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Transformation of Educational Information Technology: An Analysis of the Development of Islamic Universities in Pakistan

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ABSTRACT

This research explicitly examines the strategy model employed in the growth of Islamic institutions in terms of educational technology plans geared at organizational sustainability. The research employs a qualitative approach. The study's interpretation is applicable and backed by field data, resulting in a model for the establishment of Islamic institutions that may serve as a reference in Pakistan. This study examines studies on strategic goals, curricular relevance to industry demands, and employment outcomes for university graduates. The survey found no substantial difference between Islamic and regular universities. The university's development strategy is in line with the government. As such, colleges have been given the option to develop creative programs. In this situation, program innovation is driven by technology and information. The Islamic University of Pakistan conducted employment market and labor research, as well as studies that illustrate the pattern of using Information Communication Technology (ICT), which revealed significant developments in the field of sustainability and community oriented. Furthermore, the study's findings revealed a gap between activities at Islamic institutions and the experiences and skills required for young people to enter the information technology business. The paper has consequences for innovation and shifting priorities in higher education policy.

Keywords: *Education Transformation; Higher Education; ICT; Islamic University; University Development.*

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INTRODUCTION

The traditional education system in Pakistan has long focused on theoretical knowledge and examination-based evaluation (Khushik, 2018). However, with global challenges demanding dynamic and swift changes, this approach alone is insufficient to prepare graduates to meet the demands of industry in the era of 5.0 and fulfill 21st-century competencies (Sergi & Scanlon, 2019; Stringfield et al., 2017).

The Islamic Republic of Pakistan, the second-largest Muslim nation in the world, comprises five major ethnic groups: Punjabi, Sindhi, Pathan, Baluch, and Muhajir (Muzaffar et al., 2020). The majority of Pakistanis (97%) are Muslims. This demographic reality influences the orientation of educational institutions toward Islam (Shakil & Akhtar, 2012).

Currently, Pakistan is facing multiple challenges, including terrorism, poverty, and social conflict, highlighting the crucial role of education in addressing these issues. Illiteracy and a lack of tolerance are often linked to such problems, yet education is frequently overlooked in policy-making (Iqbal, 2015; Jabeen et al., 2020). Political parties are often criticized for blaming historical and international factors for their policy and leadership failures (Shaikh et al., 2023). However, this does not diminish the fact that there have been failures in implementing inclusive and effective educational policies (Shakil & Akhtar, 2012). Formulating educational policies that focus on improving access and quality of education can help create a more tolerant and informed society, contributing to solutions for Pakistan's social challenges (EdTech Hub Team, 2021; Marlina & Bashori, 2021; Naveed, 2013).

To address these issues, development efforts should focus on enhancing the nation's human capital, with sustainable quality improvements in higher education (Astuti et al., 2021; Habib et al., 2021). Higher education contributes to enhance the productivity of labor force and directly impacts economic growth (Abbas et al., 2022). Pakistan has made significant progress in the fields of educational leadership and technology (A. Saeed et al., 2015). Both developed and developing regions of Pakistan, through local governments, are aggressively launching training programs and collaborative initiatives to expand access to education through technology and leadership (Sain, 2023; Williamson, 2016).

In recent years, Pakistan's educational landscape has undergone significant changes (Bilal, 2019; Zubairi et al., 2022). As the world becomes increasingly interconnected and driven by technology, the importance of acquiring relevant skills and embracing technology at universities is more critical than ever (Faisal & Kisman, 2020). This study explores the importance of skills and technology education in universities in Pakistan and how it can empower students and the nation.

The potential of educational technology as a powerful tool in improving Pakistan's education system is widely recognized. With international collaboration

and the adoption of appropriate technologies, it is hoped that the quality of education, both in Pakistan and globally, will continue to improve.

METHOD

This study investigated the transformative role of information and communication technology (ICT) in the educational development of the Islamic University of Pakistan. As ICT integration becomes increasingly vital for enhancing educational quality and accessibility, this research assessed the current state of ICT resources and infrastructure at the university. By employing a qualitative approach, the study gathered both qualitative and quantitative data through surveys, interviews, and document analysis, focusing on the experiences of faculty members, students, and administrative staff.

The research analyzed the effectiveness of ICT tools in transforming teaching and learning processes at the Islamic University of Pakistan. It examined the influence of online learning platforms and digital resources on student engagement and learning outcomes and the improvements in administrative efficiency and research capabilities facilitated by ICT. Identifying the challenges and barriers to effective ICT implementation, such as infrastructure issues and faculty resistance, was a critical component of this analysis, providing a comprehensive understanding of the factors affecting educational transformation.

Based on the findings, the study proposes actionable recommendations to enhance ICT integration at the Islamic University, focusing on policy development, resource allocation, and faculty training. The anticipated outcomes are expected to contribute to a deeper understanding of how ICT facilitates educational practices and institutional development in higher education in Pakistan. Ultimately, this research offers valuable insights for Islamic universities and other institutions seeking to leverage technology for educational enhancement in the digital age.

RESULT AND DISCUSSION

The History of Educational Development in Pakistan

Pakistan faces numerous challenges, including terrorism, poverty, insecurity, sectarianism, and ethnic conflicts, underscoring the critical role of education in addressing these issues. High illiteracy rates, along with a lack of awareness and tolerance, are considered root causes. Unfortunately, education is often not prioritized in development policies. The education system is regulated by both federal and provincial governments, with the federal government focusing on curriculum development, accreditation, and research funding (Abbas et al., 2022).

The system is divided into five levels: primary, lower secondary, upper secondary, higher secondary, and university. While 87% of Pakistani children

complete basic education, preschool education for children aged 3-5 years and sex education at the secondary level are also part of the curriculum (Jahanzaib et al., 2021). Eight core disciplines are taught in formal schools: Urdu, English, mathematics, arts, science, social science, Islamiat, and computers. In addition, provincial and regional languages are taught in secondary schools in each respective province (Muzaffar et al., 2020).

As an Islamic republic, Pakistan has sought to implement Islamic principles in its education system since gaining independence in 1947. The main focus has been to create an education system that reflects Islamic values, such as Islamic brotherhood, social justice, and tolerance. The current education structure, based on a 1959 decree of the national education commission, consists of several tiers, ranging from primary to secondary education. The introduction of women-only universities in 1981 in Lahore and Karachi marked an important step in increasing access to education for women.

The system extends into higher education, where students typically complete a two-year preparatory program prior to college admission, with the exception of vocational institutions. A bachelor's degree is awarded upon reaching the 14th or 15th year, a Master's degree after the 16th or 17th year, and a Ph.D. as the highest level of academic qualification. With Punjab University in Lahore as the sole university since Pakistan's separation from India in 1947, religious courses have been an integral part of the curriculum, affirming the state's commitment to Islamic education (Faizi et al., n.d.; Zia, 2003).

The University of Punjab, Pakistan established a Faculty of Divinity in 1950, followed by the University of Sindh, which opened a Faculty of Islamic History and Culture in the early 1950s. Islamic education in Pakistan is categorized into three types: (1) Quranic School, where children learn to read the Qur'an; (2) Mosque Primary School, a government initiative launched in the 1980s to provide primary education for children aged 7 and older with a focus on the Qur'an, Urdu and mathematics; and (3) Madrasah, institutions that require students to memorize 30 Juz of the Qur'an before progressing to other subjects (Khushik, 2018).

Quranic Schools are usually located within the village mosques or mushalas and offer flexible learning schedules. Mosque Primary Schools, initiated by the Ziaul Haq government, were intended to address the shortage of learning centers in rural areas. However, many were unsuccessful as the imams often lack proficiency in Urdu and mathematics. Madrasahs strongly uphold the principle that the Qur'ān serves as the foundation for religious education and represents five main schools of thought: Deobandi, Barelwi, Hadithist, Salafi and Shia.

> *"Traditional education lacks practical exposure and limits students' choices, preventing them from developing real-world competencies and exploring their true potential."HU.1*

Traditional education often lacks practical exposure, preventing students from developing real-world competencies. In addition, the limited range of subjects limits students' choices, preventing them from exploring their true potential.

Table 1: Comparison of Higher Education Development in Pakistan

No	University	Speciality	Accreditation
1	National University of Sciences and Technology (NUST)	Known for engineering, IT, and management programs.	Recognized by the Higher Education Commission (HEC) and various international bodies.
2	Lahore University of Management Sciences (LUMS)	Business, social sciences, and humanities.	HEC-accredited and highly regarded in regional rankings.
3	University of the Punjab	A wide range of undergraduate and postgraduate programs.	One of the oldest and largest universities in Pakistan.
4	Institute of Business Administration (IBA), Karachi	Business administration and management programs.	Highly respected in business education.
5	COMSATS Institute of Information Technology	IT and engineering programs.	HEC-recognized, with multiple campuses across Pakistan.

Political, Social and Economic Phenomena Affecting Education

Political parties in Pakistan often blame international influences and the country's post-independence history for their ineffective policies, claiming that foreign intervention has hindered thorough thinking on domestic social issues. However, this does not change the fact that the government has failed to implement an effective and inclusive education policy, one that could ensure quality education for all citizens, regardless of their background (Jabeen et al., 2020).

To address these issues, stronger emphasis must be placed on developing and implementing education policies that prioritize both access and quality of education. Such approach can help create a more tolerant and informed environment, which in turn can contribute to solving Pakistan's social challenges (Imran et al., 2024).

> *"Pakistan's education remains underdeveloped due to low public investment, with government spending not matching available revenue and minimal funding for higher education. The shortage of adequate educational institutions, especially primary schools, denies low-income citizens access to subsidies and quality education." HU.4*

The state of education in Pakistan remains underdeveloped. This is due to the low levels of public investment, as government expenditure on education does not align with available revenue. In addition, minimal funding is allocated to higher

education. The lack of adequate educational institutions, particularly primary schools, means that citizens from low-income background cannot enjoy subsidies and quality education. As a result, Pakistan has one of the lowest literacy rates in the world and ranks among the lowest when compared to countries with similar resources and socio-economic profiles.

Improving the Education System: A Strategy

The simple structure of Iran's formal education system includes preschool education, basic education, secondary education, and higher education. Historically, educational institutions or madrasahs were stigmatized due to perceptions of radicalism among their graduates (Ahmed & Jafri, 2020). With improvements in governance and the education system, this negative precedent is gradually disappearing. Consequently, Islamic educational institutions are now demanded to provide inclusive, moderate, and progressive education services.

To achieve this transformation, both government bodies and educational institutions at the local level are changing their perspectives on governance and educational services. The strategy focuses primarily on improving governance, beginning with curriculum development. This includes a combination of eight programs options, such as biology, chemistry, and computational physics, as well as compulsory subjects like mathematics, English, Urdu, Islamiat, and Pakistan studies (Rust & Arribas Layton, 2018).

The evolution of the curriculum underscored Pakistan's national objectives through the enhancement of linguistic and numerical competencies, daily life problem-solving capabilities, responsiveness to societal dynamics, and an amplified comprehension of nature and the environment. Emphasis on science and technical education underscored the augmentation of the nation's economic condition (Vestenskov et al., 2018).

> *"To develop the curriculum, multiple committees were formed to prepare and reorganize curricula at each educational level to meet national needs. The policy document called for reforming the examination system because it failed to ensure quality learning for students." HU.2*

> *"To facilitate this curriculum development, an array of committees was constituted for the preparation and reorganization of curricula for each educational level, thereby addressing the nation's necessities. The policy document advocated for the reform of the examination system, as it was not fulfilling its paramount objective of ensuring quality learning for pupils." HU.1*

In addition, the transformation is directed towards a tiered system of lectures. There are two types of Bachelor's programs in Pakistan: Pass or Honours. A pass degree requires two years of study and students usually read three optional subjects

such as Chemistry or Economics. In addition to almost the same number of compulsory subjects such as Pakistan Studies and English. The Honors degree requires three or four years of study. Students usually specialize in a chosen field of study, such as Biochemistry (BSc Hons. Biochemistry). Most master's degree programs require two years of education.

The next strategy is to eliminate discrimination. Data shows a gap between male and female learners. Therefore, the government is implementing compulsory education to reduce this gap. Gender issues have become a crucial issue that is currently improving (Jabeen et al., 2020). The paradigm of higher education management is more open and not conservative. This is shown by the increase in the number of foreign students every year.

Strategic Focus: Technologically Driven Transformation of Educational Services

Higher education serves as a critical metric in assessing a nation's qualitative growth, with university graduates epitomizing the effectiveness of educational outcomes (Kazmi & Quran, 2005). The increasingly complex demands of industry and the job market necessitate significant shifts in governance, particularly through technology-driven reforms.

The transformative paradigm significantly influences the administration of the education system, extending its focus beyond religious sciences to encompass all facets of social and business endeavors. This shift is accompanied by a wave of socio-economic alterations instigated by the introduction of transformative technology. Each technological revolution — steam power, electricity, mass production, and presently, computer technology — has introduced creative and disruptive forces that reshape the economy and redefine all social institutions and practices (Ikram et al., 2025). Existing paradigms, although adjusted to accommodate the new technological capabilities, often fall short of fully exploiting their potential. Consequently, the assimilation of new technology acts as a disruptive force against conventional frameworks.

The emergence of a new paradigm stimulates the growth of mutually reinforcing businesses, social structures, and cultural practices. In this way, new technology also manifests as a potent creative force (Murtaza & Hui, 2021). The analysis of educational growth can be categorized into five development focal points: time efficiency, infrastructure enhancement, alignment with industrial requirements, organizational restructuring, and program innovation (Kazmi & Quran, 2005; F. Saeed & Awan, 2020). Each must be realigned and synchronized with the capabilities of new technologies.

These structures and practices become deeply embedded within the economy and society, constructing a "new common sense" framework for organizing any

activity and structuring any institution, whether governmental, commercial, entertainment, or educational. As organizations, practices, and individuals realign, this new paradigm instigates a quantum leap in productivity, modernizing and regenerating nearly all economic activities, and holds the potential to achieve full employment and widespread economic and social benefits.

The challenge lies in Pakistan's pervasive conservative understanding related to the education system implementation. The administrative paradigm is not congruent with the evolving economic and societal needs (Khan et al., 2021). A solution-oriented strategy necessitates the granting of autonomy and strengthening of control mechanisms (Muhamad et al., 2016). In the context of educational organizations, educators and education personnel are encouraged to work collaboratively and flexibly within distributed teams. The work teams utilize various digital tools and resources to solve problems and create new ideas and products. As students on campuses convene in structured classrooms at designated times, lecturers deliver standard content in front of large classes while students listen, adapt, and reproduce this knowledge in assessments. However, their use of ICT remains limited. In alignment with the mass production paradigm, ICT is frequently employed to increase the volume of instruction, reduce costs, or enhance basic skills performance.

The Role of Technology on 21st Century

Technological innovation has fundamentally altered how we assimilate and access data. Its integration into education has opened vast new opportunities for learners. As learning aids, online sources, interactive interfaces, and multimedia tools contribute to a more immersive and individualized learning experience. These tools remove geographical constraints and enable learners to explore knowledge beyond the traditional classroom (Hikmawati & Hosnan, 2022). Several universities in Pakistan have adopted technology into their pedagogical approaches. E-learning platforms, virtual classrooms, and digital libraries are ubiquitous, thereby enhancing pedagogical processes and promoting inclusive education (Li et al., 2024).

Higher education institutions play a pivotal role in fostering a generation equipped to navigate future challenges. Among the responsibilities of universities in the development of education, skills, and technology, two are significant. Firstly, the incorporation of experiential learning methodologies. By integrating hands-on learning experiences, internships, and workshops, universities furnish students with practical experiences. This exposure fortifies their comprehension of their respective fields and amplifies their self-confidence. Secondly, the strategy of fostering industry-academic collaborations. The synergistic relationship between higher education institutions and industry facilitates the exchange of knowledge. This reciprocity enables universities to align their curricula with real-world exigencies and assists industries in remaining up to date with the latest progressions.

Enhancing Educators' Digital Competence in the 4.0 Era

To thrive in the global economy, Pakistan needs to shift its focus toward skill development (Kamran & Bano, 2024). Core skills such as critical thinking, problem-solving, communication, and adaptability are crucial for both personal and professional growth. Integrating these skills into the curriculum is essential for producing a competent and versatile workforce (Bashori et al., 2022).

The digitization of higher education is further supported by the enhancement of educators' competence, especially in information and communication technology (ICT) (Al Yakin et al., 2023). Teachers serve as the cornerstone of educational success, and their ability to support digitization efforts directly impacts human resource development. Therefore, educators must actively engage in continuous learning, whether through training sessions, self-study, or peer collaboration.

Educators play a more important and vital role in the era of the industrial revolution 4.0. They are not only required to teach but are also expected to master learning sources available to learners and act as guides. In essence, teachers function as resource linkers (Muhamad et al., 2016). Educators must also function as facilitators who curate relevant learning resources. The open flow of information has brought risks to learners. Therefore, educators need to improve their competence, especially in mastering information and communication technology (ICT). Research by Zubairi et al. (2022) support this direction, emphasizing that post-COVID school policies must shift toward digitalization (Zubairi et al., 2022).

Enhancing Students' Digital Competence and Skills

Skill education complements traditional academic education by enriching students' overall learning journey. Developing a digital-based educational framework requires attention not only to teacher competencies but also to fostering campus-wide values and a digital culture. The urgency of equipping students with digital skills can be seen in several key areas.

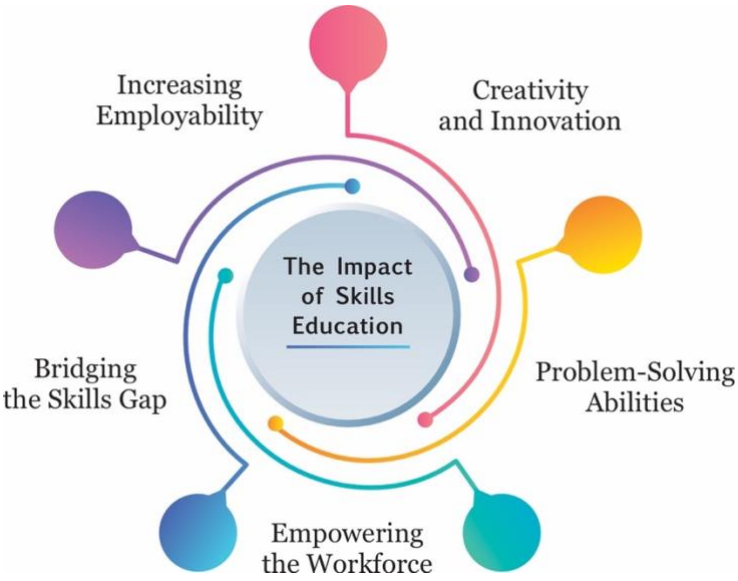

Figure 1: The Impact of Skill Education

Figure 1 describes the first aspect is creativity and innovation. Students must develop skills such as creativity and innovation to adapt and think inventively. These traits empower them to tackle complex problems with unique and inventive solutions. The second aspect involves the ability to improve problem-solving skills. Skill education emphasizes practical application, enabling students to apply their knowledge to real-world challenges. This approach hones their problem-solving abilities, making them valuable assets to potential employers. The third aspect concerns a future-oriented workforce. The job market is rapidly evolving, demanding a workforce equipped with relevant skills and technological proficiency. The fourth aspect is regarding the skill gap. A focus on skill education bridges the gap between academia and industry needs. This ensures that graduates possess the expertise required by employers, reducing unemployment rates and promoting economic growth. The last aspect is the improvement of employability. Students graduating with a diverse range of skills will find it easier to gain employment across various sectors. This not only benefits the individual but also contributes to the overall prosperity of the nation.

Technology as a Catalyst in Higher Education

In recent years, the advancement of educational technology in Pakistan has reached a pivotal juncture. This phenomenon can be analyzed through the exponential increase in the use of technology in various aspects of education (Al-Hattami, 2021). In this context, technology has acted as a catalyst, facilitating wider and easier access to education, and making it more affordable for larger segments of population.

Pakistan must adopt digital technology to boost its economic development and improve the delivery of public services (Muhamad et al., 2016). Early adoption of technology to keep pace with the rapidly changing world is essential. Higher education reforms are necessary to digitize systems and services, particularly since educational institutions fall within the domain of public service delivery.

Initiatives and emphasis on learning and gaining an edge in technology are paramount. These adaptations are necessary in light of emerging business opportunities in a world undergoing rapid transformation. Lessons in knowledge about financial technology and artificial intelligence can act as catalysts for Pakistan's progress. The development of intellectual ideas and early decision-making in implementing digitization strategies across various fields are equally essential. The government, acting as a support system, underlines that in addition to digitization, stakeholders must guide consumers to prevent online fraud. Post-COVID, the role of gadgets in enhancing learning effectiveness has increased significantly. Online learning has become a phenomenon that warrants constructive follow-up. While Pakistan has adopted mobile technology, further efforts are needed to raise awareness regarding the benefits of advanced technology.

Educational technology not only improves the quality of education through enhanced access and affordability but also serves to increase the efficiency and effectiveness of the teaching process itself. For instance, the use of technology in learning can stimulate students to actively participate, making the learning process more interactive and engaging. Moreover, technology also makes it easier for teachers to monitor student progress and participation in real-time, allowing for timely interventions and necessary adjustments in teaching methods.

Furthermore, the adoption of technology in education also provides opportunities for personalized learning, where each student can learn according to their own pace and learning style. This has a positive impact on student learning outcomes, such as improved understanding of concepts and enhanced critical thinking skills.

Strategic Solution Model

The government of Pakistan's initiative to promote educational transformation is directed towards fulfilling aspects of skills and technology. The government plays a crucial role in leading the nation towards a future that is skilled and technologically proficient. Skill development programs have also been prioritized by the government. The fulfilment of competencies here pertains to both educators and students. The government has launched various skill development programs to empower the youth with specialized training. These initiatives enhance employability and foster entrepreneurship. In addition to focusing on human resources, the government also

allocates funds to technology infrastructure investments. To promote technological education, the government invests in building modern technology infrastructure in universities. This ensures that students have access to the latest tools and resources.

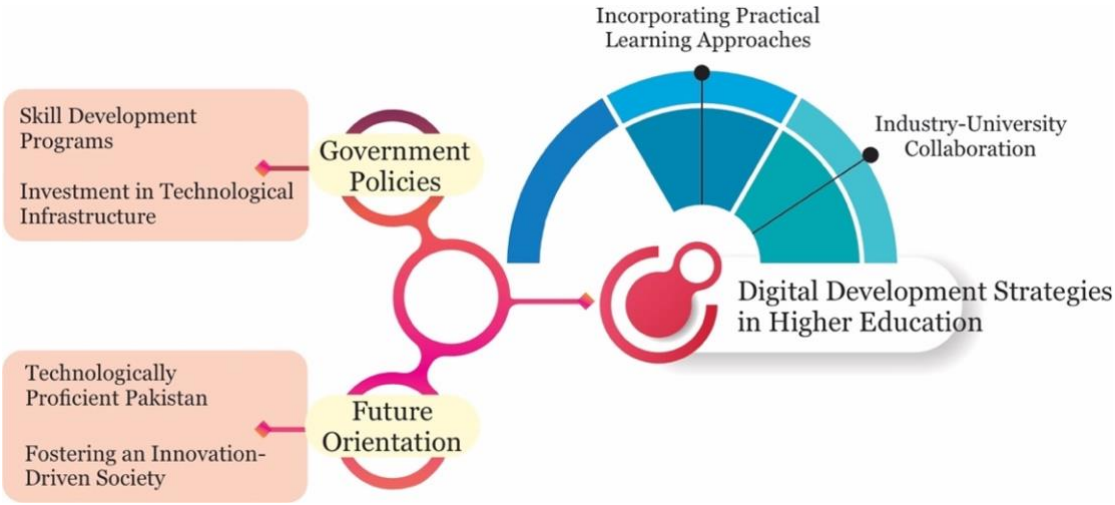

Figure 2: Digital Development Strategies

Figure 2 shows higher education development in Pakistan, government policies play a crucial role by focusing on skill development programs and investing in technological infrastructure to modernize educational institutions and enhance digital capabilities. Future orientation emphasizes building a technologically proficient Pakistan and fostering an innovation-driven society, aiming to prepare graduates who can contribute to national progress through advanced skills and creativity. Digital development strategies in higher education include incorporating practical learning approaches that move beyond theoretical knowledge to experiential and project-based learning, as well as strengthening industry-university collaboration to provide students with real-world experience and align academic research with market needs, thereby improving employability and driving economic growth.

Every Policy Creates Challenges

A solution-oriented attitude is therefore necessary, and it may be implemented as follows. First, implementing a paradigm shift in education presents challenges. Existing strategies must address resistance to policy and procedures, particularly at the micro-management level. Traditional mindsets may reject the integration of skill and technology-driven education. Awareness campaigns and collaborative efforts are vital to promoting positive attitudes toward reform. Attention must also be given to ensuring access to technology for all. Bridging the digital divide requires proactive measures to ensure that technology can be accessed by all students, regardless of their socio-economic backgrounds.

The ongoing digital transformation has been evaluated positively, and the outlook for Pakistan's education sector remains promising. The integration of skill-

based and technology-enhanced education in universities in Pakistan is a significant step toward a better and more dynamic future. Signs of a digitally proficient Pakistan are reflected in the increasing volume of academic publications and research productivity. As students become more technologically proficient, Pakistan is positioned to become a hub for innovation and digital transformation. Building such system requires time and collaboration. In the context of management, a community-building strategy driven by innovation is needed. Campus managers must foster creativity and skills to cultivate an innovation-driven society where solutions to pressing challenges emerge domestically.

The evolving mission of higher education is to prepare graduates for jobs that do not yet exist, to create ideas and solutions for unidentified problems, and to apply yet undiscovered technologies. Higher education policy must position ICT as central component of the transformed education system to meet graduate targets. Improvements in digital-based services must align with changes in curriculum, pedagogic practices, assessments, teacher professional development, and school organization (Syahreza & Sukor, 2023).

Despite the persisting issue of unmet targets from prior education policies, new policies continue to emerge. This recurring pattern underscores the urgent need for the development of a solid, enduring education policy. This policy should be complemented by an adequate implementation mechanism to ensure its effectiveness and the achievement of its intended outcomes.

In the face of these challenges, the Islamic University of Pakistan is undertaking a pivotal role in improving the quality of higher education. The university is implementing a multi-pronged approach: promoting faculty development, carrying out quality assurance programs, encouraging research innovation and entrepreneurship, expanding equitable access to higher education, as well as instilling excellence in leadership and governance within educational institutions (Syahreza & Sukor, 2023). These initiatives are fundamental in creating a conducive environment for learning and research.

This study also proposes several crucial reforms aimed at enhancing the standard of higher education in Pakistan. These include the need for curriculum reform to meet the demands of the 21st-century workforce, investment in infrastructure to support digital learning, and the development of public-private partnerships to drive innovation and improve funding. By implementing these reforms, Pakistan could significantly improve the quality and global competitiveness of its higher education sector.

Although the digitization system includes infrastructure recommendations related to expanding broadband access, the primary challenge is not physical resources but underutilization. Unequal distribution of resources poses some

difficulties, but evidence suggests that the existing infrastructure remains largely untapped. The introduction of additional computers and networks will not, by themselves, improve the future prospects of students and the economy. Digital services identify other coordinated changes in curriculum, pedagogy, assessments, teacher professional development, and school structures that need to be made to align the education system with the needs of the information economy and the knowledge-driven society. The findings presented here support these recommendations.

The digital transformation recommends that, beyond the core of standard-based concepts and competencies, the curriculum should be expanded to include critical thinking, complex problem-solving, and multimedia communication. Technology in the workplace is not only replacing the need for many manual skills but also routine cognitive skills that are the focus of traditional curricula and valued in mass production economic models. Given that factual recall and simple procedural operation can now be better executed by computers. These 21st-century skills are not only required by employers but also needed to address the various complex issues faced by our society and nation. A demanding curriculum that connects basic disciplinary concepts with complex real-world problems and encourages the collaborative development of innovative and creative solutions will provide the high-level skills that students need to compete internationally for high-paying, high-value jobs, and that our economy needs to sustain growth and maintain prosperity. Technology does not replace these skills but augments them. ICT competencies must be integrated throughout the curriculum so that students can use advanced technological tools and digital resources in designing creative and innovative solutions to these problems.

Thus, the advancement of educational technology in Pakistan has resulted in significant transformations in access, quality, instructional efficiency and effectiveness. However, it is crucial to continue evaluating and adjusting the implementation of these technologies to deliver maximum benefits for all stakeholders in the education system.

CONCLUSION

The progression of educational technology in Pakistan has accelerated in recent years. The utilization of technology is escalating, rendering education more accessible, affordable, and appealing to students. Beyond enhancing the quality of education, technology has increased teaching efficiency and effectiveness. Skill development and technological education are crucial for the advancement of Pakistani universities. By employing modern teaching methodologies and encouraging skill development, universities can empower students to lead the nation toward a prosperous and innovative future.

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