

Flexibility and Freedom: A Comprehensive Study of Distance Education in 21st Century at Higher Education in Pakistan

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Abstract: *The student's point of view about the extent of independence they could enjoy and the flexibility characteristics of distance education in Pakistan higher education were the focal points of the research hereby presented. The study intended to estimate distance students' opinions about their learning experiences and the extent of their involvement in online education. By using a quantitative survey design, this research was specifically focused on students' experiences and viewpoints from the most significant distance programs in the academic field in Pakistan. Of the survey participants, 183 completed the survey and returned the same. The data gathering instrument was a pretested questionnaire containing 16 close-ended questions measured on a 4-point Likert scale. The questionnaire mostly consisted of questions which revealed four domains of the distance learning experience: flexibility and convenience, engagement and interaction, technical support and infrastructure and perceived quality and career relevance. The computable data was processed in SPSS-25.0, where descriptive statistics were computed from survey data, and the analysis included frequency distributions, percentages, mean scores and standard deviations. The results showed a high level of agreement among the students regarding distance education convenience and accessibility. Perceptions of engagement were moderately positive, with a majority believing online learning could be as engaging as traditional classrooms, although concerns were noted regarding peer community and assessment accuracy. The recommendations proposed aimed to guide higher education institutions in Pakistan in optimizing their distance education programs to better meet student needs and expectations.*

Keywords: Distance Education, Online Learning, Flexibility, Accessibility, Learning Experience

Introduction

Education plays a very important role in the economic, cultural and social domains. This knowledge is a necessary and foundational part of life and the way our culture operates. It is the most essential necessity in the world, and people have been in need of it for years. Education is the only thing that makes a difference between people in terms of respect and dignity between people who are well-educated and those who are not (Khan, 2017). The landscape of the higher education system of Pakistan has gone through a revolution with the advent of virtual educational programs. These programs have been the most effective way of satisfying the need for higher education, knowing the fact that the resources and infrastructure were limited. By using the new technology, traditional educational institutions were unable to cope with the ever-increasing student population, resulting in full and overcrowded classes and a lack of competent staff. As a result of the problem, distance education was born to be an option for those students who were in the position of not geographically, financially or personally capable of conventional learning class attendance. This approach, which uses technology and new teaching methodologies to present educational content remotely, actually converted the Pakistani education field to a new era.

The shift from traditional to distance education was not only a response to logistical issues but also a reaction to global trends leading to more flexible educational structures (Karadeniz, 2009). The Pakistani institutions had the motto of open access as a target, and they aimed at democratizing access to higher education. Thus, it was possible for individuals from remote areas and diverse backgrounds to attain academic qualifications, for example, getting a degree course without having to relocate or omit the

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existing appointments made. In fact, the beginning period of distance education started from the sending and receiving of the course materials via mail, and later, it extended by means of online and digital resources, implying that it was undergoing a gradual transition toward a more technology-oriented method of teaching. The appropriateness of this shift was instrumental in initiating a comprehensive study exploring the efficacy and influence of distance programs in Pakistan (Lopez-Garcia et al., 2019; Peters, 2002). The materials they used were noticed by researchers and policymakers who wanted to know such materials' capability in shaping the country's educational system (Amin & Shah, 2025). The early studies aimed to test the extent of the spread of distance education, evaluate its role in educational missions, and investigate non-traditional students' quest for knowledge and the ultimate educational goals. These studies provided the base for subsequent research works in pursuance of the in-depth dimensions of distance education, which included its pedagogy, learner performance, and institutional set-up. The onset of distance learning in Pakistan was still not merely a response to an immediate educational need but also raised research questions to be answered in the future centuries (Hartnett, 2020; Veletsianos & Houlden, 2019).

Despite the initial reliance on print-based materials and radio broadcasts, the introduction of the Internet has been a major contributor to the development of AIOU (Ahmed Abdullah & Sultana Mirza, 2020; Ikram et al., 2025; Mumtaz et al., 2022; Rehman & Khan, 2020). In the next ten years, there was a massive jump in the acceptance of online learning. It was mainly due to the widening scope of the internet, as well as the advancement of e-learning platforms carrying out Learning Management Systems (LMS). Universities were busy superimposing online education, thus enabling both synchronous and asynchronous learning and providing interactive education (Khan & Abid, 2021; Qazi et al., 2024; Qureshi et al., 2012). The Higher Education Commission (HEC) assumed a vital part in this alteration by launching diverse projects which were aimed at technological application in higher education. The National Academy of Higher Education (NAHE) introduced several faculty development programs, which were the base of driving this transition. Moreover, the Virtual University of Pakistan emerged as an influential institution in the online degree market, hence causing a significant bolster in higher education outreach (Asher, 2021; Iqbal et al., 2022).

Highlighted were the themes of flexibility and liberty within the scope of distance education. This involved the fact of being able to conceive and organize your own schedule of learning in strict adherence to personal convenience (Hartnett, 2020). It is quite graphic of the agility of the learners to choose their way of learning, which has been illustrated in the design of the pathways as well as the breaking down of the rigidities of the traditional schedules that convulsed the traditional way of academia. Distance education has become so popular that students from sparsely populated and remote areas have gained access to university education, which was only a dream in the past. To add further, hybrid models of instruction became a new trend through which the blending of face-to-face training and online training could make institutions even more flexible (Al-Khamaiseh, 2022; Naqvi et al., 2025).

Distance education in Pakistan was not easy. The digital divide, which results from disparities in internet availability and digital literacy, kept on being a serious problem. The issue was also with the quality and effectiveness of online courses and teaching, as these became very important and showed the urge for really good quality assurance tools. The lack of infrastructure in the country and no technical support made it a time-consuming online educational project. On a societal level, distance education continued to suffer from the stigma of being the second-best solution in comparison to the traditional form of learning (Akram et al., 2021; Khan & Abid, 2021; Mumtaz et al., 2022). Furthermore, the COVID-19 pandemic served as a trigger that accelerated the growth of distance education in Pakistan. The entire university had to switch to the internet, which led to a conclusion of the importance of both digital literacy and reliable online platforms. In the same vein, the pandemic can be construed as a testament to the continuity of education through the distance education mode in crisis situations and could be considered a good example of its resilience and adaptability (Iqbal et al., 2022; ULLAH et al., 2021; Zaheer & Munir, 2020).

Aims and Objectives

The study was conducted to examine the trend and effect of the distance education system in Pakistan's higher learning section during the 21st century. Additionally, the study was conducted to analyze the history of distance education in the higher education institutions of the country from the beginning of the current century to the present date. In addition, the paper has presented the structural role that institutions like the Allama Iqbal Open University (AIOU) and Virtual University of Pakistan (VUP) play in the propagation and control of distance learning. Further, it looked into the effects that the rise of technology, more specifically computers and the internet and learning management systems (LMS), have had on the means and availability of distance education. This investigation also established whether distance education allowed students to be flexible and free in terms of access, pace and way of learning. The difficulties encountered by distance education in the context of the digital divide, as well as the quality and perceptions of society, have been recognized and appraised in this research. The likelihood of distance education being the growing power of higher education in Pakistan is also one angle that this research studied. This study also assessed the educators' readiness to acquire and use online pedagogical skills for effective learning. This study aimed to investigate flexibility and freedom: A comprehensive study of distance education in the 21st century at higher education in Pakistan. Three research objectives of the study are: – (1) to evaluate students' perceptions of learning experience and engagement in online education, (2) to analyze students' views on technical support and infrastructure for online learning and (3) to assess perceptions of quality and relevance in online education.

Literature Review

The 21st century has experienced global change in higher education, with distance learning as the key mode. The case of Pakistan was even more interesting as, in these times, such change was mainly aimed at enlarging the circles of the less-cut people and making education accessible in a wide variety of formats (Akhter & Mahmood, [2018](#)). Early studies have shown the inefficiency of the traditional education system. They also pointed out that students from rural areas and those with economic issues were heavily hit by the traditional education system (Rutishauser, [2020](#)). Teachers had been setting in motion the educational use of computers and the internet in the institutions' very early stages. At the same time, they signified the dedication of educational institutions such as AIOU to print and radio for the delivery of distance learning, which contributed to building the basic knowledge of the acknowledged community (Mahmood et al., [2012](#)). It was the authors who were the first to recognize that there is a great necessity for the teaching and learning processes to be suited to diverse groups within Pakistani society, too (Ali & Mahmood, [2016](#); Iqbal et al., [2019](#)).

Technological Integration and the Rise of Online Learning

The propagation of the internet and the evolution of Learning Management Systems (LMS) in Pakistan have brought us to a new era of Distance Education. Universities have quickly adopted different systems, establishing both synchronous and asynchronous learning environments. Studies have been conducted that involve the investigation of LMS adoption to electronically change the standard printed materials into digital form (Rafiq et al., [2024](#)). In particular, a study was carried out by researching how the Higher Education Commission (HEC) had been initiating e-learning in the universities and schools in the country, pointing out that there were the Commission's efforts to reorganize Higher Education through technology). Scholars have undertaken a critical examination of the way NAHE performs in the development of online faculty training, instigating the need for the preparation of teachers of online courses. The inauguration of the Virtual University of Pakistan (VUP) was hailed as an essential phase of the effort and dedication to providing online degree programs not only to the general public but to the wider audience (Maqbool et al., [2024](#)).

Flexibility and Freedom: Empowering Learners

The concepts of flexibility and freedom became central to the discourse surrounding distance education. Scholars discovered that the demand for flexible learning has indeed increased because working professionals and those who balance family and career are the ones who seek these opportunities (Akhter

& Mahmood, [2018](#)). This system of education has been confirmed to have the power of its side of the learner's autonomy, revealing that students must have the right to learn at their own pace to be the key factor in the teaching process. Educationists made a comprehensive analysis of the positive effects of individualized learning paths, focusing on the fact that distance education can indeed be a tool for learning in a way that best fits each person's needs (Veletsianos & Houlden, [2019](#)). The research was instrumental in demonstrating how distance education could solve the problem of no access to higher education in rural areas and open the doors for minority groups. They also reported the use of blended learning, where researchers showed that schools combined traditional classroom learning with online learning. They found that the students exercised more discretion over the courses that they selected as well as the pace at which they wanted to complete them (Bertiz & Karoğlu, [2020](#); Rutishauser, [2020](#)).

Challenges and Barriers: Addressing the Digital Divide and Quality Assurance

The issues of distance education in Pakistan were really serious. The key points in the Study of the digital divide were that there were major differences in terms of access to the internet and IT literacy skills. The papers that were published about online training courses questioned the quality, pointing to the lower level of academic rigour and pedagogical effectiveness. According to some scholars, such factors as the deficiency of infrastructure and technical reinforcement hinder the successful operation of the Internet (Raihan et al., [2024](#)). The investigation of societal attitudes towards distance learning paid attention to the issues of overcoming the stigma and the teaching/learning process involved in gaining popularity in society. A number of scholars studied academic dishonesty issues in online assessments. The lack of sufficient student support systems was also revealed (Mumtaz et al., [2022](#)).

The Impact of the COVID-19 Pandemic: Accelerating Adoption

The COVID-19 pandemic was like a magic wand in Africa, which then sped up the use of distance learning education in Pakistan. Researchers monitored the rapid migration of online learning platforms and underlined the significance of digital skills and robust online infrastructure. Various studies dealt with changes in the educational process during the pandemic and as well highlighted the resilience and adaptability of distance education. Scholars focused on the difficulties faced by universities as they tried to change from face-to-face to online teaching and assessment. Investigations showed students' adaptation problems with self-paced online learning (Khan & Abid, [2021](#)). The resources created specifically for educators were much in demand (Ullah et al., 2021). The local nature of the electronic materials was greatly emphasized by (Mahmood, [2022](#)). The institutions were mandated by the pandemic to come up with new online examination protocols. There was a requirement to face the emergence of new challenges and to benefit from the opportunities that distance education presented. The studies have also talked about the vital role that the bridging of the digital divide, the assurance of the quality of educational processes and the promotion of a culture of online learning have to play. The authors went further and suggested continued investment in education sector infrastructure and human resources as well as research targeting the full realization of the distance education potential in Pakistan (ULLAH et al., [2021](#)). Studies pointed to the need for teachers to arrange two-way online sessions. Everyone's accessibility to online resources was also suggested (Anwar et al., [2020](#)).

Research Methodology

The study was conducted using a descriptive type of research to understand how students in the higher education system in Pakistan perceive the flexibility and freedom these establishments provide in distance learning. The descriptive type of research utilized in this study was instrumental in finding out the current situation of distance education through the eyes of its students. The findings shed more light on the perspectives of the students in different programs. The design approach followed in the study not only helped to tap into students' attitudes and expectations but also led to various learnings from the students. The overall feedback was that the students had a multitude of issues which affected their involvement and satisfaction with distance learning. These issues were addressed after the design of the research instrument was agreed upon, and the research results were subsequently utilized for further education as well as policy-making.

The study participants constituted students of various institutions in the higher education sector in Pakistan, which used the distance learning mode drawn from Allama Iqbal Open University (AIU) Islamabad, The Islamia University of Bahawalpur (IUB) and the Virtual University of Pakistan (VUP) targeted for the study. The selected universities represent those that are the biggest in terms of regular operation in the distance education sector and the largest student body. Also, in terms of the student population, these institutions were diverse. The large number of distance learning students from universities across the country in general ensured a high-quality sample of the students. Most importantly, the number of students was such that it was possible to benefit from the results obtained. A total of 200 questionnaires were distributed among the entire population of students. Students from the three aforementioned universities were then requested to fill out the questionnaires. In the end, 183 forms returned with the required amount of information, which is 91.5% of the total sample designed. Such a return rate of questionnaires was ample for a thorough statistical analysis to be performed. The survey method was the main tool for carrying out the research and was in the form of a structured questionnaire. The bilingual and bicultural study team decided to take a less biased approach to the data collection. Besides the questionnaire, the students were provided with a bulletin that contained only one question about student demographics. Upon collection, it could be seen that up to 183 students returned the questionnaires with all the sections duly answered and the names written properly. More than nine in ten of the total) students returning a completed questionnaire showed the researchers that they obtained a high-quality dataset for their analysis.

The novelty of the paper is guaranteed due to the primary data collection method. The questionnaire was composed of 14 questions, which were required to be answered in a four-quorum (strongly disagree to strongly agree) rating. Responses were crucial to the direction of the necessary steps of the survey, including question generation, which the team compiled based on the systematic review of the literature referring to the research themes and issues. The high rate of return indicates that most of the students participated in the study. In the introduction, there were already three questionnaires that had to be filled in with a total of 16 questions. On each page of the questionnaire, there were four questions to evaluate students' attitudes toward distance education and related services. Besides, open questions invited students to give comments if they wished. The majority of the items, except for those referring to geographical and time suitability, were based on a five-point Likert scale assessing the degree of agreement. Each question was answered on a four-point scale: excellent, fair, poor and worst. These questions were derived from a wide literature review, and they cut across the main objectives of this research. The questions in this section of the survey dealt with the issue of convenience and accessibility in distance education, such as time and space management. Open and distance learning are the probable identification of the definitions of the various learning processes, which are built in the process of chatting, watching and interacting with the teachers and fellow students. The queries extracted from the informants focused on the learner's own experiences and a couple of significant issues of the interaction that were positively or negatively perceived. Students' attitudes towards the user-friendly interface in terms of the extent of the support they receive from the IT department and the university management are illustrated by the questions addressed here. There are no empirical queries about students' ratings of online programs that would enable the formulation of a useful source of feedback for the e-learning department. The topic of this section was the issues surrounding the course rigour and the quality to which the interviewees attested their studies were covering. Two coherent and verified issues were found in one of the participants: the academic level of online programs and the acceptance of online course certificates in the private sector. Relatedly, the last section of the survey accessed the viewpoint that the respondents had concerning e-learning and some of its basic areas, such as career and job prospects.

Results

This study data analysis relied on the Statistical Package for Social Sciences (SPSS-25.0) version. Descriptive analysis was utilized to summarize and define the data collected from the questionnaires. In particular, frequency distributions and percentages were performed to examine the distribution of responses for each question, especially in the case of demographic variables and categorical responses on the Likert scale. Mean scores were measured to discern the level of agreement or disagreement of the

participants for each Likert scale question. Standard deviations were used to find out the differences and the reactions of the answers from the mean which reflect the consistence of the students in their views. The statistical figures were not just helpful, but they were a means of giving the readers. Descriptive statistics also became seriously important in presenting a full-length picture that is easy to follow and about the students' judgements in the area of flexibility and freedom in distance education.

Table 1*Participant Demographic Characteristics*

Demographic Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	92	50.3%
	Female	91	49.7%
Age Group	18–21 years	68	37.2%
	22–25 years	72	39.3%
	26–30 years	28	15.3%
	31+ years	15	8.2%

The sample consisted of 183 participants with nearly equal gender distribution (50.3% male, 49.7% female). The majority of respondents were young adults, with 76.5% aged between 18–25 years.

Table 2*Students' Perceptions of Flexibility and Accessibility in Online Education*

Statement	Option	SA	A	DA	SDA	Mean	SD
1. Distance education provides greater flexibility in managing studies and personal life.	f %	56 30.6%	85 46.4%	12 6.6%	5 2.7%	4.12	0.89
2. Online learning offers convenient access to resources regardless of location.	f %	62 33.9%	92 50.3%	8 4.4%	3 1.6%	4.32	0.76
3. Distance education enables learning at my own pace.	f %	61 33.3%	88 48.1%	10 5.5%	4 2.2%	4.25	0.82
4. Online platforms allow access to course materials at any time.	f %	70 38.3%	90 49.2%	6 3.3%	2 1.1%	4.41	0.71

Students strongly agreed that online education offered flexibility, with the highest agreement (mean=4.41) for 24/7 access to materials. Over 80% of respondents agreed or strongly agreed that distance learning provided location independence (84.2%) and self-paced learning (81.4%). Only minimal disagreement was recorded (1.1%–6.6% across items), indicating overwhelming positive perceptions of online education's flexibility benefits.

Table 3*Students' Perceptions of Learning Experience and Engagement in Online Education*

Statement	Option	SA	A	DA	SDA	Mean	SD
5. Online learning will be as engaging as traditional classroom learning.	f %	35 19.1%	78 42.6%	52 28.4%	18 9.8%	3.02	0.95
6. Online discussions and interactive activities will enhance my learning experience.	f %	58 31.7%	92 50.3%	25 13.7%	8 4.4%	3.42	0.84
7. I will feel a sense of community with my peers in online learning environments.	f %	42 23.0%	85 46.4%	45 24.6%	11 6.0%	3.21	0.89
8. Online assessments will accurately reflect my understanding of the course material.	f %	47 25.7%	88 48.1%	38 20.8%	10 5.5%	3.31	0.87

Perceptions were moderately positive about engagement, with 61.7% agreeing online learning could match traditional classrooms (mean=3.02). Interactive elements received stronger endorsement (82.0% agreement, mean=3.42). About one-third of students expressed concerns about peer community (30.6%

neutral/disagree) and assessment accuracy (26.3% neutral/disagree), suggesting these areas required improvement.

Table 4

Students' Perceptions of Technical Support and Infrastructure

Statement	Option	SA	A	DA	SDA	Mean	SD
9. The university will provide adequate technical support for online learning.	f %	48 26.2%	89 48.6%	32 17.5%	14 7.7%	3.35	0.91
10. Reliable internet access will be readily available for online studies.	f %	65 35.5%	86 47.0%	22 12.0%	10 5.5%	3.51	0.87
11. The online learning platform will be user-friendly and easy to navigate.	f %	60 32.8%	87 47.5%	25 13.7%	11 6.0%	3.46	0.89
12. The University will provide sufficient training for using online learning tools.	f %	42 23.0%	80 43.7%	44 24.0%	17 9.3%	3.15	0.95

Respondents expressed confidence in technical infrastructure, particularly internet reliability (82.5% agreement, mean=3.51) and platform usability (80.3% agreement, mean=3.46). Technical support received slightly lower ratings (74.8% agreement). Training adequacy emerged as the weakest area (66.7% agreement, mean=3.15), with nearly one-quarter (24.0%) expressing dissatisfaction.

Table 5

Students' Perceptions of Quality and Relevance in Online Education

Statement	Option	SA	A	DA	SDA	Mean	SD
13. The quality of online courses will be comparable to traditional classroom courses.	f %	52 28.4%	85 46.4%	35 19.1%	11 6.0%	3.38	0.88
14. Online learning will provide me with relevant and up-to-date knowledge and skills.	f %	58 31.7%	92 50.3%	25 13.7%	8 4.4%	3.45	0.83
15. Online courses will prepare me effectively for my future career.	f %	47 25.7%	88 48.1%	38 20.8%	10 5.5%	3.31	0.87
16. The university will maintain academic integrity in online assessments.	f %	62 33.9%	85 46.4%	28 15.3%	8 4.4%	3.49	0.84

Most students (74.8%) believed online courses maintained comparable quality to traditional classes (mean=3.38). The highest agreement concerned academic integrity (80.3%, mean=3.49) and knowledge relevance (82.0%, mean=3.45). Career preparation received slightly lower confidence (73.8% agreement, mean=3.31), with 20.8% expressing doubts about its effectiveness.

Discussion

A full-scale survey was conducted to look into the perception of students on distance education in the 21st century in higher education institutions in Pakistan. The results of this inquiry are of great help for understanding the viewpoints of the millennials under the e-learning system and acknowledging the beneficial aspects of such a system. The results show that the students of the program, without a doubt, agree with the farmless nature of online education. In fact, most of the students were of the opinion that e-learning is the most convenient among other methods, and the point nearly all of them agreed on was the access to the learning resources 24 hours, 7 days a week. This discovery marries with the principles of distance education that have been propagated lately and have always been the essence of the field, that is, the removal of all kinds of limitations in the race to aggregate knowledge and the constant learning process to the students' advantage; be it temporal, spatial, or both (Stone et al., 2019). The fact that most students strongly agreed with the ideas of location freedom and adapting the speed of the course to their personal needs and way of life indicates that students perceived online education as a tool that provides them with a more flexible environment not only to study but also to get on with their daily activities. These merits are especially evident in the case of Pakistan, where students may be subject to the harsh realities of

transportation, socio-economic conditions, or their personal commitments, which may curtail their participation in the traditional face-to-face mode of education. The minimal level of disagreement among the identified flexibility items could suggest close to universal acceptance and pleasure for what is perceived as the very foundation of online learning among the students of the survey. This is in line with some other researchers who have discovered the flexibility of online learning is the most vital pull for students from around the globe (Daniel, 2016; Stone et al., 2019). The student's confidence in the flexibility of the learning process was much brighter than their views on the involvement in the online learning environment. Although the majority had a positive feeling that electronic learning can be shuffled with traditional engagement, it was not a general conception of the whole online learning concept. That is to say, when teachers integrate those elements in their courses that are known to increase students' involvement and partnership, students will be more engaged. The findings are consistent with learning theories that draw attention both to the necessity of the learners' active possession of information and the facilitation of continuous motivation (Huang et al., 2020). Despite this, a significant number of respondents displayed the feeling of being neutral on the side of the community among peers and on the issue of the accuracy of the assessment would be a cause for concern. The challenges of building a community of practice in online settings have been repeatedly discussed in the context of previous studies such as Ulanday et al. (2021) that suggest such communities face the same obstacles in the Pakistani educational system. Similarly, issues about the credibility of assessments made online that might have a direct connection with counterfeit practices in academic settings or the limits of identification of learner's knowledge through certain assessment methods are a point of focus. The results imply that the teacher as well as the educational institution should carefully design the remote course, with an aim to promote interaction.

The second aim was to explore the opinions of students concerning the level of technical support and infrastructure that were provided for online learning. The participants, more or less, were of the view that the internet was reliable and the platforms of online learning were user-friendly. A good opinion of the basic technical infrastructure is very important for the successful transmission and reception of online education. In the era of intensive technological changes, the fast and convenient mode of technology in education becomes a must (Moore & Fodrey, 2017). However, the non-uniform ratings of the technical support and the stronger expressions of inadequacy of training put in a clearer focus the weak points in the support systems. The fact that almost 25% of the students were unhappy with the training that they received gives an indication of a big gap that needs immediate work. In order to find both the faculty and the learners adept at online learning and thus exploit the full potential of digital environments the need for comprehensive training and technical support is emphasized (Roddy et al., 2017; Sato et al., 2023). Willingness to engage will be affected if the support provided is inadequate, thus students' learning gets slow, resulting in their overall perception and the effectiveness of online education being affected. This result speaks volumes about the necessity of institutions of higher learning in Pakistan to embark on providing solid technical support services and effective training programs that can cater for their students of different technological skills. This is especially true in the context where the digital literacy levels can qualify as anything but homogenous among students.

The third objective was designed to elicit the opinions of students about the quality and significance of online education. A considerably large number of students felt that they were maintaining the same quality of learning in their online courses as they did in their face-to-face traditional classes. It is actually a very favorable sign as it indicates that the students' awareness of online education as the source of demanding and beneficial learning experiences is on the increase. The students seemed to be in general the most in agreement about academic integrity and the relevance of knowledge obtained through online learning. This clearly demonstrates that students, as a whole, find online learning environments as vehicles for maintaining educational standards and for obtaining relevant knowledge that is of use to their educational and professional plans. These perceptions are massive for the future of the acceptance and trustworthiness of online education in the higher education system. A question about a slightly lower level of confirmation from the students on the topic of online learning being suitable for career preparation stands out and calls for special attention, especially since a large number of students are uncertain about it. This worry might have its root in several reasons like how students think about the toughness and

acceptance of the qualifications that are earned from an online degree vis-à-vis employers, the types of practical or experiential learning made available in online formats, or the making of certain soft skills that are often an emphasis in traditional classroom settings. Earlier research reported an array of insights into students' and employers' attitudes towards the career relevance of online education; a number of studies pointed out the rising worries among students and employers (Lau et al., [2021](#)), while other researchers came to the conclusion that online degrees were graduating from being unrecognized to becoming increasingly recognized and appreciated (AHMED et al., [2018](#)).

This research implies that higher education institutions in Pakistan should ensure, rather than wait for students to worry, the following are the steps that are needed to sustain quality and standard and also guarantee that the students' career development is in tandem with the market requirements. This includes who the quality of their online programs is guaranteed, what kind of supportive career services are provided and how clearly managers of online programs are communicating the value and the degree of recognition of their online qualifications to students and potential employers in the study of their authentic concerns situated in the Pakistani higher education context. This is a comprehensive study that is particularly rich in its data on the Pakistani college students' feelings about online education in the 21st century. The importance of the flexibility offered by online learning has definitely been highlighted, while certain priorities have been recognized as instructional practices in teacher education that require the students in the changing times. First of all, there is the task of creating a greater sense of community and second, there is also the goal of being constantly in touch with the students so that the teachers can make the necessary changes in their assessments in order to attend the lack of engagement. Additionally, the areas should focus on improving technical support services, giving thorough training as a response to infrastructure concerns and at the same time explaining many issues to the general public. This research that could follow might then be directed to explore the other factors, which by themselves will certainly affect the perception of students, through the investigation of the staff members' views. Not just any kind of pedagogical approach but also the use of technology can emerge as one of the most remarkable creators of convenience for studying, which, however, we are about to show that they can, at the same time, deal with the fallouts of the online learning world via the Pakistani educational lens.

Conclusion and Recommendations

The students in this case are from the college of Pakistan, so the main focus was on the topics of flexibility and accessibility, the quality and relevance of online learning, learning experience and engagement and technical support and infrastructure. The results demonstrated that the students had a coherent and an indisputable stand on the benefits they could acquire from such an educational system as online learning. The ability to handle work responsibilities and studies was a great benefit, as well as the easy access to sources of information from any location, the move at our own speed of learning and continuous access to the resources of the course. These benefits also signified that online learning had the main advantage of being adaptable to different student backgrounds and choices. The outcomes were a mixture of positivity and negativity though the number of students was overall happy and a 70% figure also believed that the level of engagement was possible with online learning, a few had some concerns that retaining a sense of community and true friendship in the virtual environment was not possible and also there were some doubts about the fairness of online assessments. The survey indicated the greater acceptance of the use of communication tools in online learning. The presence of such features in the online learning process, in the students' opinion, would greatly help in improving the learning process. The students also had great trust and confidence in the technical infrastructure of their online learning that included considerations on internet speed and the ability of all the communication platforms to be user-friendly.

Apart from being time-efficient and less wasteful of resources, more than half of the students interviewed appreciated that online learning had the same or better quality as face-to-face learning. The same number of students was more or less sure and in agreement with the issue of such a knowledge and skills lifestyle gained at the academic institution and its moral excellence in distance evaluation that could be transferred to their future professional lives. A great deal of confusion can be observed in the students' opinion regarding the future effectiveness of online courses for career preparation as the study illustrates. However, this indication is due to the presence of a much smaller percentage (16%) of students who uphold

skepticism on that. In addition to this, the study shed light on the student's understanding of distance education in higher education in Pakistan. The results backed up the acknowledgment of the areas that the students have been long enjoying in terms of e-learning, such as the adaptable schedule and being able to access the course materials from anywhere, while at the same time pinpointing the areas that need attention and the ways to intervene such as the hiring of more trained staff, coming up with training programs and the students' preparation for their perceived careers. Gradually, these observations were turned into policies and actions that are directed to strengthening the infrastructure, the facilitation of the students learning and providing a proper environment for online education in Pakistan in order to satisfy the demands and aspirations of the student populace. Based on the findings of this comprehensive study on students' perceptions of distance education in the 21st century at higher education in Pakistan, the following recommendations are proposed to enhance the quality, engagement and effectiveness of online learning:

- Universities must proactively work to create and maintain a virtual learning community by carrying out several strategies. A positive example could be the use of special online forums for communication, virtual study groups led by educators, joint projects introduced at the beginning of a study or ice-breaking activities in traditional settings. The usage of various communication tools for synchronous and asynchronous interaction gives the impression of the physical distance being bridged among students.
- Teachers need to be most concerned about the development of interactive elements within online courses. For instance, this might involve creating discussion forums that have clear guidelines, instructional examples and the moderators' active regulation, group projects, online tests with immediate feedback, virtual simulations and multimedia resources that prompt involvement and thinking and so on.
- Colleges should spend part of their budget on the preparation of the faculty, i.e., the design and implementation of varied, efficient and student-oriented assessment techniques that range from traditional exams to the further development of understanding. To implement this benchmarking, hybridized learning assessment, e-portfolios, presentations done via video conferencing, peer assessment (with appropriate guidance) and secure proctoring tools in the case of need but without missing transparency and fairness in the assessment process can be envisaged.
- Universities should work on the establishment of their support services for online learning and make them even stronger and more efficient. Among the specifics, there are being responsive as well as providing help desks which should be easily accessible via the use of phone, e-mail or live chat, granting fast and timely help in case of technical difficulties as well as issuing clear and full FAQs and troubleshooting guides.
- To both students and faculty, Universities ought to provide comprehensive training programs that will be effective in the use of online learning tools and platforms. Such programs are to be designed keeping various levels of digital literacy in mind and should be accessible in multiple formats (e.g. online modules, workshops, tutorials). Continual assistance and refreshing courses are equally essential.
- Institutions have to develop the necessary quality assurance frameworks that will guide the smooth running of online courses, therein shall be the center of the delivering and the curriculum design. The frameworks should focus on regular review and evaluation of online courses.
- Universities need to find ways that will make their online programs be viewed as more relevant to careers by the people they seek to reach. This can mean integrating career development resources into online courses, organizing virtual internships and industry projects, emphasizing the skills obtained in the online mode of learning that companies like and the exposure of alumni that have come through the online route to the future.

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