

# Perceptions of Undergraduates on the Effects of Online Learning on Their Academic Performance Amid COVID-19: An Exploratory Study

**Ali Aqşam**

Department of Education, Sukkur IBA University, Sukkur, Pakistan

**Email address:**

aliaqşam.bed17@iba-suk.edu.pk

**To cite this article:**

Ali Aqşam. Perceptions of Undergraduates on the Effects of Online Learning on Their Academic Performance Amid COVID-19: An Exploratory Study. *Science Frontiers*. Vol. 3, No. 1, 2022, pp. 8-16. doi: 10.11648/j.sf.20220301.12

**Received:** November 6, 2021; **Accepted:** December 31, 2021; **Published:** January 14, 2022

---

**Abstract:** The COVID-19 outbreak has marked the start of a new era in human history, setting a new tempo. In these pandemic times, education is more important than ever to stand out and reinvent itself by utilizing digital technology in online learning environments to explore new possibilities. As a result, understanding the crucial aspects that influence academic achievement during online education got critical. This thesis work exhibits how student characteristics, time management, resource allocation, power, network issues, learning environment affected the academic performance of the understudies, most importantly, how the academic integrity was compromised in the lockdown. This research analyses the influence of the COVID-19 Outbreak on the educational system of Pakistan and its repercussions for undergraduate university students in impoverished areas of Sukkur, Sindh, focusing on the instruction and evaluation of students who took online classes from their homes during the Outbreak. The primary goal of this research study is to see how online education during the lockdown affects academic performance, with the moderating effects of technology and teachers. This research will share the possible solutions to the undergraduates' challenges amid corona-virus lockdown. These challenges include teachers' and students' social, economic, and psychological issues. However, online mode is upsetting because many pupils undermine their academic progress by allowing students to work at their speed. In addition to academic success, academic integrity is also being questioned because of online classes. A total of 8 students were chosen via purposive sampling from various departments and were interviewed on their experience with online learning, and the data was collected through semi-structured interviews.

**Keywords:** Online Learning, Students' Perceptions for Online Learning, COVID-19, Academic Performance, Effects of Online Learning

---

## 1. Introduction

Education is one of the fundamental liberties that cannot be snatched away, even in the face of war or other disasters. Even during these battles and severe plagues, temporary facilities have been set up to enable an ongoing educational process. Higher education institutions have been decided to close because of the coronavirus outbreak that emerged in late December 2019, and the first case was discovered in Wuhan, China. There had been previous closures of educational institutions in specific places, such as in Pakistan's Azad Kashmir province following an earthquake in 2004 and during heavy rains and floods in 2010 and 2011.

There are several divisions in typical Pakistani society. Such distinct groupings have resulted in widening social

divides among people. Pakistani society is divided into three classes: lower, middle, and upper, and the growth of such disparate groups has led to the development of social divides.

The growing ecological divide is worsening the expanding socioeconomic difference in Pakistan. Similarly, the Education System of Pakistan is divided against itself. It is divided into different parallel systems, ranging from various educational mediums to a wide range of textbooks and learning methodologies. English and non-English instruction mediums are the two categories of instruction mediums. According to, the non-English medium is further divided into Urdu (the national language) and Sindhi (the language of Sindh province). Pakistan's education system is also gender-segregated, with boys and girls attending separate schools. The social, religious, and economic

distinctions in Pakistani education are elite and non-elite, public and private, military and madrasah, rural and urban. In Pakistan, the formal and non-formal education systems are also separated.

Infrastructure also differentiates educational institutions, with some possessing a plethora of physical amenities and others missing even drinking water and toilets. Some educational institutions are similarly divided in terms of the academic quality they provide, with many lacking even in quality education competencies [5]. Education institutions are also divided. Several trained teachers are available; several suffer a teacher shortage. Female professors are exceptionally scarce in rural areas, where the student-to-teacher ratio is high. As a result of these divisions, even the best children from rural Pakistan's poorest districts receive inadequate primary and secondary education; even regular schooling and formal education are reserved for the wealthy. Online learning is the most powerful approach for keeping the learning process as efficient as possible during the COVID-19 in education. Students who learn at home face various obstacles like inadequate information, domestic responsibilities, improper interaction, lack of self-space at home, and economic difficulties for the family. So, "to determine the success of online learning, qualitative and quantitative evaluations are required. The development of emotional involvement and learning motivation can be ascribed to the success of online education [31]"

## 2. Literature Review

Relevant literature on Online Learning During Pandemics is reviewed to gain a better understanding of my research topic. The literature review also provides a conceptual framework for the research effort. This chapter also examines the notion of online learning and the opinions of undergraduate students from around the world. The study also looks at the primary challenges students faced when attending online classes during COVID-19 and how this affected their academic performance. Finally, the review of the literature is completed from start to finish.

### 2.1. Theoretical and Conceptual Framework

#### 2.1.1. Social Cognitive Theory

According to this theory, Student characteristics and online education are critical determinants of academic performance [21]. This theory explains how people are self-developing, self-regulating, self-reflective, and proactive rather than created by environments or inner forces.

#### 2.1.2. Constructivism Theory

The constructivist approach is justified in this study since it involves and investigates patterns to understand how students explain their online learning experiences [15]. Because online courses are completed at the learner's tempo, dedication and time management skills are essential to finish on time. Aside from the necessity for managing time, an individual's academic achievement may be jeopardized. When the COVID

outbreak emerged, students and teachers had to adjust themselves to learn. A paradigm shift convinces teachers and students that using a digital platform may help people acquire knowledge and skills more efficiently.

The online learning model has become a significant and well-known alternative for higher education in recent pandemic times. Online learning has played a pivotal role in bridging the physical education gap [7]. It emerged as a form of distance learning accessible and viable while maintaining all safety precautions. It also allowed for more flexible timetables and reduced unnecessary travel time. Online Education also enables students to communicate with people from all around the country, if not the world [7]. In such a setting, further opportunities for collaboration with other people in the project's implementation typically arise. "The speedy shift to eLearning is accompanied by several challenges and difficulties [32]". No one knows when the Pandemic will end, according to [26]. As a result, institutions have successfully adapted their e-learning platforms, such as LMS, Zoom Meetings, Google Classroom, and Edmodo, to enable interactive online classes [8, 33].

### 2.2. Empirical Studies

In some circumstances, learners find online classes more attractive, with recall rates as high as 60%. Video content is predicted to account for 80% of worldwide web activity by 2019. It is no surprise that online schooling is gaining popularity [14]. Online learning has played a vital role in addressing the educational gap created by this epidemic. It made distance learning viable and accessible while adhering to all safety regulations. It also made schedules more flexible and reduced wasted travel time [19]. Online education, students can communicate with people from all around the county, if not the world. There are frequently more alternatives for collaborating with other individuals involved in developing a project in this case [22].

### 2.3. Online Learning

For more than two years, online education has focused on academic research as a notion and a catchphrase. Because the idea of online learning, albeit frequently described, has various meanings, results of a comprehensive literature review for interpretations of online learning in this work were offered. Authors and academics use the phrase to refer to significantly different, if not incompatible, concepts [13]. The growth of the definition of online learning has also been linked to technological advancements. Because of significant technological advances, educational technology has become increasingly accessible [28]. Many forms of Online Learning include distance learning, blended instructional processes, web-based Learning, E-learning, Mobile Learning, and more. All of them allow individuals to use gadgets from anywhere [26].

"Frequent rolling blackouts, shaky internet networks, time constraints restricted to staff, which means not all teachers are computer-savvy, and instructor emulation [30]"

## **2.4. Difference Among Online Learning, E-Learning, and Distance Learning**

### **2.4.1. Online Learning**

Online learning, a more feedback-oriented variant of distant learning, uses the Internet to connect students with educational materials, teachers, and other students. This type of human engagement may not be as common as other learning techniques. There are a few different pacing options in online learning: Teacher-led, self-directed, and self-paced. Many of these courses are instructor-led, like the traditional classroom style. The most adaptable pacing method is self-directed learning. Students study individually, take charge of their education, and keep track of their progress.

### **2.4.2. E-Learning**

Electronic learning, abbreviated as E-Learning, is a distinct style of instruction; it is also a type of remote education. Though it is possible that it coined the term around the same time as online learning, it can be characterized as encompassing various training formats and techniques, including CD-ROM, Intranet, Internet, and audio and video formats. This learning style may vary the most because platforms and media fluctuate from program to program. E-Learning evolves in tandem with technological advancements. The nomenclature used in each school may differ. There are many learning modes sufficient to fulfill a range of educational demands [17]. Because of the rapid evolution of technology, it is challenging to develop a unified definition of e-learning. According to the contemporary purpose, an online learning system is an internet or cloud-based tech system that supports the instructional process and efficient instruction, training, and development opportunities [27].

Remote learning (Distance learning) is the oldest of three learning modes, two-hundred-year history. Before the Internet, this schooling began with instruction via print media. Students who lived distant from a university could receive an education by writing letters. As a result, "distance learning" can also refer to correspondence education. Training may be delivered in person on a limited basis for some programs if possible. During the first decade of the 21st century, there was a substantial shift in educational settings for online learning [8, 33]. The online education field has kept up with the academic area for the past thirty years. Distance learning is a frequent component in many educational environments as formal education, incorporating various technology tools that connect teachers and students [30].

## **2.5. Students' Views on Online Learning**

When it comes to the undergraduate students' perception regarding online learning, All the eight interviewed students shared different perceptions. These perceptions were the actual shadow of their past experiences with online learning back in corona-virus lockdown. According to many students, the proper educational settings matter a lot. Online learning should prioritize designing the course outline, time

management, students' motivation, teachers' readiness, and online technology convenience from students' perspective [28]. Synchronous and asynchronous online learning can create courses during a pandemic [6]. The teacher uses an asynchronous teaching style with PowerPoint content and voice remarks. Video conferencing software is used to deliver synchronous instruction. Individual projects, group discussions, previous speeches on the topic, and planned exercises are examples of ways to expand your understanding of online learning.

## **2.6. COVID Impact on Education**

Flexible learning is possible with online knowledge [31]. Learners must take extra responsibility for the teaching and be more engaged in an online class. Students who like learning and taking online courses are more self-reliant. The focus is on the students; they can study quickly, review educational stuff for in-depth learning and understanding, take frequent pauses when they feel exhausted, use asynchronous instructional strategies to manage their schedules [32]. It is not as frightening as it appears. The eLearning environment was daunting for students. It provides a friendlier setting for shy, anxious, or afraid of communicating in front of a group. Rejection in front of a group is less embarrassing with this learning experience [32].

## **2.7. COVID Impact on Students**

During COVID-19, the use of information technology to teach classes has increased. Blended learning is becoming more popular in educational institutions. People were compelled to acquire and use digital technology because of the epidemic, resulting in digital literacy. All pupils are encouraged to improve their technological skills. Students used their phones to pass the time during lockdowns by conversing, playing games, watching movies, and watching various useless videos. However, now they have changed their minds and attitudes. Currently, students are mostly adopting mobile and technology to learn new things, such as lectures on Microsoft Teams, Zoom, Google Classroom, Google Meet, and Various other software and interactive applications. They also know about using Google Classroom to upload files and submit assignments. To master the subject, students watched several online lectures on their syllabus. They became more innovative and more aware of their surroundings. They prepared for online exams by searching for and answering multiple-choice questions on each subject. Also, university students use their vacation time to complete online diploma courses and online certifications, which will undoubtedly help them improve themselves and give them future job chances. Even candidates applying for competitive exams might take advantage of online crash sessions. Postgraduate students concentrate on their studies and prepare for competitive GRE, SAT, CSS, SPSC, FPSC. Students will begin to use technology wisely and develop themselves in this manner [16]. There are numerous scenarios in which global education may be threatened. Following are the four negative educational

impacts of COVID-19:

Following are the four negative educational impacts of COVID-19.

### **2.7.1. Student Migration Across Borders Is Slow**

Student migration from Pakistan is essential to several colleges in Canada, China, Italy, and America. Many parents will not send their children overseas for higher education due to the substantial risk.

### **2.7.2. Passive Learning by Students**

Because of the haphazard shift to eLearning without planning, most students are at risk of becoming passive learners and bored due to low memory span, especially in Pakistan, where the foundation for online learning was not even prepared [29]. The curriculum was not designed for such a format. I see how online learning can be tedious since it creates a new passive learner who could cause further issues.

### **2.7.3. Professors Who Are Ill-equipped to Teach in an Online Environment**

Not all teachers are comfortable with online learning or, at the absolute least, are ready to make the transition from traditional to online training. Because there is no defined online specialist platform, most professors use video platforms like Google Meet, Microsoft Teams, Zoom Meetings, and others to deliver lectures, which may not constitute legitimate online learning.

### **2.7.4. The Way Students Are Recruited Is Changing**

Because of COVID19, universities and colleges worldwide are in danger of losing four significant educational improvements. Any disruptive breakthrough is sure to create new opportunities that will revolutionize the world's postsecondary education system, particularly in countries like Pakistan, which is reforming this sector.

Two of the most critical areas of opportunity are student recruitment and retention. Because the risk of losing students is vital, they will have to re-evaluate their admission procedures, acceptance standards, and an entire selection procedure, which will involve new outreach strategies and the application procedure itself. Blended learning is becoming increasingly popular [7]. Colleges and universities will adopt a hybrid learning paradigm, with physical and online delivery as the norm. To acquire the requisite level, all teachers must become more digitally competent and complete some training.

### **2.7.5. Learning Management Systems (LMS)**

Learning management system developers and improvers for use by colleges and universities have much potential. However, it will have to be priced suitably for all institutions to use it. Self-paced learning enables learners to learn at their ease and from anywhere. Many online platforms that allow real-time class interactions with students (ii) video conferencing with students (iii) stable network connections, (iv) lectures accessible via devices such as phones and computers, (v) ability to watch recordings of classes, and (vi) In the aftermath of this devastating epidemic, immediate learner feedback on teaching and learning has evolved [18].

### **2.7.6. Improved Instructional Staff**

Higher institutions have a great chance to enhance the quality of instructional staff used in the classroom. Because blended learning is the way of the future, there will be a push to create new ways to create and share high-quality information, particularly as the usage of learning management systems improves academic openness and greater transparency [29]. Because the flipped classroom is the way of the future, there will be a push to create new ways to create and share high-quality information, remarkably as LMS usage improves academic openness and greater transparency.

### **2.7.7. Enhanced Collaboration**

In countries like India, the teaching sector has been mostly separated. Learning and education through collaboration now can take new forms, including commercialization. Finally, the number of teleconferencing options is expected to increase travel demand. Many academic meetings, workshops, and seminars will be held online. A novel online communication platform could emerge as a commercial model.

## **2.8. COVID Impact on Teachers' Teaching**

Teachers are the bedrock of the educational system. Thus, their quality is crucial to academic achievement. Teachers can keep up to date and improve their skills using modern technology. They make every effort to adjust to the circumstances to boost student education. As a result, they gain new teaching methods such as PowerPoint presentations, multimedia, video conferencing, and online lectures via Google Meet, Zoom Meetings, or other meeting apps during a pandemic. The most effective teaching strategies are regarded to be these [17]. They develop their notes on every subject and distribute them to students. They prepare students for online tests by giving them a questionnaire of multiple-choice questions and coaching them on how to answer them quickly. They become much more concerned about their student's health. Teachers frequently call or text their students to check about their concerns and, if any, attempt to resolve them. Teachers and mentors also give their students tips on relaxing and de-stress and how to deal with stress. As a result, the bond between students and teachers grows stronger and stronger.

## **2.9. Positive Impact of COVID-19**

The best thing about online learning is the accessibility, feasibility, and easiness in the quality of education. "The role of technology in improving the overall educational system and process is commendable. "These programs should be cost-friendly for the students usually living in the tech-needed areas [25]". Taking an online class, as well as learning and teaching online, has several benefits. Following are a few examples:

Compared to traditional learning, online learning allows teachers and students to be more involved.

Weaker pupils can learn more about the subject at home by watching the videos provided by their professors or searching for comparable films on YouTube [17].

Via online education, all students have equal access to

learning prospects.

Students oversee their learning rate and the time and place they learn.

In the classroom, using e-material allows students to access the content at any time.

Mobile phones and computers are more convenient than books and pens for new generation pupils.

There are no rear benches in online classes, and all students sit in the front row.

The opportunity to learn at your own pace is one of the most significant advantages of online education. Students are better able to assess what they are taught.

Students will undoubtedly gain new tech abilities since they must complete a large amount of work alone on a computer or laptop.

Educational materials are swiftly distributed to students, and questions are quickly answered via e-mail, SMS, and social networking platforms such as WhatsApp and Facebook.

Students who receive their education online are better prepared to manage their time in the event of a pandemic.

There is no time limit or classroom barrier with digital learning.

Among the most enticing features of online classes is the number of people attending simultaneously.

The first thing that springs to me when I think of the beneficial effects of COVID-19 is the integration and implementation of technology in the education system. Apart from the numerous negative aspects of coronavirus, its impact on education has had mixed consequences. For most educational institutions, e-learning was the only choice. Several colleges have used the ability to deliver engaging and interactive classes to students via online teaching. Currently, e-learning is only a means of filling the gap caused by the absence of academic learning.

### **2.10. Challenges of Online Learning Amid COVID**

Various global colleges met social distancing standards during the Pandemic, and the online study was permitted despite several health restrictions. COVID-19 issue has put students and instructors in a position where they are pressured to embrace the digital academic experience [10]. Organizations' innovative ideas could only assist users in dealing with the epidemic [9], teachers, and educational institutions worldwide are affected by COVID-19. There are many challenges and impediments in the way of this quick shift to online learning [32].” Nobody knows when the Pandemic will completely cease [26]. As a result, institutions have effectively adapted their online interactive learning platforms.

According to Mishra, "Interactive applications like Microsoft Teams, Skype, Zoom, Google Meet, Edmodo and various other interactive learning platforms like Facebook groups, WhatsApp and telegram channels for online teaching and learning for both instructors and learners and are used on a need-to-know basis [13]. In the literature, several researchers have examined the sustainability of e-learning in various countries. As the unforeseen move to eLearning became a

measure of strategic flexibility, several academic institutions prioritized digitizing educational content above online teaching and delivery techniques [1]. However, it served as a stark reminder of both institutions' financial restrictions and learners' social exclusion. The organization's overall response and students' access to online courses were hampered by a lack of cutting-edge technologies and poor internet connectivity and availability [4]. Students from rural areas and marginalized groups confront significant challenges in their studies during the Pandemic [8, 33]. Strategies to construct a sustainable educational system was established that ensures the development of employability and productivity skills for young minds are urgently needed. Because of online education's immediacy, numerous institutions have leaned on their existing knowledge of online education methodologies; yet COVID-19 has resulted in various teaching-learning strategies. While online classes have presented several obstacles for teachers, academic institutions, and administration, the COVID-19 Outbreak provides numerous options for preparation and remote strategies for e-learning system implementation. Classroom educators frequently come across materials when using the numerous websites and digital education systems available. The following difficulties have been noticed and emphasized by several academics: Accessibility, affordability, flexibility, pedagogy, ongoing training, and teaching methods are all becoming increasingly popular with e-learning [8, 33]. The timing of the global Outbreak of COVID-19 is an excellent example of when standard schooling is no longer functional. Students and teachers are not supposed to communicate physically as a sort of human distance during this time.

Other concerns raised by students in higher education include a lack of real-time interaction with teachers and peers, a short response time, and classroom teaching interaction with peers with many institutions of higher learning. Rather than online teaching methods, the focus is on conveying academic content to the online environment [8, 33]. Most students were upset with how some academic staff used eLearning during the outbreak. They prefer on-campus instruction over online [22].

## **3. Methodology**

While most educators know the quantitative and qualitative approaches to educational research, there are three distinct perspectives on how these strategies should be viewed and utilized. Alternatively, is the first option, followed by either/or, and then both. Some researchers are solely interested in one approach, citing epistemological differences such as statistically establishing a single reality and an objective truth vs. qualitatively providing a range of facts. As in many philosophical disagreements, conflict arises when proponents on Before opposing the other, both sides argue that their method is the most beneficial for educational research. Education researchers have benefited from approaches that have allowed them to make critical findings.

### 3.1. Research Design

This study intends to explore what undergraduate students at Public Sector University believe about their online learning experiences and the effects they witnessed during COVID-19. The primary goal of this research is to learn more about how this online teaching style influences students' academic performance and how to enhance it. I employed a qualitative study approach for the in-depth exploration of and analysis of context embedded and richly textured experience and learners' reflections on those experiences related to online learning and its effects. Qualitative research examines and analyzes the significance of people or groups on a networking event [24]. Qualitative researchers seek to get a comprehensive grasp of people's perspectives and experiences out of their perspective. Participant perspectives, feelings, experiences, and interpretations are reflected in qualitative research. Qualitative research data is based on observations and participant experiences, which aids in a thorough and detailed review. It enables academics to decipher human thinking and activities and provide new insights into societal phenomena [11].

### 3.2. Research Strategy

The study has taken place in a real-world scenario, focusing on interdependence and emerging patterns [25]. Furthermore, since the research study's nature will rely on numerous sources of evidence and data to converge in a triangulation form, developing theoretical propositions to guide data analysis early on will be helpful. research is linked to the constructivist or naturalistic paradigm, which arose from quantitative research's positivistic paradigm. Constructivism asserts that reality may be interpreted in a variety of ways. The object of the study is to learn how people construct reality in their natural environments. Constructivism maintains that there are numerous interpretations of reality.

In contrast, positivism believes that an organized reality can be objectively studied. Exploratory research comprises investigating a subject that has not been adequately explored or examined. It is frequently employed to gain a better understanding of a subject. However, it rarely yields a definitive outcome. Researchers use exploratory research to learn more about an observable occurrence and gain fresh insights to develop a particular issue. The approach of experimental research changes depending on whether new data or insight is uncovered. It starts with a broad idea and uses the research findings to disclose the connected issue to the study subject. I will investigate a specific phenomenon [23] that applies to real-life situations in this study. The research will be qualitative, exploratory, and interpretive as a result.

### 3.3. Research Approach

Qualitative research is based on the social constructivist viewpoint, emphasizing the social construction of reality. It is part of it to collect, analyze, and interpret the fundamental meaning and value of individual experiences and interactions, including conflicting views, actions, and sentiments.

Researchers are more interested in developing a comprehensive and sophisticated picture of human perspectives than gathering data from larger groups. Qualitative researchers use inductive research to construct a theory or find a significant pattern in the data they collect. Because it entails moving from the specific to the general, this strategy is considered a bottom-up method. Most research endeavors, on the other hand, require some logical reasoning.

### 3.4. Research Method

When considering whether to perform qualitative research, various factors to consider. To get a profound knowledge of any scenario in which little is known where qualitative methodologies could be used [12]. They can also gather more exact data that is complex to define analytically and new views on well-known subjects. As a result, qualitative approaches are acceptable when the researcher first needs to assess the determinants that will be examined quantitatively later. According to the researcher, quantitative indicators are insufficient to explain or comprehend a situation.

### 3.5. Research Participants

Following the selection of a research methodology, sampling takes place, selecting a specific data source to gather the information required to achieve the study's objectives [20]. This method has the benefits of requiring fewer population data, having excellent internal and external validity, and being simple to evaluate data. They are less exact and have a higher rate of sampling errors than stratified samples of comparable size. The participants in this study are undergraduate university students. Furthermore, I chose eight research participants from almost every department at Sukkur IBA University. They are now enrolled in semesters 2–7 and had prior experience with online learning during a pandemic. The study sample will be drawn from various departments within the Public Sector University to determine the feasibility of this research. A total number of 7 to 8 undergraduate students will be selected from the 2-7 semesters who have experienced online learning during the Pandemic. Purposive sampling will be used to make sure I have covered many individuals. The people will be from the departments, including business administration, computer science, and Education.

These students were interviewed about their online learning experiences throughout their school careers. I will convey the actual substance of the efficacy of online learning with higher management and Government by sharing their experiences, suggested loopholes, and feasible solutions to deal with them.

As a result, there are no hard and fast interview requirements. Participants must, however, lie on the pin placed below.

Must be an undergraduate student at Sukkur IBA University.

Must be enrolled in Semesters 2, 3, 4, 5, 6, 7.

Must have prior experience with online learning during the epidemic.

## 4. Findings

The first and most crucial step in data analysis is data transcription. Listening to the recording carefully and again is required to scrutinize and interpret data [2]. During the transcription phase, I transcribed each interview word for word to develop relevant interpretations. I did not include any of my points of view during this procedure; instead, I focused on the interviewee's comments. Meanwhile, I highlighted the most significant responses to the questions I posed. As a result of this deed, I achieved my goal of making coding more accessible. I focused on a thorough study of the data by reading it entirely rather than focusing on the quantity of data received. I also identified a few data repetitions during this procedure, but I could recognize them and sort them logically. This stage resulted in the data being thoroughly coded. "The process of tagging and categorizing data segments," according to the researchers. It facilitates the creation of a relationship between the data gathered from interviews and the concepts used in the analysis. Making coding is an innovative process that requires researchers to review, rethink, and reflect on data. I selected the essential data in a structured fashion by arranging complex data. I converted from an inductive to a deductive strategy by coding in a hierarchical framework.

### 4.1. Data Transcription

The first and most crucial step in data analysis is data transcription. Listening to the recording carefully and again is required to scrutinize and interpret data [2]. During the transcription phase, I transcribed each interview word for word to develop relevant interpretations. I did not include any of my points of view during this procedure; instead, I focused on the interviewee's comments. Meanwhile, I highlighted the most significant responses to the questions I posed. As a result of this deed, I achieved my goal of making coding more accessible.

### 4.2. Coding of Data

I focused on a thorough study of the data by reading it entirely rather than focusing on the quantity of data received. I also identified a few data repetitions during this procedure, but I could recognize them and sort them logically. This stage resulted in the data being thoroughly coded. "The process of tagging and categorizing data segments," according to the researchers. Making coding is an innovative process that requires researchers to review, rethink, and reflect on data. I selected the essential data in a structured fashion by arranging complex data. I converted from an inductive to a deductive strategy by coding in a hierarchical framework.

### 4.3. Thematic Analysis

The whole technique was also carried out to expose central themes. To encode qualitative data, thematic analysis was applied. A holistic strategy was employed throughout the data analysis process to analyze and classify desired statements

into themes. Themes are frequently defined as understandable and intelligible experiences and opinions that can be established by sorting and gathering the valuable and relevant codes produced during the second phase of the analysis. It is a pattern that arises from information gleaned from observations and interviews [3]. Discussions are used to generate themes, supplemented with theory and literature. Some of the topics that came up in my interviews were "feasibility, quality, time management, learning environment, and others."

In short, research methodology is a step-by-step plan that tells the researcher and reader how to get the desired results or collect the right amount of data. On the one hand, the qualitative research technique helped us dig in more depth. In contrast, the instruments I used, such as participant observation and semi-structured interviews, helped us focus on each other. Thematic analysis, a data analysis technique I used, let us uncover and organize themes within the data to make it more apparent and understandable to us. Each step is meticulously designed with the outcome in mind, and data analysis effectively made my work beneficial to others.

## 5. Conclusion

This study mainly looked to examine perceptions of undergraduate university students regarding online education and the effects on their academic performance amid COVID-19. Results expressed that the students had multiple perceptions towards online education, the academic performances varied having different factors. Learners cannot develop higher-order thinking skills by using technology to address real-world problems; accompanying features can influence their perceptions of online learning [14]. Students might feel some physical problems by staying for a more extended period on screen that can have very harmful impacts on their eyesight and cause them anxiety by spending more time with technological gadgets. Students also had to face some of the cycles of depression because they had to stay at home and their physical activities like meeting with their friends, discussing their problems, enjoying their leisure time at the institution, and spending some quality time with their close ones. Most of the pupils did not have the motivation and readiness to learn online, and they did not have a learning environment, proper gadgets, technical skills, or other stuff to attend the online classes amid this pandemic. These factors show that the online paradigm shift cannot fulfill the desired learning results and cannot grow students from various life perspectives, including communication skills.

Online learning should prioritize designing the course outline, time management, students' motivation, teachers' readiness, and online technology convenience from students' perspective [28].

The other important point was that those students living in the suburban areas compared to the impoverished and rural areas were the proponents of online learning, yet most of the

students had negative opinions regarding online classes. The new shift was not that useful in Pakistan because of a lack of technical resources and skills. Thus, it could be concluded that the overall impact of online shift upon students' learning was negative due to the poor network conditions, lack of technical expertise and gadgets, financial constraints, and challenging learning environment.

## References

- [1] Li, Q., Guan, X., Wu, P., Wang, X., Zhou, L., Tong, Y.,... & Feng, Z. (2020). Early transmission dynamics in Wuha.
- [2] Zhu, N., Zhang, D., Wang, W., Li, X., Yang, B., Song, J.,... & Tan, W. (2020). A novel coronavirus from patients with pneumonia in China, 2019. *New England journal of medicine*.
- [3] Seock, Y. K., & Bailey, L. R. (2008). The influence of college students' shopping orientations and gender differences on online information searches and purchase behaviours. *International Journal of Consumer Studies*, 32 (2), 113-121.
- [4] Braun, V., Clarke, V., Hayfield, N., & Terry, G. (2019). *Thematic Analysis* 48.
- [5] Karademir, A., Yaman, F., & Saatçioğlu, Ö. (2020). Challenges of Higher Education Institutions against COVID-19: The Case of Turkey. *Journal of Pedagogical Research*, 4 (4), 453-474.
- [6] Astalini, A., Darmaji, D., Kurniawan, W., Anwar, K., & Kurniawan, D. (2019). Effectiveness of Using E-Module and E-Assessment.
- [7] Moorhouse, B. L. (2020). Adaptations to a face-to-face initial teacher education course 'forced' online due to the COVID-19 pandemic. *Journal of Education for Teaching*, 46 (4), 609-611.
- [8] Murgatrottd, S. (2020). COVID-19 and online learning. *Alberta, Canada*.
- [9] Liguori, E., & Winkler, C. (2020). From offline to online: Challenges and opportunities for entrepreneurship education following the COVID-19 pandemic. *Entrepreneurship Education and Pedagogy*, 3 (4), 346-351.
- [10] Verma, G., Campbell, T., Melville, W., & Park, B. Y. (2020). Science teacher education in the times of the COVID-19 pandemic. *Journal of Science Teacher Education*, 31 (5), 483-490.
- [11] Mohajan, H. K. (2018). Qualitative research methodology in social sciences and related subjects. *Journal of Economic Development, Environment and People*, 7 (1), 23-48.
- [12] Strauss, A., & Corbin, J. (1990). *Basics of qualitative research*. Sage publications.
- [13] Lyn, J. C. I., & Muthuveloo, R. (2019). Investigating technology and organizational performance of private higher learning institutions in Malaysia. *The International Journal of Information and Learning Technology*.
- [14] Pustaka, R. (2020). Future English teachers' perspective towards the implementation of e-learning in COVID-19 pandemic era. *Journal of English Language Teaching and Linguistics*, 5 (3), 383-391.
- [15] Mahdy, M. A. (2020). The impact of COVID-19 pandemic on the academic performance of veterinary medical students. *Frontiers in veterinary science*, 7, 732.
- [16] Irfan, M., Kusumaningrum, B., Yulia, Y., & Widodo, S. A. (2020). Challenges during the pandemic: use of e-learning in mathematics learning in higher education. *Infinity Journal*, 9 (2), 147-158.
- [17] Basilaia, G., & Kvavadze, D. (2020). Transition to online instruction in schools during a SARS-CoV-2 coronavirus (COVID-19) pandemic in Georgia. *Pedagogical Research*, 5 (4).
- [18] Caplan, D., & Graham, R. (2004). The development of online courses. *Theory and practice of online learning*, 175.
- [19] Gentles, S. J., Charles, C., Ploeg, J., & McKibbin, K. A. (2015). Sampling in qualitative research: Insights from an overview of the methods literature. *The qualitative report*, 20 (11), 1772-1789.
- [20] Yang, C., Chen, A., & Chen, Y. (2021). College students' stress and health in the COVID-19 pandemic: the role of academic workload, separation from school, and fears of contagion. *PLoS one*, 16 (2), e0246676.
- [21] Palvia, S., Aeron, P., Gupta, P., Mahapatra, D., Parida, R., Rosner, R., & Sindhi, S. (2018). Online education: Worldwide status, challenges, trends, and implications. *Journal of Global Information Technology Management*, 21 (4), 233-241.
- [22] Patton, M. Q. (2002). *Learning in the Field: An Introduction to Qualitative Research*, edited by Gretchen B. Rossman and Sharon F. Rallis. Sage, Beverley Hills, 1998.
- [23] Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- [24] Bassey, M. (1999). *Case study research in educational settings*. McGraw-Hill Education (UK).
- [25] Petrea, A. R. P. (2021). THE PHYSICAL ACTIVITY LEVEL AND REACTION TIME DURING COVID 19 PANDEMIC. *HUMAN, TECHNOLOGIES AND QUALITY OF EDUCATION*, 1096.
- [26] Singh, P. P., Suravajhala, P., Basu Mallick, C., Tamang, R., Rai, A. K., Machha, P.,... & Chaubey, G. (2021). COVID-19: Impact on linguistic and genetic isolates of India. *Genes & Immunity*, 1-4.
- [27] Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49 (1), 5-22.
- [28] Richardson, S., Hirsch, J. S., Narasimhan, M., Crawford, J. M., McGinn, T., Davidson, K. W.,... & Northwell COVID-19 Research Consortium. (2020). Presenting characteristics, comorbidities, and outcomes among 5700 patients hospitalized with COVID-19 in the New York City area. *Jama*, 323 (20), 2052-2059.
- [29] Moore, M. G., & Kearsley, G. (2011). *Distance education: A systems view of online learning*. Cengage Learning.
- [30] Parsad, B., Lewis, L., & Tice, P. (2008). *Distance education at degree-granting postsecondary institutions: 2006-2007* (pp. 90-95). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, US Department of Education.

- [31] Ye, Q., Law, R., & Gu, B. (2009). The impact of online user reviews on hotel room sales. *International Journal of Hospitality Management*, 28 (1), 180-182.
- [32] Urdan, T. A., & Weggen, C. C. (2000). Corporate elearning: Exploring a new frontier.
- [33] Shishakly, R., & Sabah, A. (2021). Challenges of Online Learning Systems during COVID-19 in the UAE universities and its Effect on Business Students' Academic Performance. *American Journal of Online and Distance Learning*, 3 (1), 1-24.