospectus, as well as a rational and operative method of assessment.

Students and teenagers should be contacted. Future conclusions should consider how students' perceptions, understandings, settings, and desires are formed. Students should have access to ingredients without getting discriminated against, without being left hungry during interrogations, or without being heard during estimations or requests. Students should not be appraised with arithmetical marks rather descriptively. As the situation worsens, a more forceful approach is required, including legislators from various fields in reviewing and expressing their experiences on what worked and what didn't. It should discuss the issues and solutions that their students, parents, and teachers face. Complete negotiations, so we can only

get the best outcome out of this situation if we are composed and work together.

Students require structure to succeed, whether they are learning online or in person. According to my observations, students' uncertainty is decreased when they have straightforward, clear directions and routines, and so undue worry can be avoided. Students are more likely to connect with others, digest information, and synthesize it well when they are not overwhelmed.

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