

Digital Transformation in Arabic Language Education in Pakistan: A Multi-Level Analysis of Policy, Institutional Capacity, and Pedagogical Practices

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Abstract

This paper discusses the digital revolution in Arabic language education in Pakistan through a combined review of national policy frameworks, institutional capacity, and pedagogical practices. The study examines the national education policies, Higher Education Commission (HEC) guidelines, and the Arabic language curriculum of the selected universities using a qualitative document analysis approach. The results indicate a vast difference between the policy aspirations and the reality. Although digital integration is highly encouraged within the national frameworks, its implementation in Arabic language programs remains uneven and mostly confined to the use of simple technologies. Institutional capacity, faculty digital competence, and traditional disciplinary traditions are major influences on pedagogical practices. The paper proposes that digital transformation in Arabic language education is largely symbolic, lacking coordination with institutional strategies and substantial pedagogical change. This study can contribute to the existing scarcity of research on digital Arabic learning in South Asia and suggest useful policy, institutional, and pedagogical implications to policymakers, universities, and teachers.

Keywords: Arabic Language Education; Digital Transformation; Higher Education; Pakistan; TPACK; Institutional Capacity.

INTRODUCTION

The high rate of digitalization of higher education has taken its place in the twenty-first-century knowledge economy. Globalization, technology, and the needs of digital-mediated societies have encouraged the adoption and implementation of digital technologies in teaching, learning, and institutional governance in universities across the world (Castells, 2011). This revolution has not only changed the nature of instruction but also access to education, equity, and the production of knowledge (Altbach et al., 2019). Digital technologies have made possible new ways of interacting, multimodal learning spaces, and flexible conditions of study, which have led to the emergence of computer-

assisted language learning (CALL) and blended pedagogies in the language education field (Warschauer & Healey, 1998).

An increasing body of evidence shows that digital technologies can improve language acquisition when they are properly implemented in pedagogical design (Chapelle & Chapelle, 2001; Ihnatova et al., 2021). Online courses, virtual learning communities, and computer-aided assessment systems have enabled a transformation of a teacher-centered teaching approach to more interactive and learner-centered approaches. Nevertheless, researchers are always keen to point out that technology itself is not a guarantee of better learning results. The institutional readiness, faculty competence, alignment of policy, and infrastructural capacity continue to be the key factors of successful digital integration (Teräs et al., 2022). Recent systematic reviews also point out that the process of digital transformation in higher education is multi-dimensional and is influenced by institutional capacity and digital skills as well as contextual factors instead of technological adoption (Mabotha & Ngcamu, 2025; Memarian & Doleck, 2023).

The importance of the role of educators is significant in this respect. New studies indicate that teacher competence (particularly, the combination of technological, pedagogical, and content knowledge (TPACK) is the determining factor in the success of digital learning settings (Tseng et al., 2022). This integration is crucial to the coordination of digital tools and communicative and linguistic goals in language education, which has recently been highlighted in the research on technology-enhanced language learning. These observations imply that the digital transformation relies upon both the availability of technology and the didactic ability to make an effective use of technology.

Digital higher education development in South Asia has not been evenly distributed because of socio-economic differences, infrastructural constraints, unequal policy implementation, and inconsistency (Manan & Khan, 2025). A very important case is that of Pakistan. Being a developing nation with a fast-growing higher education sector, it has been making numerous policy changes and digital projects in an attempt to modernize the education system within the past two decades (Chauhdry & Azeem). The Higher Education Commission (HEC) has also implemented policies that favor online and distance education, especially amidst and following the COVID-19 pandemic, and programs like the Pakistan Education and Research Network (PERN) and the Digital Pakistan program have aimed at improving institutional connectivity and digital infrastructure (Hussain et al., 2026; Najmudin et al., 2025).

The process of digital development of higher education in South Asia has been uneven because of socio-economic differences and limitations of infrastructure, as well as inconsistencies in policy execution (Hassan et al., 2025). Pakistan is one of the cases that are especially significant. Being a developing nation and a rapidly growing higher education sector, it has made several policy changes and digital strategies to modernize its educational system in the last 20 years (Chauhdry & Azeem). Policies in favor of online and distance learning have been proposed by the Higher Education Commission (HEC), especially throughout and following the COVID-19 pandemic, and some efforts have been made to improve institutional connectivity and digital infrastructure, including the Pakistan Education and Research Network (PERN) and the Digital Pakistan program (Mualla & Mualla, 2024).

Even with these advances, empirical research shows that there is still a lot of difficulty in the use of digital education in Pakistan. These are unequal access to digital

infrastructure, differences between the public and the private institution, and faculty training (World Banks, 2016; Rahim, 2024). Studies of digital competence also establish that institutional effectiveness is strongly linked to how the educators are digitally literate and the exposure to organized models of competency (Fernández-Batanero et al., 2024). It has also been proven that teacher digital competence gaps are still one of the most prominent obstacles to the effective implementation of online and blended learning (Cohen et al., 2025). Consequently, even though policy frameworks present a vision of a digital transformation that is very ambitious, the way it is transferred to institutional practices and classroom pedagogy is not always consistent.

In this larger context, language education has a unique position. Pakistani universities commonly teach Arabic in Arabic, Islamic studies, and other similar departments. Traditionally, the Arabic pedagogy in Pakistan is based on grammar-translation approaches, lecturing, and text-based learning (Alhawary, 2023). Although these methods have generated high competence on the analysis of classical texts, they have provided few opportunities with regard to communicative practice and interactive learning. Simultaneously, the global literature indicates that multimedia items, digital tools, and blended learning classrooms can be utilized to improve the acquisition of vocabulary, listening, and communicative competence in the Arabic language learning (Ramadhani & Ali, 2025). Nevertheless, these studies are mostly contextualized in Middle East and Western settings, and there are very few accounts of the South Asian setting of higher education.

Higher education digital transformation is broadly conceptualized in the context of larger modernization and knowledge economy discourses. Scholars such as Manuel Castells argue that universities significantly contribute to the networked society because they are the primary institutions where digital technologies are changing the production, distribution, and consumption of knowledge. Simultaneously, critics also believe that the digital transformation is not solely a technical process but an institutional and ideological one, which is determined by governance frameworks, policy agendas, and organizational capabilities (Al-Jarf, 2025; Selwyn, 2021). Recent studies also indicate the tendency of digitalization in higher education to be reflected in global forces of efficiency, scalability, and competitiveness instead of necessarily pedagogical concerns (Bond et al., 2020; Zawacki-Richter & Bozkurt, 2023).

Digital transformation has been introduced in the National Policy of Education (2017–2025) and in the campaigns of the Higher Education Commission (HEC) in Pakistan. The policies advocate online learning, digital infrastructure development and more access to higher education and see the use of digitalization as a tool that can be leveraged to enhance quality and institutional performance (Altbach et al., 2010). However, one of the biggest questions is whether these reforms are substantive pedagogical changes or mere policy-driven discourses of modernization. Empirical research has begun to support the view that translation of the policy to practice is not quite uniform and depends on the situation, especially in developing nations where infrastructural and institutional gaps continue to exist (Naik, 2025; Ramadania et al., 2024).

These challenges are reflected in the evidence provided in Pakistan. The digital capacity of institutions is varied, particularly at the urban and rural levels, in the public and private universities (Tahira et al., 2025). Infrastructure gaps and access to digital resources as well as institutional readiness are some of the limiting factors even though

initiatives such as the Pakistan Education and Research Network (PERN) have improved connectivity. Additionally, some of the most recent studies suggest that without pedagogical change, technological implementations are likely to bring only the superficial changes (Abdelfattah et al., 2023; Henderson et al., 2017). These dynamics are also influenced by institutional culture in the sense that faculty resistance, the lack of professional development, and insufficient instructional design support inhibit the successful adoption of digital technologies in teaching.

Such challenges are especially acute when it comes to language teaching, with disciplinary traditions playing a significant role in pedagogy. The teaching of the Arabic language, especially, has traditionally been based on grammar-translation techniques with the focus on the morphological analysis and the interpretation of the text (Qader & Baset, 2025). Although this method has created generations of educated people who are well versed in the classics, it has been considerably criticized to restrict communicative competence. The modern academic school of thought is proposing a more moderate pedagogical approach that is both grammar-driven and communicative and interactive. As an example, Al-Batal (Al-Batal, 2024) points out the need to use modern standard Arabic and dialectal variation, whereas Ryding (Ryding, 2016) suggests that the learners require context-sensitive and learner-centered teaching.

Although these are global changes in pedagogy, the literature on the teaching and learning of the Arabic language is largely based on North American and Middle Eastern experiences, with little involvement in South Asia. The religious and philological traditions that still play an important role in Pakistan have continued in Arabic language programs that focus on textual analysis and classical studies. Although this disciplinary orientation is an important intellectual resource, it has become a challenge in incorporating communicative and technology-enhanced pedagogies in modern higher learning settings.

In this context, computer-assisted language learning offers a significant contextualizing platform on the applicability of technology in language education. The development of CALL can be traced back to the early days of work by Warschauer and Healey (Warschauer & Healey, 1998), who discussed the shift of the behaviorist models to integrative and internet-based learning spaces. More recent advancements take this framework further to encompass blended learning, mobile-assisted language learning (MALL), and AI-based adaptive systems, which make it possible to have a personalized and interactive learning experience (Haleem et al., 2022; Zawacki-Richter et al., 2019). Research shows that digital technology can be used to greater effect in the process of vocabulary acquisition, learner autonomy, and engagement when it is properly implemented in pedagogical design (Philipsen et al., 2019; Whalen, 2020).

Nonetheless, there is one of the key controversies in the literature about technological determinism. Whereas the views on this topic suppose that the introduction of the digital tools automatically enhances the outcomes of the education process, others believe that technology itself is not what revolutionizes pedagogy. Rather, beliefs, competencies, and instructional practices of teachers have a decisive impact on how technology is utilized. This controversy is quite topical in Arabic language education, where powerful pedagogical traditions tend to mediate the implementation of digital solutions. Teachers that have been trained on grammar-based paradigms can use digital platforms without completely altering their teaching philosophy, thus not significantly changing pedagogical practice.

The current body of knowledge on digital education is more associated with digital education in general, higher education reform, or online learning during the pandemic, or the use of technology in STEM and English language education in the Pakistani case. The programs in the Arabic language are relatively unexplored. More crucially, the current body of research is infrequently developed in an integrated analytical view of interlinking national policy frameworks, institutional capacity, and pedagogical practices. Such disintegration prevents a complete view of the way digital transformation can function on the many tiers of the higher education system.

The relevance of aligning these dimensions is highlighted in the recent scholarship of the globe. Recent publications reveal that to ensure meaningful digital transformation, technological infrastructure cannot be regarded alone, as it needs institutional support, faculty development, and pedagogical innovation (Bond et al., 2020; Kazimova et al., 2025; Zawacki-Richter & Bozkurt, 2023). In a world of structural inequalities and highly disciplinary cultures, digital projects will be symbolic without it.

The proposed study aims to fill this gap by proposing an interdisciplinary solution for the digitalization of the Arabic language in Pakistan by analyzing the interaction of the national policy frameworks, institutional capacity, and Arabic language teaching methodology. Taking the wider context of the discourse of the digital transformation and its disciplinary and cultural setting into account, the study constitutes a contribution to the local and the global discourse of technology-enhanced language education.

Studies on digital education in Pakistan have focused primarily on higher education reform in general, online learning during a pandemic, and the use of technology in STEM and English language education (Munawar et al., 2025). Much remains to be done in the field of teaching Arabic. However, there is no single analysis that examines the relationship between national policy, institutional capacity, and pedagogic practice in terms of this. Such a divide restricts the view of the digital transformation processes at various stages of Arabic language instruction in Pakistan. The present study, in this regard, presents a thorough review of the digital transformation in the education of the Arabic language in relation to the association of national policy frameworks and institutional readiness and pedagogical practices. The study is based on the theory of digital transformation as a multi-layered process, as it is influenced by structural, organizational, and pedagogical factors rather than the technological one. This study attempts to tap the subtle ambiance of the Arabic language programs in the wake of digital change in the higher education system in Pakistan, which is specifically aimed at the interaction of these dimensions.

In that sense, this research explores the following research questions: What are the policies of digital education that facilitate digital transformation in higher education in Pakistan? To what extent are public and private universities institutionally prepared to implement digital Arabic language instruction? How have Arabic language departments adapted pedagogically to digital learning environments? What structural and pedagogical challenges hinder effective digital transformation in Arabic language education? How can policy, institutional capacity, and pedagogy be better aligned to improve digital Arabic language teaching in Pakistan?

METHOD

Research Design

The proposed research will be qualitative in nature with the use of a document analysis research design to examine the problem of digital transformation in Arabic language teaching in Pakistan. The most appropriate research study would be document analysis as it allows systematic investigation of the policy framework, institutional strategies and curricular practices in their real-life context. In order to reflect the changes in digital education, the study focuses on the documents published between 2015 and 2024.

Research Subjects

The study is based on three types of documents: (1) National education policy documents; (2) guidelines and reports of the Higher Education Commission (HEC); (3) Arabic language program curricula of selected universities. The representative universities with the Arabic language program were selected using purposive sampling strategy which comprised of the University of the Punjab, International Islamic University Islamabad and the University of Karachi. These institutions were selected because they have developed Arabic departments and they are from different institutional settings in Pakistan's higher education system.

Data Collection Techniques

The data was gathered by systematic document analysis of national education policy frameworks, HEC guidelines and reports and Arabic language curricula of the selected universities. The documents were found and analyzed based on their relevance for the study of digital transformation in Arabic language education, focusing on both the policy dimensions and institutional capacity and pedagogical dimensions. The documents were evaluated for authenticity, relevance, timeliness and preference was given to official documents and recent documents.

Data Analysis

Thematic content analysis was used to analyze the information. Documents were coded systematically in an iterative process of open coding, categorization and theme refinement along three dimensions of analysis – (1) policy frameworks, (2) institutional capacity, and (3) pedagogical practices. The triangulation technique was performed by using policy documents, institutional documents and academic documents related to the study to enhance the validity and reliability of the findings. In order to ensure analytical rigor, consistency of coding was ensured by multiple comparison of the data sources and the themes that came to light with the conceptual framework of the study. This strategy enabled a coherent conceptualization, implementation and practice of digital transformation in the field of Arabic language education at various levels of higher education in Pakistan.

RESULTS AND DISCUSSION

Policy Framework and the Narrative of Digital Reform

In the review of the national policy documents, it is evident that Pakistan has developed an inclusive policy framework on digital transformation in higher education. The National Education Policy (2017-2025) and the Digital Pakistan Policy Framework

are the key documents that are concerned with the integration of information and communication technologies (ICT) to enhance access, quality, and institutional efficiencies. The concept of digitalization is constantly mentioned as a strategic priority in relation to the trends of national development and the international educational trends.

Similarly, the Digital Pakistan Policy Framework points out the necessity to pay special attention to the utilization of the technological infrastructure, digital literacy, and the conditions of online learning within the learning institutions. All such policies form part of a national strategy of refocusing higher education on the new trends of the digital transformation and knowledge-based development that the world is experiencing. Specifically, they highlight the importance of universities implementing new teaching practices, incorporating digital tools into their curriculum, and improving efficiency in institutions by using technology.

The results, however, show that there is a gap in the execution of the policy guidelines in the Arabic language programs. Even though other institutions have begun to embrace the digital learning platforms and blended learning techniques, there are still other institutions that widely employ the classical classroom-based teaching techniques. The difference implies that policy commitments may not always be implemented in institutional practice.

Moreover, the discussion suggests that the policy documents are mainly aimed at the general use of technology rather than discipline-specific technology, such as Arabic language education. Digital policies are therefore inclined to be interpreted and implemented by the universities in a way that does not satisfy the language learning pedagogical needs. The institutional theory approach to such commitments by policy, however, is more of the normative and coercive demands than the guaranteed pedagogical improvement. This means there is a gap between policy and practice, and what is written in the policy may not have a similar and substantive implementation.

This study presents a multi-layered discussion on the digital transformation of Arabic language education in Pakistan by taking into account the alignment of policy frameworks, institutional capacity, and pedagogical practices. The results indicate that digital transformation is still disproportional and, even in most instances, more symbolic. These findings can be analyzed using the institutional theory and Technological Pedagogical Content Knowledge (TPACK) framework to provide important critical information about the structural and pedagogical forces influencing this process.

On the policy level, the results show that there is always a disconnect between national aspirations and their implementation in both institutional and pedagogical settings. Although the policy frameworks are strong advocates of digital transformation as one of the strategic priorities, its effect on the teaching of the Arabic language is not uniform. This trend is indicative of larger world-system dynamics where digitalization is being promoted as the core of knowledge economies, but in many cases, these aspects have not been implemented in local contexts (Ahmed et al., 2025; Castells, 2011).

This institutional gap can be conceptualized as a decoupling of policy and practice in which digital reforms are adopted symbolically and legitimizing instead of being actualized to effect change (Bromley & Powell, 2012; Meyer & Rowan, 1977). Universities, especially in the developing world, might be ready to match up the global academic discourses of modernization in order to be seen as legitimate without entirely changing their pedagogical processes. This interpretation can be supported by recent research on digital transformation in the field of high education, which points out that the

lack of commitment at policy levels, often associated with a weak connection to institutional reality and pedagogical requirements, is a common reason why these initiatives fail (Kazimova et al., 2025; Mabotha & Ngcamu, 2025).

Such results imply that digital transformation policies in Pakistan have been mostly generic and technology-oriented and do not provide discipline-specific policies in such areas as the teaching of the Arabic language. Consequently, universities receive these policies in a manner that prescribes a tendency to comply with them rather than to be innovative in their pedagogy. This makes for very serious concerns regarding whether digital reform in higher education is the substantive transformation or simply a policy discourse of modernization.

Institutional Readiness and Organizational Constraints

The outcome shows that a high gap in institutional readiness to digital transformation exists across the universities that have the Arabic language programs. Although the basic infrastructure of the institutions is almost there, such as the learning management system and online portals, the usage of the technologies in the system is not yet implemented.

Partially, public universities may have some of the digital technologies in place; however, there are structural barriers to more complete implementation. These limitations are a lack of financial resources, irregular access to the internet, and institutional support of pedagogical innovation. The digital platforms in most instances are applied in an administrative context and not interactive teaching and learning.

By comparison, semi-autonomous and private universities seem to be comparatively more receptive to digital transformation initiatives. The competition forces within the education sectors of higher learning are pushing the education institutions to adopt the current teaching technologies and platforms of blended learning. However, in these contexts, the application of digital technologies in the Arabic language programs is still not systematic but rather scattered and does not involve a systematic approach to integrating it into the curriculum design.

These findings also suggest that the institutional policies regarding digital education are usually generic in nature and do not provide any directions on specific disciplines. In the Arabic language departments that do not have discipline-specific planning, it is a drawback of digital transformation endeavors. This uneven adoption indicates institutional constraints and is aligned with the concept of isomorphic adoption, which means that in this case, universities formally adopt digital tools to meet policy requirements but do not use them in a meaningful way to address pedagogical action.

On the institutional level, it is found that there are high differences in readiness among universities. The simplest digital infrastructure, such as learning management systems and online platforms, has been adopted by most institutions, yet they have not implemented them fully in their teaching. This helps to argue that infrastructure is not enough to cause meaningful digital transformation.

These dynamics can be useful to explain with the help of the institutional theory. DiMaggio and Powell (DiMaggio & Powell, 1983) argue that isomorphic adoption takes place in organizations because of coercive, normative, and mimetic pressure, which incline organizations to adopt similar practices. Digital technologies in Pakistani higher education are often not implemented in a consistent pedagogical approach but are

introduced due to the policy requirement and international trends. The use of digital tools is thus used in extremely superficial ways, primarily in administration or content delivery. Recent research also supports this interpretation by suggesting that the availability of technology is not the only determinant of the effectiveness of the institution but also the organizational culture, leadership, and the structures of professional development (Henderson et al., 2017; Sreekanthaswamy et al., 2025). In this research, the lack of institutional approaches to Arabian language programs, which are specific to the discipline, restricts the level of digital integration. In addition, the structural limitations in terms of funding, unequal infrastructure, and lack of instructional design facilitate change but also limit the possibility of it.

These results highlight the fact that digital transformation is essentially an organizational and pedagogical challenge and not a technical one. Unless institutions are committed to long-term adoption of technology in their fundamental academic activities, the digital initiatives will probably continue being disjointed and uncoordinated.

Pedagogical Integration and Faculty Competence

The review reveals that there is a lack of pedagogical involvement of digital technologies in teaching the Arabic language. Online resources have been adopted mainly to deliver the content (posting of lectures, handling homework) as opposed to online interactive and student-centered learning tasks. There are relatively few more interactive applications like multimedia-based language teaching, online discussion, virtual language labs, and collaborative learning activities. This shows that the interactive nature of digital tools is not fully used.

Moreover, the conventional teaching methods based on lecturer and grammar are still prevailing in institutions. These methods focus on textual exegesis and memorization and replicate traditional pedagogical patterns in the teaching of the Arabic language. The results are also showing that a lot of the instructors are not trained formally in the use of technology-enhanced teaching strategies. As a result, digital tools have found their way into the pedagogical practice as a supplement to the main activities and not as a part of the instruction, restraining their potential to change the dynamics. This suggests that there is no integration of technological, pedagogical, and content knowledge from a TPACK perspective. The teachers might be very knowledgeable in the subject they teach but be deficient in pedagogical and technological skills needed to effectively teach digitally.

The findings at the pedagogical level indicate that the digital technologies are more applicable in content delivery instead of interactive or student-centered learning. Such limited integration is an indication of a discrepancy between the technological tools, pedagogical approach, and disciplinary content as conceptualized in the TPACK framework (Mishra & Koehler, 2006).

The findings show that a large proportion of instructors have high subject knowledge, but they do not have pedagogical and technological skills needed to teach online. This asymmetry is the cause of some kind of technological replacement; digital platforms imitate the practice of a lecture, but they do not change the learning experience. These tendencies support the fact that the realization of digital transformation, as a phenomenon, is impossible as an effect of technology, but it involves the restructuring of the method of pedagogical practice.

Recent investigations confirm the role of teacher competence in this process. According to DM Voronin (Voronin et al., 2020), the capacity of an educator to combine

technological, pedagogical, and content knowledge is the critical element of successful digital transformation. In a similar manner, Tseng (Tseng et al., 2022) emphasize that successful use of technology in the language education process has to be organized with communicative and interactional objectives. This research is consistent with this body of literature as it shows that lack of structured professional development restricts the pedagogical effects of digital tools.

Such observations indicate that faculty development is the lever of change most critical. Digital technologies will probably not disrupt the teaching practice without specific training and guidance instead of addressing the current pedagogical constraints.

Disciplinary Traditions and the Digital Divide

The tradition of discipline is quite important in determining the adoption of digital teaching practice in Arabic language education. The historical focus of the field on grammar, textual analysis, and classical scholarship still affects instructional methods such that they tend to restrict the implementation of communicative and technology-enhanced instructional methods. This has led to a lack of application of communicative and digitally enhanced teaching methods. Digital tools do not create significant effects on pedagogical innovation in most instances since instructors view them as complementary to conventional approaches.

The results also depict the ongoing importance of the digital divide in the system of higher education in Pakistan. The availability of efficient internet connections, technological materials, and faculty development is significantly different at different institutions and locations. The urban universities tend to be better equipped, while the universities with underdeveloped areas are limited. These differences have an impact on the learning activities and lead to disparity in access to digitally enhanced education for students. The results would suggest that, besides institutional capacity, there are entrenched epistemological and pedagogical traditions in the mediation of digital transformation.

The role of disciplinary traditions in digital transformation is one of the unique contributions of the study. In Pakistan, the teaching and learning of the Arabic language is strongly based on grammar-focused, textual pedagogies that focus on the classical studies. These traditions create a very strong intellectual legacy but also pose a problem of pedagogical stagnation in which the communicative and technology-based methodology cannot be introduced.

This fact is in line with the skeptical thoughts about educational technological changes that are saying that digital devices are not transforming education but are being transformed by current cultural and institutional practices (Henderson et al., 2017). In this sense, the implementation of digital technologies in teaching the Arabic language is not just an issue of access or an issue of training but also a bargain of deep-rooted epistemological and pedagogical assumptions.

The challenge, however, is not to replace the old ways of doing things; it's to reconcile the old ways with the new ones—the discipline with the pedagogy. This entails creating a balance between the preservation of the best aspects of classical education and the adoption of interactive, learner-centered instructional methods with the use of digital materials. The Internet is a digital landscape in which digital inequalities and structural constraints also exist.

Digital Inequality and Structural Constraints

It is also noted that the digital divide remains important in the system of higher education in Pakistan. The unavailability of fair access to effective internet, technological services, and trained faculty creates disparities in the learning experiences of students in institutions. This implies that digital transformation is not merely a pedagogical and institutional problem but also an educational equity problem.

According to recent research in the world, digital inequality is not only a question of access but also differences in usage and skills as well as in learning outcomes (Carney, 2022; Malpass, 2022; Zawacki-Richter & Bozkurt, 2023). The findings of the present research affirm this view, pointing to the fact that its pedagogical use is not even in the areas where infrastructure is accessible. Existing structural inequalities cannot be countered by digital transformation unless these inequalities are tackled.

Toward Systemic and Integrated Transformation

Comprehensively, the current study has established that the process of digital transformation in Arabic language education is a multi-dimensional and systemic one that needs to be aligned on the policy, institutional, and pedagogical levels. In line with the recent studies (Lim et al., 2019; Tran & Nguyen, 2024), the meaningful change requires the combination of technology with curriculum development, institutional strategy, and faculty development.

The findings have shown that the current digital form of reform in Pakistan is characterized by fragmentation, where the policy aspiration, institutional practice, and pedagogical realities are in comparative autonomy. To solve this fragmentation, there is the need to move towards methods that are technology-driven, pedagogy-oriented, and contextualized.

In this regard, the comparative application of institutional theory and the TPACK framework offers a viable analytical framework that can be applied to understand the structural constraints and the pedagogical possibilities of digital transformation. It is the consistency of these dimensions that determines the success of digital reform in the end. Without this alignment, the digital initiatives are likely to remain a kind of a symbolic gesture in which they can do little to influence teaching and learning outcomes. All these findings suggest that digital transformation in the education of the Arabic language cannot be viewed as a linear process of technological adoption but rather a negotiated one that is shaped by institutional organization, pedagogy, and policy forces. This supports the issue of context-sensitive and integrative solutions to digital reform in higher education.

CONCLUSION

The paper has examined the process of digitalization of learning Arabic in Pakistan in a comprehensive way concerning policy frameworks, institutional capacity, and pedagogical practices. The findings show that, though the policies of the country offer a very good vision of how digital integration in higher education must be translated, there remains an unequal and uncoordinated transfer of the same into institutional practices and classroom behaviors.

Digital transformation is considered a policy-level strategic priority of enhancing access, quality, and global competitiveness. However, the discussion reveals that these

policy frameworks are very generic and lack discipline-specific guidelines for other disciplines such as Arabic language education. As a result, universities will understand and implement digital initiatives not to address the specific pedagogical requirements of language learning in a holistic way.

The research establishes that there is a major disparity in the preparedness of universities at the institutional level. Although the majority of institutions have elementary digital infrastructure, including learning management systems and online tools, the actual application of these tools to teaching is minimal. Structural barriers, such as the unequal distribution of resources, inadequate funding, and the lack of institutional support, persist in impeding the creation of holistic digital learning environments. Furthermore, technological adoption is given greater priority than pedagogical change by institutional strategies that have established the patterns of shallow implementation.

On the pedagogical level, the results show that digital technologies are mostly applied to deliver the content instead of interactive and student-centered learning. Concepts of the TPACK framework are not applied in a systematic manner, and there is little indication of effective combination between technological devices, pedagogical strategies, and the contents of the Arabic language. Conventional pedagogical practices, especially grammar-translation and lecture-delivery, are still prevalent, which can be attributed to the legacies of disciplinary traditions of Arabic studies.

The results also indicate the importance of faculty competence as a key aspect of digital transformation. Most teachers have not been trained in technology-enhanced pedagogy, and, therefore, they cannot apply technological devices to their benefit. Consequently, technology is still auxiliary as opposed to being transformative in the Arabic language classrooms.

Also, the existence of the digital divide is also a challenge. Learning disparities are caused by the unequal access of reliable internet, technological materials, and training opportunities across institutions and regions. In the absence of specific measures, digital transformation can strengthen the current disparities in higher education.

Comprehensively, the results indicate that digital change in the teaching of the Arabic language in Pakistan is more of a symbol and less of a substance. As is standard with the institutional theory, universities tend to implement digital changes in order to conform to the policy requirements and the world trends, even though the real pedagogical practices do not change much. This decoupling creates a necessity to have an increasingly synchronous and situational approach to digital reform.

Based on these findings, this study proposes the following recommendations: The policymakers ought to come up with discipline-specific digital education policies for Arabic language courses. These must have explicit curriculum integration and pedagogical creativity as well as assessment practices. Moreover, specific funding schemes ought to be implemented to promote technology-based language learning, especially in institutions that are under-resourced. Surveillance and review systems also need to be enhanced so that the digital policies can be effectively implemented.

Universities need to stop focusing on infrastructural growth and instead focus on pedagogical integration of the digital technologies. This involves an investment in the continuous professional development programs on the aspect of technology-enhanced teaching. Learning institutions must also form instructional design support units that help faculty members to design digitally integrated curriculum. Best practices of digital

pedagogy can also be propagated by encouraging cooperation and sharing of knowledge among the instructors.

The Arabic language teachers ought to be more interactive and student-oriented in their teaching methods that capitalize on the digital medium. These multimedia tools, online discussion forums, collaborative learning groups, and virtual language laboratories can enhance the student level of engagement and communicative competence to a large extent. Application of the TPACK framework in the curriculum designing process can prove effective in ensuring that there is a substantial amount of correspondence between technology, pedagogy, and content.

Equity and inclusion should be considered during the promotion of digital transformation. The measures that are required to eradicate the digital divide are the increased availability of digital infrastructure, improved access to the internet, and training of instructors and students. Special attention should be given to the institutions of less developed regions in order to enjoy equal education opportunities.

The future studies should be conducted on the topic of digital transformation of Arabic language teaching through empirical studies such as interviews, questionnaires, and classroom observations. A comparison of the research conducted in various regions and institutions can be used to gain more understanding of the contextual differences. Moreover, the analysis of the experience and perception of digital learning among the students would provide a deeper insight into its effects.

Finally, the digital transformation of Arabic language education cannot be achieved through technological use only; it needs systemic coordination of policy, institutional, and pedagogical levels. In the absence of this alignment, the digital initiatives will be superficial and will not lead to any meaningful transformation in the teaching and learning outcomes. The context-specific and coordinated strategy is, therefore, necessary to make sure that the digital transformation will be a truly transformative force in the teaching of the Arabic language in Pakistan.

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