

# An Empirical Qualitative Study on the Punjab ESL University Students in Adoption of Emerging Technologies and the Challenges of ODL Environment

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## Abstract

The aim of this qualitative study is to explore the adoption of technology and the challenges of the ODL environment. Whereas the post-pandemic era has given rise to online learning. However, despite the importance of online learning ODL adoption and challenges remain unpacked. The challenges among ESL university students are more compared to other developed countries, as Pakistan is an underdeveloped country whereas the ODL issues are more significant. This study has focused on the ESL students and the data gathered insights regarding their overall views of ODL from the semi-structured interviews with undergraduate students. Thus, the investigation focused on the real time challenges of ESL students and their experiences in the adoption of technology and the challenges of the ODL environment as well as their experiences and perceptions connected to the emerging technologies in the use of the ODL environment. The results revealed that the students faced challenges such as power shutdown, unaffordable internet packages, infrastructure, a lack of technology acceptance, a lack of innovation and traditional pedagogical methods and network issues. Most of the ESL students observed that ODL was challenging for them since they had a great deal of interruptions at home, which impacted their concentration, and comprehension of the lessons as well. Therefore, the study concluded that the ESL students are partially ready for ODL, and that more time is needed to adapt to the emerging technologies which require compassion, inspiration, and a great deal of effort.

**Keywords:** ODL environment, lack of technology acceptance ESL university students, Pakistan, Traditional pedagogical methods

## 1. Introduction

During the crisis and the worldwide spread of the coronavirus pandemic, the world has noticed outstanding development in online schooling as teachers and students are expected to altogether remain at home and resume online learning completely (Ahmad & Idrus, 2021; Zuhairi et al., 2020). Hence, with the new standards in education, come new obstacles and challenges. Evidently, the load of online learning has pushed teachers and students as well to expand their information and communication technology (ICT) abilities, and some are reluctantly prepared for the new standards in education. Therefore, ESL university students have no other option than to face the challenges and difficulties of open and distance learning (ODL) (Adesina, 2020; Kagan, 2021; Wali & Madani, 2020).

However, the ODL or e-learning structure is one of the major challenges for several universities during and post COVID-19 pandemic era. Moreover, e-learning structures have highly customizable online learning applications such as blackboard and a number of other fanciful features that are more valuable and useful in post-pandemic situations (Azzman & Najib, 2021; Lukas & Yunus, 2021). However, the efficacious use of e-learning systems depends on the adoption components and their further utilisation. Thus, the major challenges that disguise the current ODL environment; are the absence of arrangement, lack of infrastructure other major challenges and the components that contour the efficacious usage of the ODL environment (Nasreen & Afzal, 2020; Tanveer et al., 2021). On the other hand, a rich crack has been recognised in the awareness of the ODL environment adoption of emerging technologies, and challenges and experiences. Therefore, the ESL students at Pakistani universities are facing difficulties in the adoption of emerging technologies and experiencing challenges in the ODL environment (Khan & Abid, 2021; Musingafi et al., 2015). In this post Covid-19 era, technology attempts to yield a platform to build up communication between ESL university students and lectures. Moreover, the wealth of previous research (Mayes, et al., 2011) contend that the ODL lessens the psychological distance by enhancing interaction and learning. Thus, ODL can be promoted through adequate technology usage, and also in support of the successful accomplishment of the learning outcomes. An increasing body of literature shows that students feel more comfortable with online learning due to the pandemic and post-pandemic. The rising utilization of technologies improves the chance of encountering dynamic support in distance schooling, regardless of participants being truly isolated (Lee et al., 2018). In adapting to new improvements in innovation and online learning, scholastic staff, however, face various difficulties, for instance, quickly evolving innovations, pressure to beneficially utilise innovation and consolidating proper teaching strategies in an inexorably different environment. Administrative staff, lecturers notwithstanding, commonly obtain inadequate preparation in instructing, teaching methods and instructive study (Bates, 2018).

## 2. In the Context of Pakistan

Pakistan is an underdeveloped country that is making strides to raise educational standards for all ages, from pre-kindergarten to higher education (Ahmed et al., 2014). The overall

situation of the educational system in terms of students, institutions, and instructors has improved (Pakistan Economic Survey, 2016). However, students in Pakistan who live in rural areas or come from low-income families often have trouble adjusting to new technologies, which can lead to a loss of social connections, poor attention spans in children, distractions from noise, poor internet connections, and a lack of independent study skills (Barrot, 2021; Nasreen & Afzal, 2020; Tanveer et al., 2021; Zuhairi et al., 2020). Online education can be effective in nations with advanced digital infrastructure, but it is ineffective in Pakistan (Basilaia & Kvavadze, 2020). However, in Pakistan, a sizable portion of instruction, as well as administrative tasks at educational institutions, are carried out by hand (Salam et al., 2017). Lack of affordable, dependable, and quick internet access is a barrier to online learning, especially for Pakistanis living in remote or underprivileged areas (Siddiqui et al., 2020). Because a substantial amount of web content cannot be accessed using smartphones, students who use cell phones to access the internet are unable to profit from online learning. Several academic institutions prioritised the transfer of educational content to the digital world over online teaching and delivery methods, turning the unexpected shift to online learning into a gauge of organisational agility (Wu, 2020). However, it served as a reminder of the inadequate funding for educational institutions and the social marginalisation of students, through which a lack of internet access and availability, as well as an absence of cutting-edge technology, reduced organisational responsiveness and students' ability to engage in digital learning (Ahmad, 2020; Zhang, 2020).

### 3. Literature Review

These in-service ESL teachers still encounter many difficulties as they pursue their studies. They must perform multiple roles while working and studying, including those of a teacher and a student, among others. They attend part-time classes while working in the classroom and socialising with other student teachers both online and offline. A number of studies (Bawa, 2016; Bhandigadi et al., 2021; Ilonga et al., 2020; Kara et al., 2019; Ouma, 2019; Yaw Koi- Akrofi et al., 2020) show that among the many challenges working adult learners enrolled in ODL programmes encounter are a lack of financial aid, difficulty balancing family and work responsibilities, health issues, and a lack of motivation. Finding the time is a challenge for many people to finish their assignments and prepare for exams while still working a full-time job and keeping family obligations. Multiple international research studies (Bawa, 2016; Musingafi et al., 2015; Ouma, 2019; Yaw Koi-Akrofi et al., 2020) also listed the difficulties working adults who are pursuing ODL studies face, including personal difficulties, logistical difficulties, and program-related difficulties. The list of personal problems includes a lack of motivation, social and family issues, a failure to adjust to ODL, and false beliefs about cognitive load. Administrative problems include inadequate orientation and induction, inadequate library assistance, a lack of management support from the university, and a lack of representation for distance learners in leadership and governance, poor assignment is a final example of program-related problems. The design, the length of the course, the instructors' lack of understanding of the needs of online students, and technology-related problems like the use of multimedia platforms for studies. In ODL

institutions, these difficulties frequently result in high attrition rates, which is harmful because the institutions lose both revenue and the student enrollment necessary to support a programme and the institution. Consequently, the rate of student attrition has always been a concerning development for ODL universities and colleges (Nasreen & Afzal, 2020; Tanveer et al., 2021).

#### **4. Problem Statement**

The developed nations are more industrialized, and their level of per capita income is also high compared to other less developed or developing countries. The discrimination between developed and developing countries can be measured by the usage of digitalisation, and it can be observed in both classes of societies (Ravenhill, 2017). Consequently, in this digital era, developing countries are endeavouring hard to improve their innovation lines, through their instructional strategies. e-learning, pedagogical models and learning technology are still lacking due to technology acceptance level, which is very low in developing countries like Pakistan (Bonifacci et al., 2016; Chapel, 2020). Thus, the utilization of online learning in education in developing countries has logically progressed during the most recent twenty years due to the enhancements in innovation and infrastructure services, which required strong internet connections and easy accessibility of the internet. Likewise, this expanded the doors of education and learning. Hence, online learning has its own challenges, the students still lack adoption of emerging technology due to the traditional teaching methods and the educational system of Pakistan is relying on a more deep-rooted traditional approach to learning and is therefore unable to use the technological and pedagogical developments (Othman et al., 2022; Shahzad et al., 2021). Although the education system of Pakistan has taken many initiatives for improvement, it is not empowering and encouraging the students, and the major reasons are the absence of a good administration, absence of financial plan. Lack of interest in innovation and technology acceptance and the students who cannot afford the education on a physical or daily basis to colleges and universities will prefer online learning and online learning has its own challenges for ODL learners (Sutton, 2021; Tew et al., 2022). Therefore, the significant advantages of ODL relate to its adaptability, openness, affordability, and life-based education prospects. It empowers an extension of tertiary enlistments at less expense per student than under the residential campus system (Pityana, 2009). More prominent adaptability empowers ODL courses to adjust to explicit students' needs or work necessities, subsequently empowering more prominent significance (Visser et al., 2020). ODL additionally obliges the developing interest in deep-rooted learning more effectively than do private projects. Furthermore, ODL is able to reach students who have been turned away from higher education for various reasons, including gender inequality (females are not permitted in educational institutions), inability to attend school, college, or universities due to family obligations or social constraints, and financial crises (Zainuddin et al., 2016). The gravity of the problem is the challenges in online learning for ODL learners and the adoption of emerging technologies and the ODL environment in the context of Pakistan.

## 5. Research Questions

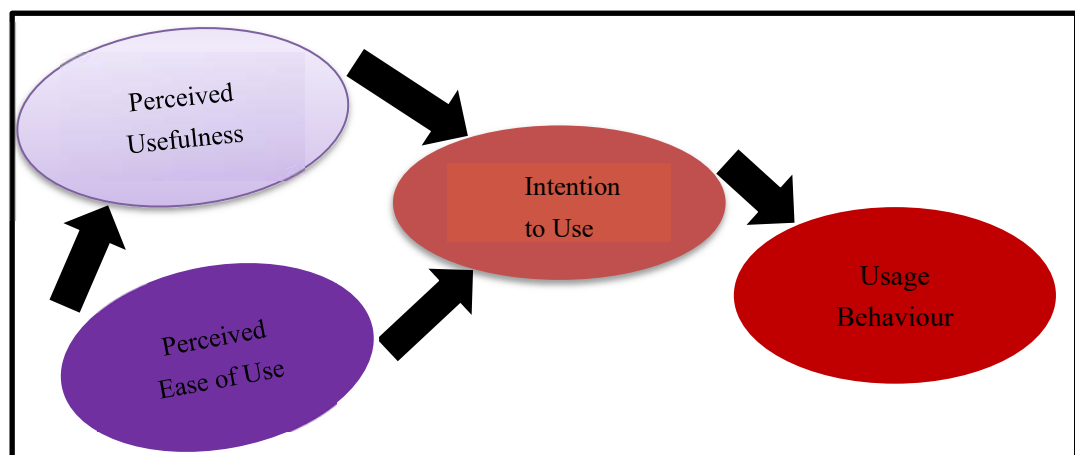
- i. What are the challenges experienced by Punjab University ESL students in adopting an ODL environment in the context of Pakistan?
- ii. What are the perceptions of the Punjab University ESL students on emerging technologies that can be used for ODL environment in the context of Pakistan?

## 6. Research Objectives

- i. To investigate the challenges experienced by Punjab University ESL students in adopting an ODL environment in the context Pakistan.
- ii. To explore the perceptions of the Punjab University ESL students on emerging technologies that can be used for ODL environment in the context of Pakistan.

## 7. Technology Acceptance Model (TAM)

The technology Acceptance Model (TAM) is a theoretical establishment to make sense of and anticipate people's acceptance of information technology.



**Figure 1.** Technology Acceptance Model

In the midst of the growing popularity of online education worldwide, efforts are being made to fill the gaps in the framework's fundamental educational components teachers, students, and learning sources. Online assistance has been marketed as a real tool that enables ongoing communication between distant students and their instructors or tutors. However, certain factors involving students might make it difficult to facilitate online learning effectively at this level of education. Online assistance is frequently represented as the practice of interacting with students and learning resources over the internet or in an online learning environment. The organised method of handling other people's correspondence in an online medium is called facilitation (Abdullah & Ward, 2016). Online facilitation is quickly bringing

about an educational change in the way that online learners commit to working together, cooperating, and conversing. Online facilitation is essentially a term used in education to highlight how students can deal with expressing themselves in online spaces. According to researchers, online support keeps distance students connected to their tutors and learning resources (Adesina, 2020). It continues to be an ODL educational delivery method that calls for qualified staff who have the necessary skills and a positive attitude to oversee and direct learning experiences in virtual learning environments (Setlhako, 2014). This mediation is regarded as an emerging medium for educational delivery that promotes active cooperation among the fundamental educational elements in ODL. Distance learners are impacted by the online learning environment, which also provides facilitators with an appropriate platform to encourage learners to take charge of their own education. It addresses a significant shift in perspective in the ODL educational cycle and has led to significant changes in global school systems. As a result, it plays a crucial role in the effective ODL educational cycle.

The Technology Acceptance Model has been used to explain how different client classes intend to use innovation. Researchers have also used TAM variables to forecast the level of innovation in the educational sector. The TAM Silva (2015) proposed has high reliability and authenticity, as described in Dasgu (2002). According to this model, perceived usability (PU) and perceived ease of use (PEOU) are the two key developments that could determine social intent to use technology. The term "PEOU" refers to the extent to which a customer accepts that using a particular innovation stage or gadget would always be trouble-free, while "PU" refers to the extent to which a customer accepts that using a particular innovation-related gadget would improve performance at work. In this particular scenario, perceived usefulness refers to the degree to which a distance learner agrees that using online resources will be free from all types of hardships or difficulties, whereas perceived usability refers to the degree to which a distance learner agrees that using online resources will improve their understanding of educational content, connections and learning outcomes by the time they have finished their course of study (Sadeghi, 2019). TAM has been extensively used in a variety of contexts, both inside and outside of educational settings. For instance, Shroff et al. (2011) examined how PEOU affected the social expectation among students to use an electronic portfolio framework. The results showed that PEOU had an overall negative impact on students' attitudes towards using and acknowledging the electronic portfolio framework. According to Wu and Chen (2017), clients' level of recognition predicted intent to use and actual utilisation of web-based entertainment, massive open online courses (MOOCs), and e-learning frameworks inside the educational setting. The more students' PEOU and PU regarding course transmission media, such as course sites and transmitting programming, improve, according to Arbaugh and Duray (2002), the more their perspectives have shifted firmly in favour of e-learning. This subsequently increased their chances for fulfilment and growth and accelerated the rate at which this method of teaching was recognised. In order to complete this review, TAM constructs were modified to measure how willing distance students at Pakistan's Punjab University were to participate in online facilitation. It is expected that the presentation of this method of educational transmission may alter students' preferred methods of learning in terms of timing, organisation, learning resources, and cost implications. The transition to this new teaching methodology may be extremely challenging for students.

## 8. Research Methodology

The research explored the experiences of eight ESL students at Punjab University through a qualitative approach such as semi-structured interviews. Precisely, the investigation focused on the real time challenges of ESL students and their experiences in the adoption of the ODL environment as well as their experiences and perceptions connected to the emerging technologies in the use of the ODL environment.

### 8.1 Research Design

This research has been designed with a qualitative approach and furthermore, it used a purposive sampling frame which led to significant and authentic responses from participants in the investigation. There are a few reasons behind the qualitative approach: firstly, the researcher gives priority to the student's perceptions and their real-time experiences. Secondly, it has focused on the adoption of emerging technology for ODL (Fareed et al., 2021; Iqbal et al; 2022). The investigation is based on reality, rather than the global laws of knowledge. This study aims to understand the challenges faced by ESL university students in experiencing the ODL environment, and to explore the perceptions of Punjab University ESL students on emerging technologies that can be used in the ODL environment in the context of Pakistan. Hence, numerous (Almaiah et al., 2020; Khalil et al., 2020; Khan & Abid, 2021; Niwz et al., 2019) studies have explored the experiences of the ESL students from an educational background. Therefore, in this study the experiences of ODL students have been studied. On the other hand, the study used purposive sampling. Creswell (2009) recommended that in a purposive sampling the selection of participants will give accurate data about the phenomenon being studied. This purposive sampling method will help to focus on the specific features of the population that are of interest which will enable the researcher to answer the research questions and achieve the research objective through a qualitative approach. For this study, the participants were ESL university students who use technology for ODL, and this sampling approach assists the purpose of the study.

**Table 1.** Demographic data of the interviewed Students in the University of Punjab

Participant No	Gender	Faculty of English
1	Female	ESL University Student
2	Male	ESL University Student
3	Female	ESL University Student
4	Male	ESL University Student
5	Female	ESL University Student
6	Female	ESL University Student
7	Female	ESL University Student
8	Male	ESL University Student

The sample for the interview were the eight ESL university English department final year students from Punjab University. Moreover, the five females and three males were

interviewed. The interview was based on purposive sampling.

### *8.2 Survey Design*

To design the qualitative approach, the researchers' followed and took the support of past literature. To make this research significant the semi-structured interviews were conducted with the ESL university students. The qualitative approach using the tool of semi-structured interviews was purely based on the research questions; research question one will address the challenges experienced by Punjab University ESL students in adopting an ODL environment and research question two will address the perceptions of the Punjab University ESL students on emerging technologies that can be used for an ODL learning environment in the context of Pakistan. Generally, speaking, the chosen questions reflect themes present in other literature that address challenges experienced by ESL university students in adopting an open distance learning environment in Pakistan. Furthermore, the semi-structured questions directly relate to the research questions outlined above and help to identify the challenges experienced by ESL university students including the structure, tools, enhancements and future prospects. Additionally, the research questions fully focused on the challenges facing ESL students and their perceptions of emerging technologies that can be used in the ODL learning environment. Finally, there was room for respondents to add unstructured, further thoughts to the discussion. Each survey's key questions are listed in Table 2 below. Participants were given an overview of the questions at the start of the survey, along with information on the study's objectives and how the data would be used. Before beginning the survey, each participant gave their informed consent and their responses were kept anonymous. An effective way to collect information from participants at Punjab University is through a semi-structured interviews conducted to better understand how ESL students perceive new technologies and learning in an ODL setting.

## **9. Data Analysis**

The process of thematic analysis (Nowell et al., 2017; Cooper et al., 2012) was used to analyse the data, and interview notes were analysed together. However, this process includes familiarising oneself with the data, generating initial codes, searching for themes, reviewing themes, and defining themes. First, both authors independently read through the responses and interview notes, took extensive notes and formulated a first list of preliminary codes to describe the challenges experienced by ESL university students in adopting an open distance learning environment in Pakistan. At this stage, researchers also began noting potential, preliminary themes. Second, the researcher coded the responses from each interview using this list of codes. Generally speaking, codes reflected how individuals prepared for e-learning, the tools or approaches used, perceived challenges, and their experiences. Throughout the coding process, memos and notes were taken (Bryman, 2016; Nowell et al., 2017). Then researchers reviewed the -codes, memos, and data together. A final list of five identified themes was generated.



**Table 2.** Interview Coding Template

<b>Respondents</b>	<b>Code</b>	<b>Theme</b>
3 & 7	<b>POCET</b>	Participate in online classes for emerging technologies
2 & 6	<b>CAE</b>	Challenges and experience in your online courses
5 & 8	<b>CA</b>	Challenges in adoption of ODL environment
1&4	<b>FP</b>	Future Prospectus learning opportunities in the future

▪ ***Participate in online classes for emerging technologies***

ESL university students found that participation in online classes or becoming a part of the ODL environment made their learning effective. In the ODL environment, the students highlighted how difficult it is to provide high-quality teaching and learning. While demonstrating the benefits of ODL, students demonstrate how it makes learning more convenient because classes can be accessed anywhere in the world without boundaries and with the aid of technology. Hence, the ESL students are becoming effective learners with the help of ODL and emerging technologies.

According to Sadeghi (2019), there may be significant obstacles to effective online learning in a number of different countries due to poor internet access and the potential for distractions when studying alone. In a similar vein, Lloyd et al. (2012) discovered that factors affecting the success of online learning include inadequate training, subpar technology support, technological failures, and switching LMS software. One ESL student stated that “*students have many problems in Pakistan, there is no face-to-face interaction between instructor and learner, and less technological equipment affects their learning process.*” Another student

commented that “*poor internet service and erratic power supply remain the most important factors that could hinder students’ participation in the online facilitation.*” According to Ullah et al. (2017) examined how undergraduate students at the University of Peshawar felt about online learning. Due to the high level of difficulty in understanding and using an online learning programme without the proper guidance. They found that there was no positive attitude due to the high difficulty level in understanding and using the online learning programme without having appropriate guidance.

Park, (2009) revealed that an online learning environment's web-based educational platform is another issue. On the other hand, because of the uncomfortable home environment, students' enthusiasm for learning is reduced. Students might not be interested in accepting online learning as a result. Saade et al. (2007) noted that numerous universities struggled

greatly with online education, which falls short of students' expectations and may result in unexpected failure (Kilmurray, 2003). Moreover, the students' discontent, dissatisfaction, and displeasure with their online learning experience as a result (Bristow et al., 2011). These challenges should be taken into account when planning and implementing online facilitation for an effective teaching-learning process, especially at the higher level of education.

▪ ***Challenges and experiences in your online classes***

The technology has been developed for the last two decades and there has been a vast growth in the technology of mobile phone, and the use of social media and the internet. In this scenario, educational institutions must come forward and take the initiative to adopt new technologies for education and the broad dissemination of information. Another student commented that *“the major challenges with the ODL environment in Pakistan are improper infrastructure, inadequate infrastructure, delayed feedback from the instructor, technical issues and poor student support services.”* Most of the universities in Pakistan do not have full accessories and lack basic aids so students are facing difficulties. Even some universities lack sufficient class rooms, libraries and laboratory equipment (Ahmad, 2021; Joubert, 2018; Shehzadi et al., 2021). Although Zirnkle, (2001) recognised unique issues affecting distance learners, they include programme expenses, lack of equipment and infrastructure, instructional concerns and poor technical help. Zirnkle, (2001) also lists poor teacher contact, insufficient feedback, alienation and isolation, and subpar student support programmes as further issues.

Additionally, students in Pakistan are facing numerous ODL challenges, like the absence of proper technical education, inappropriate learning materials and inadequate course requirements (Arain et al., 2020). One student explained her personal experience *“As per my personal experience firstly, the internet is very expensive which students cannot afford. Secondly, due to this internet connectivity is very low. No electricity, less motivation or delayed feedback from the instructor.”*

▪ ***Challenges in adoption of ODL environment***

The majority of the students were complaining about the infrastructure, such as slow internet, frequent electricity shutdowns, losing out on networking and higher chances of distraction. Pakistan is an evident opportunity to be engrossed if we dealth to evaluate the practice of technology in ODL in Pakistan. Another student stated that *“I think during the pandemic the students came across many challenges, online learning became more complicated with an inadequate internet facility, a lack of infrastructure, many more structural issues.”* Though, Pakistani students show a positive attitude toward e-learning at a higher educational level (Abimbade et al., 2019; Hutt., 2017). But they do not have enough resources to get an online education. Furthermore, literature proves that lack of IT infrastructure is a major issue in remote learning with poor internet connections (Adesina, 2020; Bello & Hamzat, 2020; Ma'mor et al., 2022).

Another ESL student identified that *“Hmm... In my point of view, the primary challenge in an ODL environment is no closer interaction between students and teacher or delayed feedback*

*from the instructor.*” Students struggle because the majority of universities in Pakistan lack basic amenities and equipment. Even some universities lack adequate classrooms, libraries and laboratory resources, and there is little interaction between students and teachers. (Ahmad, 2021; Joubert, 2018; Shehzadi et al., 2020).

▪ ***Future Prospectus learning opportunities in the future***

The ODL environment has future prospects as it will incorporate technology with different platforms and apps. Additionally, the ESL university students are comfortable with the usage of technology specifically, when it comes to learning vocabulary and Synonyms via the English language apps.

According to an ESL university student, *“online facilitation encourages immediate feedback within the system as students are able to ask questions and get immediate responses from the instructor.”* The high level of acceptance of distance learners would presumably increase their participation in online facilitation. Donkor (2011) examined how well learners liked and accepted video lessons in the ODL learning environment, and his findings are strongly in support of this. The results revealed a positive correlation between students' acceptance level and their readiness to use video lessons in online learning. In other words, how well online facilitation is accepted will determine how effectively students can participate in the process. This demands that ODL stakeholders, especially those involved at the higher levels of education, consider how well-received this instructional delivery method is when designing and carrying out online learning.

In essence, an online facilitation platform has been seen as a channel for delivering instruction that is simple for students to use to participate in videoconferencing, discussion forums, submit assignments, and take quizzes.

This might be due to how user-friendly the model platform is that was used to facilitate the process. The platform is an integrated tool that could be utilised to facilitate a wide range of online learning processes like interaction, collaboration, discussion, synchronous instruction, quiz, and assessment. The platform has been improved with tools to increase distance learners' capacity to engage in the teaching-learning process in the same way that it is done in a physical classroom. Another student mentioned, *“this medium allows us to relate directly with our lecturers, instead of relying solely on course materials.”*

The ODL is beneficial and useful in the post-pandemic era as well as for students who are employed and unable to attend physical classes. Students who are passionate about learning are not required to attend traditional classes; instead, online learning will support them in distance learning.

## **10. Results & Findings**

In the following sub-sections, the results from the qualitative approach, the face-to-face semi-structured interviews from the eighth semester final year Punjab University ESL students (undergraduate). Therefore, the results are divided based on their themes which were

identified in semi-structured interview transcripts and coding.

The empirical evidence provided in this study, shows a strong and significant result. The findings also provide evidence and indicate that ESL university students shared their experiences or perceptions regarding the ODL environment. As per many studies (Harrison et al., 2017; Abimbade et al., 2019; Bello & Hamzat, 2020; Virtic et al., 2021; Cao et al., 2020) ESL students are facing many problems or challenges in the ODL environment, like the absence of quality instruction between students and teachers, the absence of quality distance learning materials, the lack of student support, financial issues contrary course information, a lack of direction and dissatisfaction with tutors' difficult course assignments and expensive internet. After conducting this research, it can be said that there are still a lot of unanswered questions that demand further investigation. As a result, this study might prompt additional research in some areas. Online learning is increasingly evolving as a positive response to the global mission for increased educational opportunities thanks to the advancement in technological developments to bridge the educational gaps between remote students and their teachers. Online facilitation has been promoted as a genuine platform for connecting with distant students across geographically dispersed parts of the world, with less emphasis placed on temporary and spatial boundaries. The challenges of the ODL environment for online learners are being taken into consideration by the Pakistani educational system in order to ensure effective online learning. With planning and cooperation from students across the country, it is knowledgeable internet-based assistance that goes above and beyond. Therefore, it is crucial to look into the probable variables that might influence how much distance learners appreciate this clever online information delivery method. This is being done to ensure that stakeholders can make educated decisions regarding the mission to change the nature of online learning in the nation.

This study laid out the way that distance students considered the ODL environment and adoption as a valuable learning stage to interface with their mentors and peers from various nations around the world. Perceived usefulness and ease of use have additionally been recognized to altogether affect students' degree of acknowledgment of online facilitation as a successful method of informative transmission. ODL needs to address the bunch of difficulties standing up to the compelling help process as distinguished by the respondents. This would meaningfully affect the nature of online learning in the nation and across the world.

## **11. Future Recommendations**

In light of the findings of the study the following suggestions were made:

The Higher Education Commission (HEC) ought to select teachers who will be exclusively liable for ODL students. More precisely, the lecturers/teachers and ODL programme heads ought to go through a boost in preparation for distance education yearly to guarantee that they are aware of and can address the difficulties faced by their students. The HEC ought to advance the requirement for face classes as excursion schools two times in a semester. HEC

ought to likewise take severe measures to monitor the instructor's participation during the face-to-face meetings. It was obvious that ESL university students shared the importance of the usage of technologies in online learning and in ODL environments. A major concern of ESL students is the inadequate technical training of the academic staff and the lack of infrastructure for teaching online. To take advantage of the benefits of new technologies, immense changes in existing teaching practices in an ODL environment completely might be vital, especially the advancement of abilities for the on-screen age (Bates, 2018). To completely foster the advantages of new advancements, huge changes in existing teaching practice in an ODL environment might be essential, especially the improvement of abilities for the electronic age (Bates, 2018).

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## **Authors contributions**

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