

Exploring the Influence of Globalization on Digital Pedagogy and Access in Higher Educational Institutes (Karachi-Pakistan)

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Abstract

In a globalized world, digital techniques are one of the essential aspects that demand to be considered in every educational institute. Digital learning is very crucial to build up the collaboration, to develop quality education, and to make education achievable for everyone in the entire globe. Higher education requires technological integration to make its educational system more effective. Higher education must vitally learn to manage digital technologies within its institutions. The objective of this research is to identify the digital pedagogical techniques influenced by globalization and the challenges they face in implementing them in their universities. The study was conducted in universities in Karachi, Pakistan. The study's population is university faculty members. The data was collected from 6 faculty members of 3 universities. A qualitative approach was used in this study. The data was collected by semi-structured interviews. The thematic analysis procedures were used to analyse the data and to present the study's results. Themes were generated from respondents' responses to summarize the findings. The purposive sampling techniques were used in this study to choose sample size that has relevant knowledge and experience about digital learning at the higher education level. The findings of this study would be beneficial for educators, policymakers, and educational institutes. This study helps to increase awareness about digital learning techniques and their challenges so that they can better plan to improve the digital learning techniques at their educational institutions.

Keywords: Influence, Globalization, Digital, Pedagogy, Higher Education.

Introduction

Globalization is an extensive and multidimensional process that encompasses educational, economic, social, cultural, and political factors that have been discussed in a variety of ways and contexts. Globalization may open up opportunities, including faster technology transfer, the promotion of modern technological pedagogies, and increased accessibility to digital tools and digital learning platforms from developed to underdeveloped nations (Biru & Amentie, 2024). In the current digital age, globalization has a significant influence on education, requiring changes in teaching strategies to incorporate digital resources (Nunez et al., 2022). The need to prepare students for a digital and global work environment has enhanced the use of digital techniques in educational institutes and teacher training programs. In the era of globalization, incorporating digital technologies into education offers many benefits. It increases learning opportunities,

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facilities, and make education easier (Naz et al., 2023). Globalization has updated the teaching strategies. Globalization unifies education worldwide and cultivates an association of educational systems, placing a strong emphasis on preparing students for the global economy. At the same time, ICT transforms education, boosting pupils' motivation, engagement, and performance while requiring teachers to be flexible (Rahimi & Oh, 2024).

As an underdeveloped country, Pakistan's educational system faces many challenges in today's modernized, globalized world. University education is crucial for developing a civilized, modern, and informed society by providing quality education to students. The aim of university education is to train, educate, research, and serve society. Pakistan faces various socio-economic, cultural, political, and educational barriers. Effective digital education is crucial for improving the quality of education and achieving the SDG goals, particularly SDG4, which aims to ensure access to quality education and promote equal opportunities to learn (United Nations, 2015). In addition, digital education in Pakistan is further challenged by issues such as the institute's inadequate financial status, inadequate infrastructure, and untrained teachers, especially in rural areas (Lashari & Umrani, 2023). About 22.8 million children are not attending school, with a substantial number of them being girls. This condition is a need for accessible education (UNESCO, 2021). Furthermore, Pakistan educational system faces both opportunities and challenges as a result of the growth of digital learning and technology (Buriro et al., 2023). The initiative of Pakistan's digital vision seeks to incorporate technology into education, to identify the digital learning techniques and needs to address the challenges and make strategies to overcome those challenges (Ministry of IT & Telecom, 2020). Pakistan's higher education system initiative incorporates technology into education and develops digital learning. This initiative needs to explore the digital pedagogical techniques that Pakistan universities are using and address the challenges for better implementation of technology in educational institutes.

Statement of the Problem

The 21st Century is also known as the digital era, and technology is crucial to enhance quality education. Digital advancement is an important part of globalization. Many countries are using different digital learning techniques to enhance the quality of education, make it more accessible, and meet global standards. Globalization increased the demand for digital learning to meet global standards and achieve world-class education, thereby improving the quality of education (Nguyen et al., 2024). Previous studies explored that In order to maintain global educational trends under developing countries such as Pakistan higher educational institutes are struggling to integrate the digital pedagogies and find it difficult to successfully incorporate technology into their teaching methods (Abid et al, 2021; Shahzad et al., 2024; Phulpoto et al., 2024) This disparity between local reality and worldwide standard reveals a significant gap the successful implementation of digital pedagogy in the context of globalization So there is a need to investigate to identify that higher education institutes at Pakistan which digital techniques they are using to improve their teaching techniques and because of it is under developing country which challenges they are facing to implement these techniques.

This study aims to identify the digital techniques and address the challenges this helps to know that in local context where we stand to incorporating the digital pedagogies in higher educational institutes which helps to policy makers, higher educational institutions and faculty members to make better plans for the future which helps students to get better learning opportunities and it gives insights what digital support faculty members need in higher educational institutions at Karachi Pakistan. This study will be helpful to understand how globalization plays its role in

influencing digital pedagogies to improve the quality of education in higher education. This study would be helpful for educators, higher institutions, and policy makers to improve digital techniques in their educational institutes and address the challenges.

Research Questions

1. What digital pedagogical techniques influenced by globalization are currently being used at higher educational institutions?
2. What challenges are faced in implementing globalization-influenced digital pedagogical techniques at higher educational institutions?

Research Objectives

1. To identify the digital pedagogical techniques influenced by globalization that are currently being used at higher educational institutions.
2. To explore the challenges faced in implementing, globalization influenced digital pedagogical techniques at the higher educational institutions.

Literature Review

Technology and globalization are two view points of the same coin (Qadri et al., 2018). Technology is closely associated with globalization. In order to improve the education, Methods of instruction, and students' learning process, it demands technological advancement and innovations (Qadri & Bhat, 2018). This research study discussed the transitions of teaching and learning in the 21st century. The significant changes in teachers' teaching methods, students' learning habits, and education have entered a new era brought about by the emergence and advancement of technology (Allayarova, 2025). The integration of technology into pedagogies marks a significant paradigm shift in modern teaching methods. Better learning outcomes and a new era of educational innovation are presented by this shift. The availability of technology facilitates the growth of knowledge and fosters an environment that is advantageous to learning, which raise the academic success (Lashari & Umrani, 2023; Lashari et al., 2023). Numerous studies demonstrated how e-learning may significantly improve the teaching and learning process (Thomas et al., 2022). The 21st century has displayed profound transformation in every sphere of life, including education. Education is greatly impacted by the explosion of technology and the broader shift to digital society, which forces teachers to adjust to new difficulties, new skills, and the capacity to use digital tools in the classrooms are essential for today's educators (Benade, 2017; Imran et al., 2022). The development of these skills has been greatly impacted by digitalization. With the use of digital technologies, teachers may focus more on teaching students how to think critically and solve problems as well as on individualized education (Abbasi et al., 2019). Simultaneously, digital systems offer the chance to collect additional data on students' performance, which helps teachers better customize the learning process (Nurmanov & Jabbrov, 2017; Imran & Lashari, 2023).

The gradual adoption of digital education technology has significantly changed the educational landscape of the 21st century in terms of pedagogy, learning environment, and context. The revolution has been driven by technological advancements that have permeated many facets of society and opened previously unthinkable learning opportunities. The use of web technologies for individual communication, information sharing, and knowledge creation has been encouraged by mobile handheld devices, learning management systems, online forums, webcasters, and podcasts, and has also drawn in companies and educational institutions hoping to take advantage

of these opportunities (Male, 2016; Abbasi et al., 2019). The rise of globalization and interactivity in higher education has been facilitated by the digital revolution. Teachers need to work with students from all over the world, improve their communication skills, and be proficient with social media and other technologies for group projects and idea sharing (Sidiqova, 2020; Lashari et al., 2021). Pedagogical activities are now more possible with digital technologies. These days, university instructors use video lectures, interactive materials, electronic platforms, and other resources to make learning more interesting and accessible (Zabolotska et al, 2021). Technological teaching can also help increase students' knowledge of sustainable development. Teachers can prepare students according to global market demands (Fayyaz et al., 2024). To improve learners' outcomes and the quality of education at the university level, it is necessary to integrate technology into education and increase the use of digital pedagogies (Fayyaz et al., 2023). The study shows that in Pakistan, educational institutes need to be aware of ESD education through the integration of technology in teaching pedagogies, which will be easy to increase awareness and enable students to contribute to sustainable development through digital pedagogies (Jiskani et al., 2024). In general, the use of digital technologies in teaching pedagogies has expanded due to the necessity for many educational institutions to compete on a worldwide scale. Globalization and digital technology continue to shape teacher training programs. Rapid technological advancement and the digital aspects of 21st-century learning settings influenced and changed how students access and evaluate discipline-specific and general pedagogical approaches in teaching and learning. To adapt to the ever-changing global marketplace, the roles of teachers and students in digital learning settings must shift (Simming et al., 2015). This is essential for meeting the demands of classroom experiences in the 21st century. To effectively prepare students for a digital and global workplace, teachers must be equipped with digital skills (Keengwe, 2018). This study shows that the global educational environment has changed with the integration of digital learning into higher education (Bitar & Davidovich, 2024).

Theoretical Framework

World System theory

The theoretical framework examines how globalization influences digital pedagogy and access in higher education institutions at Karachi Pakistan using Immanuel Wallenstein's world systems theory. This theory explains the globe is divided into three regions: the core, semi-periphery, and periphery. Each of which plays a unique role in the allocation of power and resources. This concept explain that core countries developed nations are at the fore front of the digital revolution in education, creating cutting-edge pedagogical resources, platforms and standards. Institutions in semi- peripheral areas like Pakistan is try to embrace and localize this advancement, frequently without sufficient funding or infrastructure assistance. Higher education institutions in Karachi Pakistan are further divided into elite institutions near the semi-periphery and public or less resourced universities on the periphery. Due to their lack of faculty training, infrastructure deficiencies, and unequal access to digital resources the peripheral institutions contribute to a widening digital divide (Siddiqui et al., 2023). This disparity leads to an uneven application of digital pedagogy which increases educational inequalities. The model demonstrates how systematic dependency and underdevelopment restrict local digital innovation and access and it's graphically represents the flow of influence from the global core to the local periphery. This framework aids in placing Karachi's digital education issues in a larger global power hierarchy rather than only technical or institutional deficits.

Research Methodology

A qualitative research approach was used in this study to investigate digital practices and challenges at the higher education level in Karachi, Pakistan, through interviews and thematic analysis to examine the in-depth experiences of university faculty members.

The qualitative method is appropriate for discovering detailed, in-depth insights into respondents' opinions and experiences through observation and interviews (Creswell & Poth, 2018).

Population and Sample Size

The study population comprised faculty members, and a total of 6 were selected from 3 universities in Karachi, Pakistan: 2 from each university. A small sample ensured depth. The focus of this study is to collect comprehensive data rather than a large sample size. The education department was selected because this research is directly linked to pedagogical practices and worldwide teaching trends. The selection requirements of faculty members who use digital pedagogies in higher education institutions. Both private and public universities were involved in determining the availability of digital pedagogy systems.

Purposive sampling techniques were used in this study to select respondents with relevant knowledge and experience in digital pedagogical techniques and digital tools at the higher education level.

Data Collection Method

Semi-structured interviews were used to collect the data with 6 respondents. This technique was used to collect the data because it allows for flexibility in exploring responses and asking open-ended questions during interviews. The interviewer keeps the predetermined questions, but they are free to follow the direction in conversation that seems appropriate at that time (Cohen & Crabtree, 2006). Interviews also collected demographic information from respondents, including names, gender, education, designation, teaching level, and university name. Interview questions were designed relevant to the research topic. The interview questions focused on 2 aspects: how globalization has influenced the digital pedagogical techniques they use in their universities, and the challenges they face in implementing them. To clarify any unclear responses, the interviewer asks follow-up questions throughout the interview. With the respondents' permission, each interview was audio-recorded, and the recordings were transcribed for analysis. Before approaching the faculty members, the department head provided official consent. After obtaining permission, interviews were conducted with the university's faculty members.

Data Analysis Procedure

The Six Phase Thematic analysis procedure was used in this study to interpret and generate themes from transcript data (Braun & Clark, 2006). The audio-recorded data were transcribed, and the transcribed data were read multiple times during phase one to become familiar with the data. In the second phase, the important sentences and words were highlighted and coded, and a structured coding procedure was used. Compared, modified, and adjusted the codes even as encoding phrases and words with related meanings. In phase three, we reviewed every code and categorized it into general groups based on how similar they were, which were then organized into a preliminary theme. Phase four reviewing themes, a few codes were moved and combined. In phase five, refined, clearly defined, and finally named themes. Finally, Phase six involved interpreting themes from respondents' responses, and the findings were presented in the results.

Ethical Consideration

This study compiled every ethical requirement for qualitative research to ensure the safety, dignity, and rights of respondents. Before the data collection, formal consent was acquired from the appropriate authorities. Participants provided written consent after the study's goals, methods, and advantages were fully explained. The aim of the study was explained to the participants. Participant confidentiality was preserved. All responses were safely archived, and the gathered information was used only for academic research. During data collection, cultural considerations and respect were upheld. Participants' identities and personal data are kept confidential and not shared.

Findings

Findings show that globalization has influenced higher education institutions in Karachi, Pakistan. New pedagogical trends and digital teaching resources have emerged due to globalization. Higher education institutions have incorporated digital pedagogical methods but also face challenges. Data show that the use of digital pedagogy is also limited in some less-resourced higher education institutions, as they still have little to no access to modern digital pedagogical tools. As a result of globalization, higher education institutions in Pakistan are encouraged to use digital pedagogical techniques, and globalization has increased the demand for digital learning to make education more accessible, more collaborative, and of higher quality. However, compared to higher education institutions that have limited resources, those with resourced institutions are more likely to implement and maintain technological pedagogical methods.

The objective of this study is to identify the techniques and the challenges they face in implementing these digital learning techniques at the higher education level. Semi-structured interviews were used to collect the data. The analysis results show the techniques and challenges faced by Pakistani universities. The study used a thematic analysis procedure to find the results. The themes were generated from the respondents' responses, which supports the objectives. The results of the thematic analysis process yielded 06 themes based on respondents' responses, which are categorized into digital learning techniques and challenges mentioned below.

Q1. What digital learning techniques influenced by globalization are currently being used at higher educational institutions?

In the semi-structured interviews, respondents discussed the digital techniques they use in their universities and the challenges they face. During the thematic analysis, codes and themes were generated from respondents' responses, perspectives, and ideas. Codes and themes are mentioned in the appendices.

Digital Management and Collaboration Software systems

It is observed that Higher educational institutes in local context incorporating digital management system and collaboration software system such as LMS, CMS and Odoo to manage teaching, learning and administration work. LMS use to maintain students' progress, assignments and engagement (Ahmed et al 2021). (CMS) Campus Management System the analysis process of this study highlighted that in higher educational institutes at Pakistan using another software system is CMS. This system used to manage the admissions, academic records, fees, grades and schedules (Hafeez et al, 2019). The study noted that the one of another digital learning technique used by universities at Karachi Pakistan is Odoo. It is called all in one Open Resource Planning (ERP) digital e-learning management system which supports administrative process, attendance and

departmental tasks through modules ID verification and biometrics (Yaseen et al, 2020). The university faculty members explained:

Respondent 1: “Our University uses digital learning management systems (LMS) Campus Management system (CMS), and Multimedia to manage the assignment record, provide the lecture material to students and to make education more accessible”.

Respondent 3: “In our university digital technique like Odoo is used to enhance learning. Odoo helps Manage courses, assignments, and student progress”

Faculty member addressed that globalization plays their important role to adopt global best practices in higher education they mentioned in their answer that they are using LMS, CMS and multimedia and Odoo which facilitated them to maintain students record they are enabled to use these techniques by the influence of globalisation.

Video Conferencing Platforms

By analysis process it has concluded that video conferencing platforms such as Google classrooms, Google Meet, Zoom, Microsoft teams, and online classes platforms used by Pakistan universities for online teaching and learning process and these platforms connect students and teachers with various features supporting remote learning (Rehman et al, 2021). Respondent shared,

Respondent 1: “Teachers now use global platforms like MOOCs, Zoom, Google Meet, Open resources and Google classroom, while students have greater access to international resources and Google classroom, fostering autonomous and collaborative learning”.

The faculty member expressed that the way of delivering lecture has changed because of integration of technology which influenced by globalization. It enable anywhere anytime learning through these platforms.

Electronic technical pedagogical tools

This study also highlighted that in Pakistan universities multimedia, audio visual aids, laptop, computer is also used to make teaching and learning process more effective, engaging and enhancing student participation (Shahzad & Nadeem, 2021). According to one of faculty member,

Respondent 4: “We use multimedia in our classrooms which helps us to deliver lecture in more effective way. Incorporating multimedia content in higher education makes teaching and learning process more flexible.”

The participant response shows that they use multimedia to make their teaching and learning process more interactive effective and accessible.

Q2: What challenges are faced in implementing globalization influenced digital learning techniques at the higher educational institutions?

Technical issues with devices This study address that a technological digital learning technique has benefits but it has challenges as well. Digital devices has technical issues like in consistent internet connectivity, sometime system hanging, poor video and audio quality, keyboards and mouse of some computers doesn't work, sometimes device not turning on at higher educational institutes in local context (Akram et al, 2021). One of respondent share that,

Sometimes we face technical issues with devices and sometime mouse, keyboard and computers in our labs are not working and due to this issue some students bring their laptops. To make the learning environment healthy is very necessary to overcome the challenges technical issues with devices,

slow internet and lack of digital libraries we need to work on these issues (Respondent 1).

The response highlighted those Pakistan universities faces technical issues with devices that hinder effective teaching.

Limited digital infrastructure

Data indicates One of another challenge is Pakistan universities has limited digital infrastructure such as limited computers, slow internet connection, lack of access to any online software, lack of multimedia aids and lack of access to digital libraries that hinder effective teaching and learning (Jamil, 2024). According to one of faculty member,

Respondent 4: “In our classrooms some speakers are not working we need more computers and multimedia aids as well we need IT infrastructure to utilize the digital learning techniques.”

The participant’s response indicates that they have lack digital infrastructure to use the digital learning techniques they need IT infrastructure.

Lack of digital skills

The data shows in Pakistan universities some students and teachers unfamiliar with digital tools and they face challenges to use them which highlights the need for training and skills development (Dahraj, 2020) One of respondent shares their opinion,

To improve digital learning in Pakistan’s higher education system include providing continues digital training for faculty and students. Teachers and students are unfamiliar that how to use digital tools. Additionally, investing in better IT infrastructure and adopting hybrid learning models for flexibility (Respondent 5).

The response of faculty member demonstrates that teachers and students face challenges because of unfamiliarity with digital tools that emphasizing the need for digital skills development.

Discussion

The present study focused on the digital pedagogical techniques and challenges in Universities in Karachi, Pakistan, are influenced by globalization. The finding reveals that Higher education institutions that use digital learning techniques face challenges as well.

Digital learning techniques

This study supports the present study’s research findings, as it shows that globalization. influence digital techniques by providing multiple platforms for learning and teaching, by enhancing access to quality resources by promoting quality education standards, and by promoting The digital job market needs to enable Pakistan’s education to international collaboration. Globalization promotes digital learning to increase digital literacy and improve the quality.

Global digital learning is essential to meet the global standard (Farmer & Farmer, 2023). Previous studies have proven that globalization plays an important role in influencing the digital learning techniques and increase the demand for digital learning techniques at higher levels education level drastically. In today’s era, universities are in demand for digital learning techniques and it is crucial for higher education to meet the current needs, to improve the quality of education, to meet current job market needs, collaborate, and meet global standards. All digital learning techniques have been introduced as a result of globalization and digital learning, influenced by globalization (Ustun, 2020).

Challenges to implement the digital learning techniques

Additionally, this study supports present research findings by showing that the implementation of digital learning techniques has challenges as well, such as technical issues with devices, limited digital infrastructure, unfamiliarity with digital tools, lack of digital and financial resources, lack of administrative support, and inconsistent internet connectivity. These are the barriers that hinder the implementation of digital learning techniques in Pakistani universities (Ahmed et al., 2023). This study shows that Pakistani universities are currently working to change their teaching pedagogies by embracing digital learning. The teachers and management of Pakistan universities face numerous issues as a result of this shift to digital instruction (Noreen & Hafeez, 2016). This study proves that one of the most important subjects in the world of Information technology nowadays is digital pedagogy and technology adoption. Higher education acceptance, and deployment of digital pedagogies encounter several intricate obstacles. Challenges include a lack of technical assistance, knowledge, institutional preparation, and high-quality. Online course content, limited proficiency with information technology of faculty members, these are the present challenges (Ahmed et al, 2023).

Conclusion

The present study identifies the digital learning techniques and challenges that are influenced by globalization. Globalization plays an important role in introducing advanced technological learning techniques to promote global skills, collaboration, and increase facilities, to prepare students for future. Pakistan is an underdeveloped country; they face challenges in implementing digital initiatives pedagogical techniques. Digital techniques are essential to improve the quality of education and meet the global demands, so universities should focus on how to minimize the challenges and take advantage of digital learning techniques. Digital learning should be well supported and the university should develop strategies to enhance these techniques.

Recommendations

These recommendations would be helpful to implementation of globalized influenced digital leaning techniques and overcome the challenges to betterment of quality education at higher education level at Pakistan.

1. Introduce and offer the training sessions, workshops to students and teachers for utilize technology appropriately.
2. Provide IT support team or help desk to figure out all technical complications.
3. All digital platforms need to be available in multiple languages to make digital plate form understandable.
4. Use feedback or evaluation forms to know about students and teachers issues analyze this form and adjust teaching methods accordingly.
5. Encourage students and faculty to research on technological practices and engage students towards projects on digital innovations.

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