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Online Educations and its Relevance for Pakistan: A Case Study of Professional Development and Research Institutes of Pakistan

Syed Ali Shah

Assistant Professor, Department of Pakistan Studies,
Abdul Wali Khan University, Mardan, Pakistan

Correspondence: syedalishah@awkum.edu.pk

Dr. Mehwish Habib

Demonstrator, Education, Abdul Wali Khan University,
Mardan, KP, Pakistan

Email: mehwishhabib@awkum.edu.pk

Umama Wajid

M Phil Scholar, Department of English, Abdul Wali
Khan University, Mardan, Pakistan

Email: umamawajid2684@gmail.com

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Abstract

This research paper explores the importance and need of alternative education based on comparing the online and on-campus learning processes. This paper compares the advantages and disadvantages of online and traditional education through the prism of the Professional Development and Research Institute (PDRI) in Pakistan that underwent modification in response to the pandemic. It further studies the potential factors of AI in contemporary online education and discusses the issues related to alternative education solutions. By answering the following research questions, the paper will shed light on the changing nature of education and can enlighten the decision-makers on how the future conduct of education practices will be. Online learning, especially during the post-COVID Pakistan scenario, has become central as a solution to challenges and opportunities among other needs. Online education has increased access and flexibility; however, it poses challenges which include technological challenges and issues to do with quality assurance. Geographical limitations and cost limit on-campus education through its face-to-face interaction and its campus resources. The research and practice on hybrid learning, socio-cultural barriers, and digital literacy need to be developed and discussed in the future, and inclusive educational systems promoted.

Keywords: Alternative Education, PDRI, Online Education, Hybrid Learning, Post-COVID.



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Introduction

Alternative education is a general term that is considered an inclusive term that constitutes a wide scope of educational way which is not linked to mainstream education that learners typically receive in a conventional school. It is a bundle of various learning environments, instructional practices, and curriculum adapted to learners with diverse abilities and inclinations (Osman, 2020). Alternative education is increasingly regarded as progressive and adaptable method of learning that has many moderating features as well as the positive point of view of the school education.

The important thing for the alternative education is that to acknowledge different kind of learning styles and needs of the learners (Maddux, 2004). Commonly the in-class education makes a common strategy which ignores individual interests, skills and pace of learning. Unlike the traditional type of education, the alternative system can have a more personalized and individualized learning approach which enables the learners to be free to explore what interests them most, take part in practical activities and to study at the rate they feel comfortable with. This flexibility is of particular importance for students who meet problems in regular classrooms and need some additional support to succeed with their study.

For students, the alternative education is also all about the experiential learning, the real world application where they can have project-based learning, internships, community service, and other enriching activities that are beyond the walls (Dumford & Miller, 2018). By the means of interactive, experiential activities the alternative education model fosters the development of the students' critical thinking, problem solving, creativity and collaboration. These four skills are in demand today in the world which is rapidly change and interconnecting.

One more significant aspect of alternative education in contemporary life is reflected in the meaning of lifetime learning and skills development which appeared because of the quicker pace of the world technological progress and reorganization of labor markets (Palvia et al., 2018). In view of deviations from the established notions of a traditional career path and emerging novel industries, adaptability skills, digital literacy, communication, and entrepreneurship are becoming more relevant and meaningful. Leading alternative education programs, the development of modern skills is always under line. Thus, the students are equipped with the required tools and skills to deal with the existing challenges and the manifold opportunities for today's job market.

Furthermore, alternative education offers an opportunity for the disadvantaged and the poorest community members to get a high-quality education to improve their social status. The goal of these programs is the construction of a participatory, culturally sensitive, and inclusive alternative learning ambience that can challenge social injustices and provide people with diverse backgrounds the academic space they need to achieve their dreams and to perform to their full potential (Johnson, Veletsianos, & Seaman, 2020).

2. Research Objectives and Questions

Research objectives

- To explore the necessity and significance of Alternative Education
- To evaluate the prose and cons of on campus education
- The Role of AI and modern online education.

Research Questions

- A. What is modern alternative (online education) and its significance?
- B. What is the difference between the two and challenges

Significance of the Study

The case study of Professional Development & Research Institute (PDRI) in Pakistan is crucial in several aspects since it stresses on the peculiar problems and trends of alternative education that is especially in the case of developing countries like Pakistan (Osman, 2020). At the beginning, the e-learning during the COVID-19 pandemic demonstrated to PDRI students how well internet-based education copes with the emergency conditions. The sudden shift of education institutions globally to online the PDRI case study provides an example of how an institution in a developing country managed these challenges such as the inadequate technology facilities, the digital gaps and the innovative pedagogy in the unexpected turn.

The example of PDRI's work in the field of online education proves that alternative education is a contributor to the solving of the systemic limitations of education access and quality in Pakistan. PDRI is a vivid illustration of how alternative education can be used as a tool of inclusion and expansion of educational opportunity to students of diverse cultures including those in remote or deprived regions due to the application of distance learning technologies that lack geographical limits and access to traditional school infrastructure (Adnan and Anwar, 2020). In addition, the experience of the PDRI proves that there is a need to use the technology and innovations to enhance the educational outcomes and career growth perspectives in the low-resource areas.

PDRI case study is an excellent example of the best practices and lessons that can be adapted by applying them to other countries in the world to transform the education system with the help of digital tools and platforms available in developing countries (PDRI,2024). In addition to that, the shift of PDRI to the online education proves that strategic planning, capacity building, and collaboration with the stakeholders are of value to make the alternative education initiatives sustainable and scalable. Through the challenges, experiences and leanings they have, PDRI is sure to be studied by policymakers, educators and others stakeholders in the field, who will learn how they achieved successfully and interventions that will succeed in promoting the growth and sustainability of alternative education in Pakistan and beyond conditions (Adnan and Anwar, 2020). The analysis of PDRI Pakistan allows offering a close understanding of risks and opportunities present in the case of alternative education in the situation in the developing country.

This case study has in the light of the experiences of the PDRI highlighted this issue of alternative education in the larger context of the educational inequities, innovation and lifelong learning in the context of various socio-cultural settings. The selection of the Professional Development and Research Institute (PDRI) in Pakistan as a case study was not just informative, premeditated, and purposeful in several ways but, therefore, the study of the alternative education was not only extensive but, additionally, meaningful. PDRI is first of all a well-known educational institution in Pakistan and this is why it is an ideal selection of study (PDRI,2024). So, its commitment to the professional learning and research has made PDRI an important factor in the realm of education in the country and this is why it was a good target of analysis. In addition to this, the fact that the PDRI planned its response to the COVID-19 pandemic by transitioning to online education implies that it is flexible and inventive when addressing the crisis. This decision is both the demonstration of the commitment of PDRI to the continuation of education and it will also enable us to explore issues and the opportunities associated with this

process taking place, particularly in a third world nation like Pakistan.

Moreover, PDRI projects in online education are in line with the general goals of this research paper, which is to explore the importance of alternative education, to assess the advantages and disadvantages of the different learning systems, and to look at the part of technology, especially AI, in the current method of education delivery (Koh, 2020). PDRI's experiences can be used to get an idea of the effectiveness of the alternative education models, the difficulties of the online learning implementation, and the potential of technology to the enhancement of the educational outcomes.

Similarly, PDRI's case study provides practical lessons and the list of recommendations that can be used by the policymakers, teachers and other stakeholders who want to promote alternative education and use technology to the advantage of educational development in Pakistan and other similar countries. Through the study of PDRI's strategies, achievements, and limitations, the stakeholders can find the possibilities for the collaboration, capacity building, and the policy reform of the alternative education initiatives in the region which will make them grow and become sustainable. In short, PDRI was the subject of this case study because of its high position in the Pakistani educational system, its active effort to overcome the obstacles caused by the COVID-19 pandemic, and its compliance with the research objectives of this study (PDRI,2024). Through the analysis of PDRI's experiences, this case study is going to widen the discussion on the alternative education and will create the ways for the educational innovation and improvement in Pakistan and around the world.

Exploring the Necessity and Significance of Alternative Education

The requirement and the importance of the alternative education is the realization that the conventional systems of education are not enough to cater to the different needs, interests, and learning styles of all students. Hence, alternative education provides the innovative approaches and the flexible learning environments that are suitable for any type of learner, thus individualizing the learning process and promoting the holistic development of the learners (Marinoni, Land, & Jensen, 2020). To grasp the significance of alternative education, it is required to follow its development and to study the different models that have come up in history. The history of alternative education can be traced back to the progressive educational philosophies that were established in the 19th and 20th centuries.

Theorists like John Dewey and Maria Montessori supported the student-centered learning approaches that focus on the hands-on experiences, critical thinking, and experiential learning rather than the rote memorization and passive instruction (O'Keefe, Rafferty, Gunder, & Vignare, 2020). These early reformers founded the basis of alternative education by questioning the regular schooling methods and campaigning for the educational changes that would serve the students' needs and interests. The 20th century saw the alternative education that was constantly changing in accordance with social, cultural, and political changes. The countercultural movements of the 1960s and 1970s were the main reasons for the establishment of alternative schools and educational experiments that aimed to question the norms of the mainstream education and to promote freedom, creativity and social justice. (UNESCO, 2021) Through free schools and democratic schools to homeschooling and unschooling movements, alternative education was created in different ways, each reflecting different pedagogical philosophies and educational goals.

In the last few decades, the alternative education has become the topic of interest and the important one in the time of globalization, technological development, and the movement of the job market. Now that the world is becoming more and more connected and the issues are

growing, there is a greater awareness of the importance of educational methods that help students to be ready for the challenges and opportunities of the 21st century (Kalloo, Mitchell, & Kamalodeen, 2020). Besides the traditional schooling, alternative education models such as online learning, blended learning, project-based learning, and competency-based education have come out as the right alternatives to the conventional schooling, thus providing students with the opportunity to thrive in a fast changing world. Besides, alternative education is the key to solving the social injustices and the inequalities that exist in our society. Through the use of inclusive learning environments that cater to the differences of students, alternative education can bridge the achievement gap, lower dropout rates and empower the marginalized communities to get quality education and the chances of upward mobility.

In conclusion, the change in alternative education demonstrates the increasing awareness of the shortcomings of the conventional educational models and the necessity of the innovative approaches that mainly focus on the student-centered learning, the flexibility and the inclusivity (International Association of Universities, 2020). By following the history of the alternative education and studying its different models, we can understand the importance of its role in the promotion of the educational equity, in the development of the lifelong learning and in the preparation of students for the 21st century. In Pakistan, the attempts to adopt alternative education are on the rise, which is because of the realization that the traditional education system is facing some problems and the need to provide the quality education for all the citizens is there which should be equitable.

Examining Alternative Education in Pakistan

Although the conventional schooling system is still the main one, there have been many initiatives and interventions that aim to support the alternative education models and practices throughout the country. An example of a significant activity is the creation of alternative schools and learning centers that are for the benefit of the marginalized communities, such as the rural people, street children, and girls (Crawford et al., 2020). These schools usually exist outside the formal education system and provide the learners with flexible, community-based learning opportunities that are personalized to their specific needs and circumstances.

Organizations like the Citizens Foundation (TCF) and The Indus Resource Centre (IRC) have been the main forces in the establishment of alternative schools in the remote areas, hence, giving opportunity of education to the marginalized children and making the communities to take the responsibility of their children's learning. Also, the digital technology has made it possible for the digital education to be extended through the online learning platforms and the distance education programs (Adnan & Anwar, 2020). Because of the COVID-19 pandemic, many educational institutions in Pakistan, such as universities, colleges, and training centers, shifted to online education to enable learning to continue despite the physical restrictions. The change to online learning has created new opportunities for alternative education, as learners can now access educational resources and opportunities remotely, no matter where they are located in the world. Besides, the search for alternative education in Pakistan has been supported by civil society organizations, NGOs, and international development agencies. These stakeholders have been the ones who have been the ones to be involved in the advocacy of educational reforms, conducting the research, and the ones who have been the ones to have implemented the innovative projects which have been the ones that have been aimed at the expansion of the access to the alternative education, the improvement of the educational quality, and the fostering of the inclusive learning environments.

Besides, the Government of Pakistan has also made efforts to support alternative education through policy initiatives and programs that aim at the expansion of educational opportunities

and the diversification of the needs of different learners (Osman, 2020). To illustrate, the National Education Policy (NEP) 2021 stresses the importance of alternative education and lifelong learning, indicating the necessity of the diverse needs and aspirations of learners to be met through the use of flexible and innovative approaches (Abbasi, Ayoob, Malik, & Memon, 2020). Nevertheless, the main problems in integrating alternative education in Pakistan are still present such as the lack of funding, inadequate infrastructure, and socio-cultural obstacles. Besides, the quality and relevance of alternative education programs are mainly dependent on the long-term investment in teacher training, curriculum development, and educational research.

Although the progress towards the acceptance of the alternative education in Pakistan is still being made, the relevant stakeholders, such as the government, the civil society, and the international partners, are contributing to the extension of the educational opportunities and the promotion of the inclusive and equitable learning environments across the country (Tratnik, Urh, & Jereb, 2019). Through the expansion of these initiatives and the resolution of the current problems, Pakistan can be more dedicated to the alternative education and hence all the citizens can get the learning opportunities at the level of their desired capacity.

Exploring the Importance of accessibility and flexibility in alternative education

The significance of accessibility and flexibility in education is undeniable, especially in the area of alternative education. Accessibility is about the possibility of people to have education regardless of their geographical location, socioeconomic status, physical abilities, or other barriers. Flexibility, on the other hand, is the adaptability of educational systems to the different learning needs, preferences, and life situations (Young & Norgard, 2006). Accessibility and flexibility are two of the most important aspects of alternative education models because they allow learners to break down the traditional barriers to education and go for the learning experiences that are tailored to their individual circumstances and aspirations. Among the main advantages of alternative education is its capacity to enhance accessibility by offering learning opportunities that are not restricted by the conventional constraints such as physical classrooms, fixed schedules, or scarce resources. Online learning platforms, distance education programs, and community-based learning centers are the means through which alternative education provides people who would otherwise not be able to attend school, like those who live in remote areas, working adults, disabled people, or the marginalized communities, a chance to get an education.

Besides, alternative education stresses the flexibility in both the delivery and the structure of the educational programs, thus, the learners can participate in the learning activities at their own pace, on their own schedule and in the environments that suit their needs (Ansar, Ali, Khattak, Naveed, & Zeb, 2020). This flexibility is especially useful for the learners with various learning styles, preferences, and life circumstances, as it enables them to take charge of their learning journey and pursue the educational experiences that suit their interests, goals, and abilities. Besides, the alternative education models are created for the purpose of meeting the different learning needs and preferences by providing the different pedagogical approaches, curriculum options, and support services according to the individual needs of the learners.

Through project-based learning, experiential learning, competency-based education, or personalized learning pathways, alternative education enables learners to participate in meaningful, relevant, and impactful learning experiences that are related to their interests, strengths, and aspirations. Accessibility and flexibility, in addition to the advantages of additional education in enhancing the learning possibilities of the underserved groups, also enhance the inclusivity, equity and empowerment (Yang and Cornelius, 2004). It enables the individuals to eliminate the barriers to education, to keep on learning in their lives and to realize their full potential regardless of their background or circumstances. Accordingly, the primary

values that facilitate the transformational force of alternative education in enhancing educational equity, social justice and human growth are accessibility and flexibility.

Analyzing the role of AI in Modern Online Education

The use of AI in modern online education has brought a change in the way learning experiences are given, customized and evaluated. AI technologies have a variety of capabilities that improve the effectiveness and efficiency of online education platforms, thus, providing a personalized learning experience, facilitating the assessment and feedback mechanisms, while at the same time, they pose some important ethical concerns and the challenges.

- **Integration of AI for Personalized Learning:** The AI algorithms study the huge amount of data on learner behaviors, preferences, and performance to adjust the learning process to the specific requirements of each student. With the help of the adaptive learning systems, AI can recognize the strengths, weaknesses, and learning styles of each student and accordingly change the content, pace, and difficulty levels of the learning process (Ansar, Ali, Khattak, Naveed, & Zeb, 2020). The personalized learning pathways allow the learners to go at their own speed, get the necessary support, and be more involved in the course materials, thus, the learning outcomes and retention rates are greatly improved.
- **AI-driven Assessment and Feedback Mechanisms:** Through the use of AI-powered assessment tools, the grading process is automated, thus, students are given prompt and precise feedback on their assignments, quizzes, and exams. NLP algorithms can analyze written responses, essays, and other text-based submissions and evaluate them content, coherence and grammar with a level of precision which is the same as human graders (Akram, Anjum, & Batool, 2020). Besides, the machine learning algorithms can be used to monitor the student progress, detect the areas of improvement, and suggest the interventions or resources which will help the student to achieve his/her learning goals.
- **Ethical Considerations and Challenges:** Nevertheless, despite the advantages of AI in online education, the ethical issues and the challenges that have to be solved are still there. The main issue is the possibility of the algorithmic bias, where AI systems will either unintentionally or unknowingly support or intensify the existing inequalities, which are based on factors such as race, gender, or socioeconomic status (Louis-Jean & Cenat, 2020).

Furthermore, one can also have certain concerns regarding the information privacy and security, in particular, how the AI algorithms can collect and use the sensitive student data. The open and responsible AI decision-making procedures are the secret to the equality, trust, and ethical application of AI technologies in learning. In addition, the ethical problems of AI in education, like the transparency of algorithms, the ownership and digital equality of data should be discussed and researched continuously.

AI is critical in the contemporary online education, it assists in building custom learning experiences, to accelerate the assessment procedure and to enhance the education outcomes. Nevertheless, the ethical issues and the challenges with algorithmic bias, data privacy, and transparency must be solved in order to make sure that the AI technologies are used properly and equally in educational settings (Palvia et al., 2018). Through the proper and ethical use of AI in online education, the educators and policymakers can unlock the full potential of the technology to change the teaching and learning in the digital age.

Exploring integration of AI in alternative education of Pakistan

In the Pakistani context, the integration of Artificial Intelligence (AI) in modern online education has both opportunities and challenges which are peculiar to the Pakistani educational system.

Pakistan faces the problems of access, quality, and equity in its education system, thus AI technologies present the solutions that can be used to solve these problems and at the same time also the ethical issues are raised.

- **Integration of AI for Personalized Learning:** In Pakistan, where educational resources and opportunities are usually scarce, AI-supported personalized learning platforms can be a game-changer in the process of providing the access to quality education to the people. Through adaptation of the learning experiences to each student's needs and preferences, AI algorithms can make the difference between the rural and urban students, and thus, the rural students who do not have teachers or educational materials can be helped with the AI algorithms (Palvia et al., 2018). Moreover, AI adaptive learning systems will address the issue of the dissimilarity of languages and cultures of Pakistani students through the delivery of the material in various languages and dialects thereby, enhancing the inclusivity and accessibility.
- **AI Base Feedback Systems:** AI based furniture can transform how student learning can be evaluated and feedback provided in Pakistan. In a nation wherein the conventional methods of assessment of learning (standardized test) cannot be used in assessing a full spectrum of the skills of students, AI algorithms can offer more well-rounded and in-depth analyses that take into account the various learning styles, cultural settings, and socio-economic conditions of students. Besides that, the AI-driven feedback systems will allow Pakistani students to receive timely and valuable feedback on their educational work, which will allow students to learn about their weak areas and cultivate responsibility to learn themselves (Osman, 2020).
- **Ethical Considerations and Challenges:** Although AI is a valuable instrument of online education in Pakistan, there are many ethical challenges and problems that should be addressed before the technology can be accepted by the masses. Considering the diverse socio-cultural context of Pakistan, there is a danger of algorithmic bias and discrimination if AI systems are not designed and implemented carefully to consider the cultural sensitivities and contextual factors.

Besides, the worries about data privacy and security are even more important in Pakistan, where the problems of digital literacy and awareness are very common. Making sure that the data collection and use of a student is transparent, accountable and informed is crucial to the trust and confidence in the AI-based educational platforms (Osman, 2020). To put it briefly, the fusion of AI in the modern online education is a great opportunity to overcome the specific problems of Pakistan's education system. Through the use of AI technologies appropriately and ethically, Pakistani educators and policymakers can employ the technology to increase the access to quality education, improve learning outcomes and, at the same time, promote inclusivity and equity in the education sector of the country (Adnan & Anwar, 2020). Nevertheless, it is necessary to face the ethical issues and challenges in a careful way so that the AI-driven educational innovations can be used to help all the Pakistani learners equally.

5. Research Questions

- A.** What is modern alternative (online education) and its significance?
- B.** What are the differences between online and on-campus education, and what challenges do they pose?

Examining the case of Alternative education through PDRI Pakistan case study

The PDRI, located in Pakistan, is the leading organization aimed at the upgrade of the employees' skills and competencies of every profession. PDRI has set a mission for professional

development and training that are sensitive to the needs of the learners. Program schedule covers courses, workshops and seminars, which are based on the current trends in the labor market.

Key Milestones

1. **Establishment of PDRI:** PDRI was established with a mission to be number-one professional body relating to development and research in Pakistan. As soon as the establishment of PDRI, the quality of education, research, and innovation was made the core area of the institute's works.
2. **Expansion of Course Offerings:** PDRI has been growing the number of its educational programs which deal with a wide range of significant areas including management, technology, health care and so on. These educational programs are designed to equip the professionals with the essential knowledge, skills, and competencies required for career growth in their particular fields.
3. **Transition to Online Education:** As a result of the COVID-19 crisis, the face-to-face educational program was replaced with the e-Teaching at the PDRI. By utilizing its digital infrastructure and talented youth, PDRI has transformed traditional face-to-face training into online educational portals and this has served the goal of uninterrupted education and helped professionals countrywide.
4. **Innovative Learning Resources:** Our PDRI's website offers the most efficient way of downloading course materials, signing up for virtual classrooms and joining interactive learning exercises. Through online platform of PDRI, the media of information like multimedia and interactive modules as well as tools is used in communication and this has enhanced the learning process of the participants.
5. **Participation Engagement Programs:** The communication and participation by the students is facilitated by having the features of the virtual networking events, through the live Q&A sessions and through interactive polls and quizzes, which are there in the online learning environment created by the PDRI. These happenings are deliberately created in order to strike those keys; it is a feeling of: teamwork, sharing, and community building.
6. **Devotion to Equity and Inclusivity:** PDRI is a team, which continues to participate in educational needs in terms of inclusiveness and equity in online instructions. Scholarship programs, subsidies, and special provisions are among the areas the institution addresses to make sure that all students are provided with educational opportunities and support.
7. **Future Directions:** The next point is to enhance the participation of the users, and pay attention to the technical readiness while exploring the HBR models which integrate digital and non-digital factors. PDRI is attempting to achieve this situation by improving the use of new technologies and the flexibility of professionals and the workforce of Pakistan.

Given this, one can say that the online education will help PDRI to achieve its mission of excellence and innovation in the professional development of IT professionals. PDRI has the commitment to excellence, unrestrictedness, and inclusiveness that has made it the frontline organization in the education sector in Pakistan (PDRI.2024).

Overview of PDRI and its Transition to Online Education

The Professional Development & Research Institute (PDRI) based in Pakistan is a well-known institution which has shown several noteworthy steps in the arena of professional development and formal education. With an objective of improving the professional skills and competencies of people coming from different sectors, PDRI provides various training programs, workshops

and seminars which could help in catering the ever- changing face of workforce demand in Pakistan (Adnan & Anwar, 2020). Along with the difficulties encountered during the operation of the pandemic, PDRI has made outstanding conversion to the online education from the original classroom-based training.

The transition amid the COVID-19 pandemic was necessitated by the need to preserve the integrity of education and training, in line with social distancing guidelines and lockdown measures put in place to halt the spread of the virus. The transition to online education involved several key steps and initiatives:

- **Digital Infrastructure Development:** PDRI enhanced its digital capacity by incorporating new LMS, online video conferencing facilities, as well as electronic collaboration tools. Thanks to the online infrastructure of PDRI, the participants could participate in live interactive techniques, got access to course materials, and could even communicate with the trainer remotely (Akram, Anjum, & Batool, 2020).
- **PDRI updated its training programs and course syllabus** to suit the online platform that included a touch of interactive multimedia components, asynchronous learning modules and virtual simulation that aided in engaging the participants and enabling them to experience an active learning process (Akhter and Mahmood, 2018). Trainers themselves had been through training on proven online teaching methodologies and techniques and they were supposed to pass on the instruction in a virtual (online) environment only at the highest quality.
- **Participant Engagement:** PDRI applied different techniques to maximize the involvement and communication of participants in the online courses such as breakout rooms, interactive polls and quizzes, virtual networking events and live Q&A sessions with subject's matter experts. These interactive tools assisted in the development of the individual interest of a participant as well as encouraged a feeling of belonging and teamwork among the learners.
- **Technical Support and Assistance:** Through PDRI, technical help and consultation were offered to participants to guarantee the seamless adoption of online learning by participants. This comprised among others the provision of tutorials and guides on using the online learning platform as well as troubleshooting technical problems and assisting students to get course materials and resources (Akram, Anjum, & Batool, 2020).

Overall, the PDRI's transition into the online education system has demonstrated its spirit of being innovative, adaptive, and having resilience even in the face of unreasonable challenges. PDRI has taken on the role of a trailblazer in providing digital technologies and online learning platforms, which will eventually result in the upgrading of professional capacity throughout Pakistan in a variety of sectors and industries.

Challenges and opportunities for PDRI

In the wake of the COVID-19 pandemic, PDRI swiftly redesigned its operations to continue offering the same quality of teaching and professional development to the community it served. Using its internal digital infrastructure and knowledge, PDRI managed to switch its longstanding in-person training courses to the online learning platforms (PDRI,2024). In this manner, PDRI would be able to close the education divide, advancing the range of their influence to the professionals, nationwide in Pakistan. An example of this is that PDRI relied on its web site (<https://www.pdri.edu.rp/>) will be among the primary access points to course materials, virtual classrooms, and also participating in interactive learning activities.

With the help of this site, students are able to enroll online classes, libraries and to discuss courses with professors and classmates. However, there were technology obstacles, engagement,

and engagement, among other problems that we all faced in switching to the online learning platform. While others had challenges with the Internet connectivity or lacked the digital devices which in turn affected their participation in the online classes. PDRI addresses these challenges by providing technical support services, offering digital literacy training programs, and examining delivery methods using competent offline learning materials. In spite of the obstacles, PDRI showed readiness, foresight and innovation in adjusting the needs of the learners as the situation became clear.

PDRI has integrated a new development to the existing virtual setting with features such as virtual networking events, live Q&As with subject matter experts, and polls and quizzes, all of which contribute to participant engagement and interaction. Looking into the future, pushing PDRI to enlarge the involvement of participants, and seeking equity and addressing diversity can lead the innovation of the area of online education (Abbasi, Ayoob, Malik, & Memon, 2020). Through harnessing what has been learned from the pandemic and embracing future technologies, PDRI remains steadfast in its pursuit of advancing professional development in and general workforce development in Pakistan. Such an endeavor of PDRI aims at empowering individuals, organizations, and communities to be able to prosper in the digital and interconnected milieu that is the modern world.

The transfer of face-to-face education to online platforms due to the pandemic gave PDRI some vital lessons as well as insights that can be used for better educational practices and strategies in the future. Consequently, PDRI is to take the lessons learned into consideration while working with online education and shaping its future methods in professional development and labor market training. PDRI realized the significance of being technologically competent to deal with unplanned problems to a greater extent (PDRI,2024).

Pandemic highlighted the need for resilient digital infrastructure, comprising such of high internet connectivity, user-friendly learning management systems, and effective technical support services. Ahead, PDRI will invest in digital technologies as well as infrastructure for smooth delivery of online instruction and for it to be effective in meeting students' needs (Abbasi, Ayoob, Malik, & Memon, 2020). The pandemic proved that the ability for flexibility and adaptability is the vital component in the crisis management. PDRI showcased its adaptability by rapidly transitioning its classrooms to virtual learning platforms, redesigning its curriculum, and introducing new methods of teaching to suit students in such a virtual environment.

This adaptability will, thus, be key to support PDRI in dealing with the uncertainties and the changing face of education environments in the future. PDRI acknowledged the importance of creating a connection and interaction in online learning formats. The absence of face-to-face communication did result in getting the participants engaged and collaborative. The PDRI attempted several interactive features and engagement tactics to boost active learner participation by introducing virtual networking events, live Q&A sessions and collaborative group activities (Akram, Anjum, & Batool, 2020). To be sure, PDRI will seek out novel methods in the future to enhance student engagement and participation in the online classroom. 4. Equity and Inclusivity: The pandemic shine light on the existing gaps in online education, especially among the marginalized and the underprivileged.

PDRI learned through its experience that equity and inclusivity were of prime importance and must be considered in development of online educational projects to allow all learners to have the same chances to get education and assistance. PDRI will keep on pushing for digital welfare and its accessibility, providing scholarships, subsidies, and accessibility accommodation to ensure equity in the use of online learning

The hybrid learning approach explored by PDRI aimed to leverage the benefits of online and offline modalities by considering the merits of both approaches. Hybrid models provide flexibility, convenience, and personalized learning situations – all whilst maintaining the presence of face-to-face interaction and practical through activities (Young & Norgard, 2006). PDRI will consider hybrid learning models that include online and face to face aspects in order to enhance the effectiveness and accessibility of its educational programs. With technological preparedness, flexibility, engagement, equity, and hybrid learning as its mainstay, PDRI will continue to be innovative and open for change so that it can respond to the needs of its learners and support the advancement of workforce development in Pakistan. With its dedication to quality and diversity, PDRI is ready to serve as a torchbearer towards the formation of the new era of online learning all over the country.

The multi-faceted and impactful role of the Professional Development & Research Institute (PDRI) in distinctive education in Pakistan is functional (Akram, Anjum, & Batool, 2020). The PDRI stands as the key instigator in the implementation of quality education, development of innovative ideas and solutions, and resolving the different learning challenges of the professionals in various fields. Here are some key aspects of PDRI's role in alternative education:

- PDRI is a pioneer of online learning in Pakistan. It endeavors to provide a wide coverage of courses, workshops and seminars through online mode to its users. With the help of technology as well as web-based learning materials, PDRI extends education to the communities outside the classroom system by targeting people in distant and underprivileged areas.
- Facilitator of Lifelong Learning: PDRI provides for lifelong learning through the offer of professional continuous development skills for individuals at different stages of the profession and career growth. By virtue of its online courses and training programs, PDRI facilitates the re-skilling of professionals in terms of upgrading their current skill-set, acquiring new knowledge, and staying at the forefront of the trends and technologies of their current fields.
- Promoter of Flexibility and Accessibility: PDRI facilitates the flexible and accessible nature of education by offering online learning options that possess a great fit for different learning styles and necessities (Young & Norgard, 2006). Through offering individualized learning modules, interactive multimedia resources and flexible scheduling options, PDRI advocates for learner-centered educational experience by allowing learners to personalize the experience according to their social commitments and lifestyles.
- Provider of Industry-Relevant Training: PDRI offers industrial training programs that are specifically tailored to meet the changing needs of the job market and workforce. Such programs align with the evolving job demands. With industry experts, professional associations, and employers working together, PDRI makes sure that the courses are current, okay and functional for the existing industry standards and practices (Abbasi, Ayoob, Malik, & Memon, 2020).
- Advocate for Quality Assurance: The PDRI helps to keep the level of quality assurance of online education at a high level by ensuring strict standards of instructional design, course content, and learner support services. Continuous evaluation and improvement oversight of online courses is a vital aspect of PDRI's maintenance of its quality and credibility. It ensures a positive learning experience for the participants (Akram, Anjum, & Batool, 2020).
- Catalyst for Innovation: On the other hand, PDRI is an emerging force in the process of inspiring innovation by integrating technologies, pedagogical models and learning methods.

Through this research of new instructional strategies, interactive learning tools and engagement activities, PDRI causes the online education to be innovative and makes progress in the education of the country (Abbasi, Ayoob, Malik, & Memon, 2020).

- **Community Engagement and Outreach:** PDRI liaises with community, institutional, and stakeholders' groups to increase awareness levels about the benefits of the combined type of education and encourage people's participation in the e-learning programs. PDRI builds connections, conducts outreach initiatives and advocates for a coalition and collective efforts in promoting education equity where every individual will have the opportunity for good education. Overall, the PDRI is the central enabler in the developing of the alternative education of Pakistan through online learning, promoting flexibility and accessibility, delivering industry-relevant training, developing quality assurance strategy, fostering innovation and linking the community (Akhter & Mahmood, 2018). The PDRI will have its mission to superb delivery through inclusiveness and continuous improvement of education in general and in lifelong learning in particular.

Conclusion

In summing up this discussion, the transition to online learning of the Professional Development & Research Institute (PDRI) in Pakistan, reemphasizes the transformative possibilities and the dilemma involved in embracing e-learning as a solution in tackling new realities and demands. While Providing an equal opportunity of accessibility and flexibility for learners Online Learning requires certain issue to be handled such as Infrastructure Technology, Engagement Strategies and Quality Assurance (Ansar, Ali, Khattak, Naveed, & Zeb, 2020). Otherwise, on-campus college education is still a preferred option for its ability to deliver personal contact, campus amenities, and social networking opportunities, while it is undeniable that it faces challenges such as geographical restrictions, rigidity, and affordability.

Therefore, authorities involved in cultivating education and policy-makers have to fight collectively the institutional obstacles toward alternative schooling, comprising the digital divide, quality assurance, and the challenge of social assimilation. The digital infrastructure, creation of awareness, and improvements in collaboration of the key stakeholders will result in the creation of a versatile and inclusive system of education that will consider the benefits of the online model and the on-campus model of education as well. Moreover, equity, accessibility, and lifelong learning must be the guiding principle in research and practice of alternative education in the future, allowing new technology, public- private partnerships and community involvement to act as the incentives to individuals or whole communities to go along with the digital age. Throughout community involvement and continuous betterment, we could ensure that there would be education never failing to serve as a decorative aspect to the social mobility, economic growth, and human evolution in Pakistan and every other segment of the world (Abbasi, Ayoob, Malik, and Memon, 2020).

Recommendations for Policymakers and Educators

- i. **Invest in Digital Infrastructure:** When it comes to eliminating digital gap, increased investments in digital infrastructure must also be prioritized to ensure that all the students will receive fair opportunities to access online education. On the one hand, this implies the expansion of broadband connection, delivery of devices to the disadvantaged territories, and e-education of individuals through technological literacy courses to guarantee their digitization skills.
- ii. **Enhance Quality Assurance Structures:** Policymakers need to devise uniform quality assurance structures, accreditation and regulation systems to sustain the quality and the

reputation of online education. Through this, they control through measuring the efficiency of these online programs, which must meet the national standards of education, and make transparency and accountability obey able in online learning institutions.

- iii. III. Encourage Popularity and Adaptation of Alternative Education: The policy makers and the teachers should work collaboratively in the popularization of the virtues of the alternative education models so as to popularize their use in the post COVID Pakistan. This would involve conducting advocacy campaigns, capacity building workshops, establishment of strategic partnerships with learning institutions, employers and other community stakeholders in order to fulfill more on online learning platforms.
- iv. IV. Encourage Cooperation and exchange of knowledge: The policy makers should encourage the actors of education to collaborate and share their knowledge so that they can spread the good practices and experiences and come up with new forms of solving alternative education. It includes the establishment of communication channels, meetings, and the R&D partnership that contributes to the connection between the sectors and regions.
- v. The 2017-2021 Future in Research and Practice in Alternative Education.
- vi. i. Study Hybrid Learning Model: Researchers and practitioners are going to be required to research the benefits of hybrid forms of learning that include online and on campus systems in order to leverage the value of both (Ansar, Ali, Khattak, Naveed, and Zeb, 2020). This we will accomplish by designing the learning paths to be flexible, integrating learning activities involving the use of technology, and introducing experiential learning to the curriculum to make the learners to remain active in the engagement and the learning process.
- vii. ii. Meet Socio-Cultural Practice: Future studies ought to investigate socio-cultural impediments to adopting nonstandard educational models in post-COVID Pakistan and implement strategies that are effective in addressing them. The qualitative, community based and participatory action research activities will be incorporated into the studies to develop an insight into the cultural belief, attitudes and preferences towards the online learning and designing culturally appropriate intervention strategies.
- viii. iii. Digital Literacy and Skill Development: Researchers and practitioners: There is the need to prioritize on digital literacy and skill development to enable the individual to be successful in the Digital era because of having the skills he needs to be accomplished (Akhter and Mahmood, 2018). These activities include the creation of online courses, training, and certification plans can contribute to the emerging digital literacy, critical thinking, problem-solving, and cooperation among students with diverse ages and backgrounds.
- ix. iv. Promote the Creation of Inclusive and Sustainable Education Systems Research and Practices in post-COVID-19 Pakistan in relation to alternative education should be centered around promoting equity, inclusion, and sustainability as they are the core values that may positively address the issues of accessibility and relevance of education (Ansar, Ali, Khattak, Naveed, and Zeb, 2020). This includes creating diversity, equity, and a sense of inclusion to online learning spaces, creating accessible and culturally responsive educational contents, and establishing strategic partnership with marginalized groups in order to support their individual needs and desires through the joint development of educational solutions. Therefore, the post-COVID Pakistan situation needs a multi-faceted approach taken by the policymakers, teachers, researchers and practitioners in order to promote equity, inclusivity and innovation in alternative education (Akhter & Mahmood, 2018). Through digital infrastructure investments, implementation of quality assurance measures, promoting the awareness and acceptance of alternate education models, as well as the development of

collaboration and knowledge sharing capacities, the stakeholders can build a more adaptable, resilient and sustainable education system which in turn empowers individuals and communities to deal with the digital world positively.

References

- Abbasi, S., Ayoob, T., Malik, A., & Memon, S. I. (2020). Perceptions of students regarding E-learning during COVID-19 at a private medical college. *Pakistan Journal of Medical Sciences*, 36, S57–S61. <https://doi.org/10.12669/pjms.36.COVID19-S4.2766>
- Adnan, M., & Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology*, 2, 45–51. <https://doi.org/10.33902/JPSP.2020261309>
- Akhter, H., & Mahmood, M. (2018). Study of the impact of online education on student's learning at university level in Pakistan. *International Journal of Distance Education and E-Learning*, 3, ED597924.
- Akram, M., Anjum, F., & Batool, Z. (2020). COVID-19: A reason behind digital education in Pakistan. *Mediterranean Journal of Social Sciences*, 11, 19–26. <https://doi.org/10.36941/mjss-2020-0019>
- Ansar, F., Ali, W., Khattak, A., Naveed, H., & Zeb, S. (2020). Undergraduate students' perception and satisfaction regarding online learning system amidst COVID-19 pandemic in Pakistan. *Journal of Ayub Medical College Abbottabad*, 32, S644–S650.
- Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., Magni, P. A., & Lam, S. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning and Teaching*, 3, 1–20. <https://doi.org/10.37074/jalt.2020.3.2.7>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. Retrieved from <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- International Association of Universities. (2020). COVID-19: Higher education challenges and responses. Retrieved from <https://www.iau-aiu.net/Covid-19-Higher-Education-challenges-and-responses>
- Johnson, N., Veletsianos, G., & Seaman, J. (2020). U.S. faculty and administrators' experiences and approaches in the early weeks of the COVID-19 pandemic. *Online Learning*, 24, 6–21. <https://doi.org/10.24059/olj.v24i2.2285>
- Kalloor, R. C., Mitchell, B., & Kamalodeen, V. J. (2020). Responding to the COVID-19 pandemic in Trinidad and Tobago: Challenges and opportunities for teacher education. *Journal of Education for Teaching*, 46, 452–462. <https://doi.org/10.1080/02607476.2020.1800407>
- Koh, D. (2020). COVID-19 lockdowns throughout the world. *Occupational Medicine*, 70, 322. <https://doi.org/10.1093/occmed/kqaa099>
- Louis-Jean, J., & Cenat, K. (2020). Beyond the face-to-face learning: A contextual analysis. *Pedagogical Research*, 5, 1–4. <https://doi.org/10.29333/pr/7937>
- Marinoni, G., Land, H. V. t., & Jensen, T. (2020). The impact of COVID-19 on higher education around the world—IAU global survey report. International Association of Universities, Paris, France.
- O'Keefe, L., Rafferty, J., Gunder, A., & Vignare, K. (2020). Delivering high-quality instruction online in response to COVID-19: Faculty playbook. Retrieved from

<https://files.eric.ed.gov/fulltext/ED605351.pdf>

- Osman, M. E. (2020). Global impact of COVID-19 on education systems: The emergency remote teaching at Sultan Qaboos University. *Journal of Education for Teaching*, 46, 463–471. <https://doi.org/10.1080/02607476.2020.1802583>
- 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, 233–241. <https://doi.org/10.1080/1097198X.2018.1542262>
- Tratnik, A., Urh, M., & Jereb, E. (2019). Student satisfaction with an online and a face-to-face Business English course in a higher education context. *Innovations in Education and Teaching International*, 56(1), 36–45. <https://doi.org/10.1080/14703297.2017.1374875>
- UNESCO. (2021). Education: From disruption to recovery. Retrieved from <https://en.unesco.org/covid19/educationresponse>.