

Education in Pakistan: Historical Roots, Current Challenges, and Future Pathways

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ABSTRACT

The aim of this study is to present a systematic literature review (SLR) of education system in Pakistan. The study synthesizes historical evolution, current practices, challenges, and pathways of future reforms. Based on an interpretivist and constructivist approaches, the study used secondary sources of information from major thematic databases and publications (2015–2025) following PRISMA guidelines.

Findings of the study reveal that education system in Pakistan remains influenced by colonial legacies, structural issues, inequitable access, weaknesses in governance, and policy implementation gaps. Currently, several practices demonstrate incremental progress toward modernization, including outcomes-based education, sustainability education, and AI. However, there is scarcity of studies with empirical evidence on the effectiveness of teacher training, technology integration, and inclusiveness. According to outcomes of study a number of critical gaps exist in the field of higher education. These include lack of research in exploring outcomes of teacher development, and a weak alignment between higher education and employment prospects. The study emphasizes the need for context-sensitive, equity-driven, and technology-enabled reforms to modernize education system in Pakistan.

Theoretically, this SLR contributes by linking socio-political, historical, and pedagogical perspectives. Practically, it provides insights for educators, institutional leaders, and policy makers. Overall, this focuses on bridging historic disparities, strengthening governance, and providing sustainable, inclusive, and future-ready education in Pakistan.

Key Words: Education system in Pakistan, Historical legacies, Teacher training, Governance challenges, Curriculum reforms, Future pathways

INTRODUCTION

Historically, education in Pakistan has deep roots in colonial heritage and in traditional pedagogical approaches. The evolution of the education system reflects this through its developments. According to scholars, colonial-era policies and traditional teaching methods continue to play an important role in shaping current disparities in access, quality, and equity within the system (Yasmin et al., 2022). This approach emphasizes moral guidance, cultural preservation, and fostering social cohesion during the colonial period of teacher training (Ghosh, 2021; Popkewitz, 2018). Despite their importance in original contexts, historically based priorities have persisted into the modern era, often hindering innovation and limiting the adoption of student-centered learning practices in schools.

Currently, the Pakistani education system faces several structural and operational challenges. Specifically, outdated and insufficient teacher training programs affect teaching quality across different levels of schooling

(Ahmed et al., 2018). In addition, socio-economic and rural-urban disparities undermine the effectiveness of the education system (Arshad, 2024; UNESCO, 2022). Additionally, uneven technology integration among private elite schools and public schools creates a significant difference in opportunities between the privileged class and the common population (Ali, 2025). Therefore, policies such as the Single National Curriculum (SNC) continue to struggle with implementation due to these issues.

The educational reform in Pakistan fails primarily due to implementation fragmentation rather than policy absence. There is a gradual shift in the educational landscape towards reforms aimed at promoting inclusiveness and encouraging student-centered learning. It is becoming increasingly important to promote digital literacy, introduce innovative pedagogical approaches, and implement inclusive practices to accommodate the diverse needs of individual learners (Mynbayeva et al., 2018). A number of technologies that are emerging in response to the Fourth Industrial Revolution, namely artificial intelligence (AI) and virtual reality (VR), have the potential to transform teacher training and classroom delivery, providing potential pathways to the modernization of the education system (Qazi, 2020; Bashir et al., 2023). Several developments are underway to signal a critical shift from historically entrenched pedagogical practices to dynamic, technology-enhanced, and learner-focused pedagogical practices. Despite Pakistan's increasing number of researchers in STEM fields, systematic literature reviews (SLRs), especially in the field of education, are lacking (Aslam et al., 2022). This study emphasizes conducting research as a systematic literature review to enhance the quality and breadth of educational research in the country.

- Taking a close look at the history of education in Pakistan, we can examine its foundations.
- Analyzing the current challenges that the education system faces in order to make improvements.
- Develop an understanding of current practices and reforms in the field of education to modernize educational institutions, policies, and governance.
- To explore future directions for reform.
- Contribute to Pakistan's body of knowledge in educational research by consolidating fragmented research.

Conceptual Framework

Three interlinked dimensions of the educational system in Pakistan: historical perspectives, current state and challenges, and future directions for reform guide the conceptual framework of the current study. This framework guides the synthesis of existing scholarly work in examining the historical foundations of the education system in Pakistan, current practices, curriculum and teachers' training, and socioeconomic disparities in shaping the overall effectiveness of the education system. The following base lines studies establish the conceptual foundations. Table 1 illustrates the interconnection between three dimensions.

Table 1: Conceptual Framework for Systematic Literature Review

Dimension	Historical Foundation	Current practices and Challenges	Future Prospects
Major objectives	Development of educated class to serve in administrative roles.	Class based system (Private elite English medium, government Urdu medium, religious schools).	Uniform and inclusive education system to bridge the gap of inequality.
	Strengthen colonial control	Language division: differences in medium of instruction.	Reform for a unified medium of instruction and professional development of teachers.

Teacher Training	Moral guide, agent of cultural preservation.	Outdated pedagogies, insufficient and ineffective professional development.	Updated pedagogies to ensure inclusiveness of several social groups. Digital literacy.
Curriculum	Cohesion of the nation and cultural identity	Outdated curriculum, deficiencies in teacher training, gaps in implementation of single national curriculum (SNC)	Integrated policy for inclusiveness. Competence driven and inquiry-based curriculum
Policy & Governance	A legacy of hierarchy and colonialism	Underfunding and inadequate monitoring	Effective governance and monitoring.
Access and Equity	Inequalities based on class	Rural and urban gaps. Socio economic disparities	Equitable resource allocation and opportunities enhancement, public private partnerships, sustainable reforms.

METHODOLOGY

The study synthesizes the knowledge as qualitative research (Creswell & Poth, 2016) using secondary data under a systematic literature review strategy. Information relies on secondary data sources including journal articles, book chapters, policy reports, and institutional publications. Therefore, an interpretivist and constructivist research paradigm underpins this study (Tuan et al., 2019; Khoo-Lattimore et al., 2019). A systematic literature review synthesizes and interprets meaning, context and themes within the selected literature. Narrative analysis in this study aligns with interpretivist and constructivist paradigm (Popay et al., 2006; Greenhalgh et al., 2018). The systematic approach of this study, guided by PRISMA, provides a pragmatic element to ensure transparency, replicability, and relevance of findings (Page et al., 2021).

We deploy a comprehensive search across major academic databases including ERIC, Scopus, Springer, Web of Science, and Google Scholar. Some relevant literature comes from institutional repositories, UNESCO, World Bank, and Pakistan government portals. Combining Boolean operators and keywords, the search used: the education system in Pakistan, historical roots of Pakistani education, challenges in Pakistan's education system, the future of education in Pakistan, Policy reforms in Pakistani education. The study selects articles and reports based on initial screening of titles and abstracts. Considering recent and past developments in Pakistani education system, we have selected a feasible methodological period of 10 years publications to avoid outdated information. To align investigation strategy with standard practices in systematic reviews (Snyder, 2019; Xiao & Watson, 2019) we focused on a decade-long period to balance comprehensiveness and relevance.

To ensure replicability avoidance, reliability, and comprehensiveness, the study followed a structured and transparent approach in synthesizing existing scholarly work on education in Pakistan. Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guided the methodology. We selected studies published in English language during 2015 to 2025. Study utilized selected record from journal articles, book chapters, and policy reports. Eligibility criteria included the following conditions explaining education system in Pakistan: (1) theme related to topic, (2) historical perspectives, (3) challenges, and (4) future directions. Inclusion criteria included relevance of record focused directly to Pakistan's education system and rigor of selected studies. Exclusion criteria included duplicate themes, scope of the study, and significance of information. Initially, a total of 167 records (ERIC: n=30, Scopus: n=62, Web of Science: n=55), with an additional 15 records, were retrieved. After removing duplicate themes (n=45), 122 records were available for screening of titles and abstracts. Through independent selection verification, 90 records lacking scope, language, and relevance criteria were removed. Hence, a total of 32 records were sought for retrieval, and 26 full-text articles were accessed after confirming dual-reviewer eligibility assessment. 5 articles were excluded due to discrepancies regarding their methodological issues, data quality, and limited rigor. Finally, we included 21 studies with 100% consensus for

inclusion in the qualitative narrative synthesis. Figure 1 displays details of the process of selected records for synthesis of information into a systematic literature review.

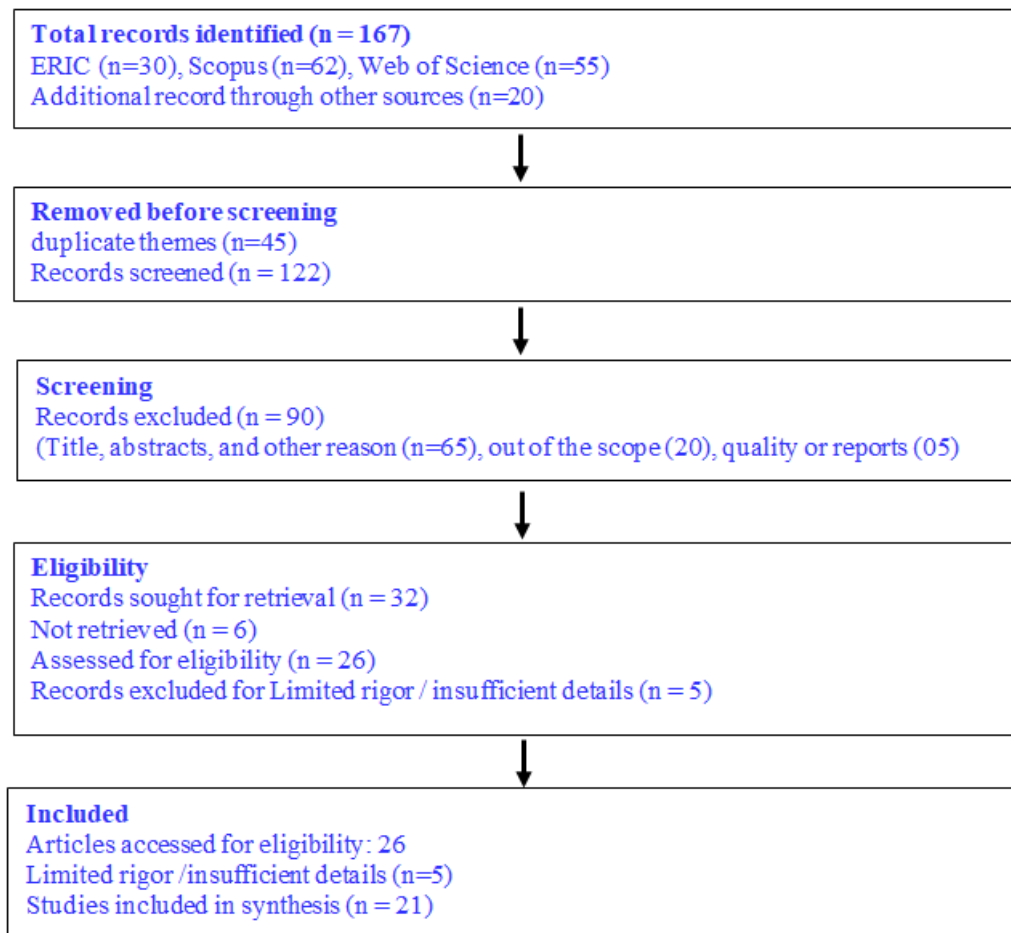


Figure 1. PRISMA

After the screening 26 articles went under full assessment. Due to insufficient methodological rigor and inadequate transparency of findings five articles were excluded. Finally, 21 studies meeting established quality standards and eligibility criteria were selected for review.

The study identified relevant literature across ERIC, Scopus, Web of Science, SpringerLink, and Google Scholar using a systematic search following search strings.

Table 2. Search Strings

Database	Search String
ERIC	educational system, challenges ,reforms ,policy ,curriculum , teacher training
Scopus	TITLE-ABS-KEY "challenges" OR "reforms" OR "teacher education" OR "curriculum" OR "governance" OR "equity"
Web of Science	"education system" Pakistan, reforms OR challenges OR governance OR teacher training OR curriculum"
SpringerLink	"Pakistan education system, policy reforms , teacher education, educational challenges, future of education"

Google Scholar	"education system in Pakistan, educational reforms in Pakistan, teacher training in Pakistan, future of education in Pakistan"
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Additionally, relevant policy reports and institutional publications of UNESCO, World Bank, Higher Education Commission (HEC) Pakistan, and Government of Pakistan repositories were identified using Google search. Study evaluation criteria were adapted from established systematic review guidelines (Xiao & Watson, 2019; Snyder, 2019) for quality appraisal of all eligible studies before including them in the final synthesis.

Table 3. Assessment Criteria

Criterion	Description
Relevance	Directly relevant to education system of Pakistan
Methodological Rigor	Clarity and appropriateness of research design for objectives of study
Data Quality	Authentic data sources, evidence, and appropriate analysis
Transparency	Clarity of reporting of study objectives, methods, and findings
Contribution	Meaningfulness of contribution to understand educational issues

Analysis includes patterns, convergences, and divergences across records. Finally, we concluded our study by contextualizing findings, issues, and emerging trends in Pakistan's educational discourse through a narrative synthesis.

Table 4: Summary of Literature Survey

No	Author(s)	Year	Database	Study type	Focus	Key findings
1	M.S. Farooq	2017	ERIC	Review	A Review of Pakistan School System	Study indicates major issues; lags in quality in primary education, shortfalls in budgets.
2	G.M. Rind	2024	ERIC	Review/Analysis	Analysis of Higher Education Reforms in Pakistan.	Expansion in higher education but skewed access due to uneven implementation of reforms.
3	Khushik, F., & Diemer, A.	2018	Scopus	Critical analysis / Review	Critical analysis of education policies in Pakistan: A sustainable development perspective.	Analysis of SDG integration, highlights disparities among provinces and study recommends policy-making for inclusive and sustainable education system.
4	Zhang, K., & Aslan, A. B.	2021	Scopus / Science Direct	Review	AI technologies and future directions in education.	Summary of recent advancement in AI for education and directions for future research.
5	N. Rehman	2025	Scopus	Analysis	Pakistan's readiness for STEM education	Provide a list of critical gaps in teacher preparation, policy

						mechanisms, and resource availability.
6	N. Fatima, M.I. Ashraf, S. Zehra	2020	Index Copernicus	Policy analysis	Higher education policy & research in Pakistan	Identified some challenges in social transformation and need for structural reforms.
7	Z.H. Sain, S.M. Ayu, J. Junaidah	2024	GARUDA	Review	Evolution of Islamic Education in Pakistan.	Comparison of traditional and modern education and recommendations for reforms to modernization of religious education centers.
8	R. Naz, R. Akhtar, M.S. Ahmad, F. Fatima, S.M. Abdullah	2025	EuroPub	Integrative review	Analysis of educational environment	Identifies factors hindering the development process. Links policy, curriculum and environment for educational development and recommended actions.
9	P. Hoodbhoy	2020	Springer	Book chapter	Pakistan's higher education system and assessment	Study provides a historical overview of higher education. Identifies gaps in autonomy, skills and employability and recommends governance reforms to ensure inclusiveness, research, and innovation.
10	Akram, H.	2020	Semantic Scholar	Critical analysis /Review	Education governance in Pakistan	The study identified key challenges in governance, key policy gaps, implementation issues, and institutional weaknesses.
11	Qureshi, N., & Kalsoom, Q.	2022	Springer / Scopus	Book chapter / Review	Teacher education in Pakistan	The study identifies structural problems, gaps in teacher training, and potential reforms to enhance the preparation of teachers in the classroom.
12	Halai, A., & Durrani, N.	2020	Springer / Scopus	Book chapter / Review	School education system in Pakistan	The study examined the growth of schools, barriers to equal access to schools, and disparities among regions when it comes to access to schools.
13	Durrani, N., & Halai	2018	Elsevier	Analytical/Qualitative study	Dynamics of gender justice, conflict and social cohesion	The study concluded that educational reforms should focus on gender justice and social cohesion in order to overcome patriarchal norms, societal resistance, and conflict in order to achieve positive change.

14	Tahira, M.	2020	ERIC	Sector review	Teacher Education in Pakistan	Study highlights issues of teacher's training and mismatch between policy and practice
15	Jalil	2019	Routledge	Analysis / Qualitative	Education in Pakistan: Past and future prospects	Study highlights inconsistency in policies due to political instability and resource constraints.
16	Nauman, S.	2015	ERIC	Journal article	Investing in Education: Pakistan as a Traditional Society in a Modern World.	The study highlights that cultural and religious perceptions create a resilience of traditional values for modernization efforts.
17	Nousheen, A., Zai, S. A. Y., Waseem, M., & Khan, S. A.	2020	Scopus / Science Direct	Empirical / Experimental	Education for sustainable development (ESD)	The study reveals a positive impact of pre-service teachers on teacher's attitudes; suggests integration of teacher training programs to enhance their commitment to ESD.
18	Anwar, R. H., Yahya, U., & Zaki, S.	2024	Scopus	Book chapter / Review	Values ingrained in Pakistan's education system	Explores how education system of Pakistan carries deeply ingrained values by history, religion, culture, and politics.
19	Ahmed, Z., Khan, S., Saeed, S., & Ali, F.	2021	Semantic Scholar	Review / Analysis	An overview of educational policies of Pakistan	The study highlights socio-economic influences on reforms and gaps in quality and access under historical perspective.
20	Naviwala, N.	2016	ERIC	Report / Analysis	Pakistan's Education Crisis	The study examines issues including allocation of funds, inefficiencies, poor learning outcomes, political influence, and limited donor interventions in Pakistani education system.
21	Asim, H. M., Vaz, A., Ahmed, A., Sadiq, S., & Mansoori, S.	2021	ERIC	Review	A Review on Outcome Based Education	OBE enhances alignment of curriculum and teaching but its effectiveness depends on faculty competency, institutional support, and curriculum design.

LITERATURE REVIEW

Table 4 shows the findings of selected studies in the context of Pakistan reflect a deep and complex interplay of following elements.

Historical Roots

There are long persisting structural fragmentation and inequalities in Pakistan's educational system rooted into historical underpinnings. According to Hathaway (2005), a comprehensive analysis of the imperial aftermath can be found by reviewing governance issues and financial distress as a major contributor to the development of

a two-pronged system heavily favored by elites after the colonial era. Ahmed, Khan, Saeed, and Ali (2000) provide an overview of the policy laid down by Ahmed, Khan, Saeed, and Ali (2020) that shows that the reforms were made in response to socioeconomic pressures and not to address the problems at the root of the system. In addition, Nauman (2015) emphasizes the tension between traditional social norms as well as cultural values as it relates to institutional reform that is based on them. As a result of these studies, we can gain a deeper understanding of the historical inequalities and inconsistent policy directions that shaped Pakistan's education system.

Present Challenges

Research has shown perpetual structural and policy halts, these problems are further magnified by governance problems. There is a substantial convergence across the reviewed studies regarding the nature of challenges and structural issues. For example in studies Farooq (2017), Akram (2020), Khushik and Diemer (2018), and Halai and Durrani (2020), persistent issues and barriers reported across the studies are: weakness of governance, inadequacy of funding, policy implementation inefficiencies, and inequitable access. Tahira (2020), Qureshi and Kalsoom (2022), and Rehman (2025) report in teacher training effectiveness, professional development, and institutional capacity issues.

Collectively, these studies suggest that educational problems in Pakistan are interconnected rather than isolated. Major amplifier among common issues are governance deficiencies, teacher training, implementation of curriculum, and educational equity. These issues call for a systematic reform instead of fragmented interventions. Assessments of recent educational records exhibit some divergence. For example, Rind (2024) considers higher education expansion to have increased participation opportunities, while Hoodbhoy (2020) highlights institutional autonomy issues, innovation barriers, and graduate employment problems. Similar to policy-oriented studies, researchers differ in their assessment of initiatives like the Single National Curriculum and sustainability-focused reforms due to varying contexts for implementation and differences across provinces. Rehman (2025) reports STEM preparedness, competence of teachers, and lack resource availability as core issues, while studies on educational innovation suggest that technology and AI can transform education. According to Tahira (2020), teachers continue to face the scarcity of pre-service and in-service training. Halai and Durrani (2020) report inequality in access to education, mainly for marginalized groups and regions. Fatima, Ashraf, and Zehra (2020) emphasize the necessity for structural reforms to link societal transformation and higher education. However, there is a broad agreement about Pakistan's education system's structural challenges, but different interpretations of how to address them.

Current Practices

In contemporary practice, reforms and innovations are reflected in practice. Implementing outcome-based education (OBE) as a paradigm shift in tertiary education is a step towards aligning curriculum, instruction, and assessment (Asim, Vaz, Ahmed, Sadiq, & Mansoori, 2021). Incorporating sustainability education into teacher education programs has been shown to positively impact pre-service teachers' attitudes toward sustainable development (Khushik & Diemer, 2018; Nousheen, Zai, Waseem, & Khan, 2020).

Furthermore, because Islamic education centers are required to provide a balancing act between traditional learning processes and contemporary subjects, the Single National Curriculum encourages them to do so (Sain, Ayu, & Junaidah, 2022). Some institutions are experimenting with AI-based approaches to personalize learning (Zhang & Aslan, 2021). These practices reflect incremental progress towards aligning educational goals with national needs, values, and global trends.

Future Pathways

The implementation of artificial intelligence in education for sustainability is one of the most promising trends emerging in the field, despite challenges such as improving curriculum, reforming policies, and incorporating artificial intelligence into the classroom to reshape the educational culture (Nousheen et al., 2020). To ensure that modernization creates a sense of belonging that is in line with the local identity, Anwar, Yahya, and Zaki (2024) emphasize the importance of integrating cultural and ethical values into school curricula. The

transformative potential of artificial intelligence technologies will provide personalized and adaptive learning in research and skill development (Zhang and Aslan, 2021). According to Naz et al. (2025), the alignment of curricula, policies, and environments should be integrated into a comprehensive approach to reforming education for the future.

Emerging Themes

Generally, the studies have focused on the evolution, challenges, practices, and reform pathways of Pakistan's education system to identify some important trends. Several factors influence the system's efficiency, including historical legacies, governance structures, teacher preparation, curriculum development, and technological innovations. Across all policy and practice areas, equity, quality, and sustainability are by far the areas that are most frequently stressed in terms of policy and practice. Findings reveal the following major themes from selected studies.

Table 5: Themes

Theme	Description	Sources (studies)
Historical foundations	Colonial dual system continues to influence education system.	Hathaway (2005), Ahmed et al. (2021), and Nauman (2015)
Governance	Poor monitoring, uneven implementation at provincial level.	Akram (2020), Khushik & Diemer (2018), and Naviwala (2016)
Teacher training	Gaps between policy and practice to enhance competence of teachers.	Tahira (2020), Qureshi & Kalsoom (2022), and Halai & Durrani (2020)
Equity and access	Implementation of Single National Curriculum (SNC) has gaps, disparities in access between different groups in population.	Farooq (2017), and Halai & Durrani (2020)
Higher education and research	Deficits in autonomy, resource allocation, and research culture.	Rind (2024), Hoodbhoy (2020), and Fatima et al. (2020)
Current practices	Outcome based assessment and reform initiatives	Asim et al. (2021), Nousheen et al. (2020), Sain et al. (2024), Zhang & Aslan (2021)
Future pathways	Focus on sustainability. Role of AI in future pedagogies. Integration of ethical values.	Naz et al. (2025), Nousheen et al. (2020), and Zhang & Aslan (2021)

Identification of Gaps

Overall, this SLR highlights historical, structural, and policy dimensions, but several critical gaps (table 3) remain. First, existing research is fragmented across isolated themes, and rigorous research covering multiple aspects is scarce. Most scholarly work is on the legacies of history and discussions on policy frameworks, with limited empirical studies on classroom practices and the effectiveness of reforms. Many studies have identified teacher training as a weakness, but few experimental or longitudinal studies have reported the real impact of teachers' professional development on student achievement. Second, some studies acknowledge issues of inclusion and equity but require deeper exploration of gender, cultural, and minority groups among regional and cultural diversity in Pakistani provinces. Similarly, few studies recognize artificial intelligence and technology as emerging opportunities, but they lack research on scalability, feasibility, and outcomes in diverse Pakistani contexts.

Third, studies on higher education report the expansion of tertiary education but do not provide sufficient insight into employability, research, and alignment of curricula with job market needs. In addition, some studies discuss

policy reforms such as the Single National Curriculum (SNC) and SDG-driven initiatives but do not investigate the ground-level challenges of implementation in different provinces and stakeholder engagement.

Finally, some studies discuss the potential of digital transformation, but none or very few studies target the possibilities of this transformation to ensure equity and inclusiveness, considering resource and class disparities between private and public schools. Therefore, equity-focused research must target the realities associated with marginalized groups. Likewise, policy-oriented research must go beyond implementation frameworks and address values, culture, and local regional resource barriers to balance modernization with local identity for sustainability. Addressing these gaps through innovative and action research will help Pakistan improve its education system with globally relevant trajectories.

Table 6: Gap Analysis

Gap	Description
limited systematic literature review in education	Although there are more studies being done about education in Pakistan, systematic literature reviews (SLRs) are still lacking as there are not enough studies in this area. Mostly, existing studies are fragmented and tend to focus on isolated themes rather than offering a holistic compilation of information.
Overemphasized historical and policy perspectives	There is a substantial proportion of research that examines colonial legacies, policy evolution, and governance challenges, among others. A limited number of studies have provided empirical evidence regarding the effectiveness of classroom practices, pedagogical innovations, or student learning outcomes.
Less focus on effectiveness of teachers training	Studies on teacher education have highlighted a number of deficiencies in the field. There are only a few longitudinal studies or experimental studies evaluating the effectiveness of teacher professional development programs and their impact on student achievement.
Inclusion and equity	These topics underrepresented or insufficiently investigated, inclusion for students with disabilities, and the access to quality education of minority groups, despite urban-rural and socioeconomic disparities.
Insufficient research in technology integration	Some studies recognize AI and digital literacy are recognized as future pathways but empirical studies are very limited to evaluate the feasibility, scalability, and effectiveness of technology integration in a diverse educational context of Pakistan.
Unexplored issues in research in education	Despite reporting of expansion of higher education, there is relatively limited research investigating innovation ecosystems, graduate employability and research culture and innovation in higher education institutions. There is also a gap of regional studies because most of the studies are concentrated in Punjab, with limited evidence from Baluchistan, Gilgit-Baltistan, AJK, and remote rural regions.
Gaps in research on policy implementation	Some studies discuss policies like Single National Curriculum (SNC) and Sustainable Development Goals (SDG)-based are discussed but rarely analyze ground-level implementation challenges and stakeholder perception.
Stakeholder gap	There is a lack of research that included parents, school leaders, employers, policymakers, and students simultaneously, despite the importance of such research.

DISCUSSION

Many important areas of Pakistani education remain underexplored despite growing research. There is a lack of studies that examine what actually happens inside classrooms, rather than historical legacies and policy frameworks. The true impact of teaching practices, reforms, and teacher training programs remains unclear.

Many studies have discussed teacher education, but few examine whether professional development efforts lead to lasting improvements.

There is also a lack of attention to inclusion and equity. Despite some studies addressing gender or regional disparities, there is little research on how these inequalities affect marginalized students, such as those with disabilities. Pakistan's diverse provinces need to understand these experiences if the education system is to be fair and inclusive.

Global trends in technology have not yet been matched by research. Despite being discussed as future opportunities, there is little evidence that these innovations will be effective in different types of schools, especially when resources vary so widely between urban and rural areas.

Research in higher education is mainly focused on institutional growth than curriculum relevance and employability. Similarly, many suited discuss policies such as the Single National Curriculum (SNC) and Sustainable Goals (SDG)-based initiatives but very limited studies has discussed implementation of these initiatives. Therefore, practical and action-oriented research can help to bridge this gap.

This systematic literature review indicates that the challenges faced by Pakistan's education system are not merely operational but deeply embedded in historical, institutional, and socio-economic structures. The evidence suggests that colonial legacies continue to shape educational stratification through disparities in access, language of instruction, and resource allocation. These historical influences have interacted with contemporary governance and policy challenges, creating a complex environment in which educational reforms often struggle to achieve their intended outcomes.

The persistent disconnect between policy formulation and implementation is a central finding across the reviewed studies. While Pakistan has introduced numerous reforms aimed at improving quality, equity, and modernization, the literature consistently indicates uneven execution across provinces and educational sectors. This observation supports broader international debates suggesting that educational transformation depends not only on policy design but also on institutional capacity, stakeholder engagement, and contextual adaptation. Consequently, the effectiveness of education appears to be constrained more by limitations in governance and implementation mechanisms than by lack of policy initiatives.

The review also highlights the strategic importance of teachers in educational reform. Across multiple studies, teacher quality emerges as a critical factor influencing curriculum delivery, student learning outcomes, and the success of reform initiatives. However, professional development efforts often remain disconnected from classroom realities and evolving pedagogical demands. This finding aligns with global evidence emphasizing that sustainable educational improvement requires continuous investment in teacher capacity, reflective practice, and professional learning communities.

Another significant concern is the relationship between equity and educational quality. The literature demonstrates that disparities based on geography, socioeconomic status, and institutional type continue to affect educational opportunities. Rather than representing separate policy concerns, equity and quality appear to be mutually reinforcing dimensions of educational development. Educational reforms that improve quality without addressing access disparities may inadvertently widen existing inequalities, whereas inclusive approaches can contribute simultaneously to educational effectiveness and social cohesion.

The analysis further indicates that emerging innovations such as outcome-based education, sustainability education, and artificial intelligence are gradually reshaping educational discourse in Pakistan. These developments reflect growing alignment with global educational trends and twenty-first-century learning requirements. Nevertheless, their transformative potential depends on adequate infrastructure, teacher readiness, and contextual relevance. Technology should therefore be viewed as an enabling mechanism rather than a standalone solution to systemic educational challenges.

A profound convergence is evident across literature related to methodologies. The presented studies heavily rely on secondary data and policy overviews to explain a background and present gaps within centralized initiatives

like the Single National Curriculum (SNC). Similarly, there is convergence regarding outcome such as presence of colonial legacies, inconsistency in policy implementation, and inefficacy are teacher training. However, divergence about real world utility are there. For example, Technology-focused studies (e.g., Zhang & Aslan, 2021) emphasize on AI and other learning tools for personalized learning as a scalable solution. Conversely, other studies report that implementation of high-tech interventions may not be an advantage without addressing existing resource deficits of public schools. Additionally, outcomes regulated to single national curriculum also split about its viability as vehicle to ensure nationwide social cohesion. Mostly, reviewed studies argue that ignoring realities of language barriers and local resource constraints at provincial level may hinder benefits of SNC.

Overall, the findings suggest that meaningful educational transformation in Pakistan requires an integrated approach that simultaneously addresses governance effectiveness, teacher development, equity, curriculum relevance, and technological innovation. Sustainable progress is most likely when reforms are context-sensitive, evidence-based, and aligned with both local realities and global educational developments. Such an approach can support the creation of a more inclusive, resilient, and future-oriented education system capable of responding to evolving societal and economic needs.

Recommendations for Future Studies

The literature review robustly documents historical influences, governance deficits, inequities, and fragmented reforms and implementation issues in OBE, sustainability, and digital transformation progress. However, fragmented thematic studies, less attention to technology feasibility, and equity remain limited by the scarcity of rigorous impact evaluations, requiring coordinated and wider-scope studies. Addressing these gaps requires research investments in the impact evaluation of teacher training, contextualization of implementation across provinces, and equity-driven analysis to create actionable evidence. Therefore, the study makes the following recommendations.

- Track SNC and OBE reforms at provincial level using mixed methods.
- Implementation of evidence-based models including built-in monitoring and evaluation systems to scale up professional development.
- Disaggregated data-based research to prioritize equity by gender, geography, and disabilities.
- Pilot studies to evaluate cost-benefit and learning outcomes if investment in AI.
- Investigate higher education linkages through industry partnership and entrepreneurship programs and their alignment with employability.
- Classroom-based research with empirical evidence.
- Experimental and quasi-experimental studies on impact evaluation of teacher training.
- Empirical studies on effective AI tools, virtual classrooms, and e-learning platforms comparing public and private schools.
- Detail studies to address inclusiveness issues segregated by gender, rural and urban communities, and income level.
- Research on governance and implementation with insights on ground realities from diverse stakeholders involving students, teachers, and parents.
- Research to explore the ways to integrate sustainable development cultural and values aspects into curriculum to align local entity with global relevance.

CONCLUSION

This systematic literature review presents a comprehensive synthesis of the education system of Pakistan, reflecting a complex interplay between historical inequalities, systemic weaknesses, and evolving opportunities. The review of selected literature indicates trends and patterns of the education system in Pakistan. Some issues are persistent, such as current practices such as OBE, sustainability education, Islamic education reforms, and AI integration, which demonstrate pathways of progress. Literature surveys indicate issues of historical influences, policy implementation, curriculum, and future directions. The most significant evidence is gaps regarding the sufficiency of information, rigor, and empirical evidence. Methodological weaknesses and lack of longitudinal studies merit future research for critical evaluation to ensure long-term impacts of reforms and possible future directions. To create actionable evidence, findings suggest research investments to evaluate teacher training, contextualization of implementation across provinces, and equity-driven analysis.

Theoretically, the paper contributes to the existing body of knowledge and links historical and socio-political perspectives with existing challenges of governance, curriculum, and pedagogies through an interpretivist standpoint. It consolidates themes of existing scholarly work and fragmented research to provide multidimensional understanding of future research. Furthermore, findings highlighting educational transformation in Pakistan must be understood in alignment with scalabilities and considerations of diversities of the overall educational landscape. Practically, the study provides valuable insights for policymakers, educational planners, and institutional leadership in designing sensitive context reforms integrating local culture with global competencies. Furthermore, practitioners can employ these insights to design interventions in curriculum modernization and promotion of equity. Overall, the study reinforces that educational reforms in Pakistan must address equity and quality simultaneously to strengthen the governance system, integrating sustainability and digital transformation in collaboration with the private sector as well for a future-ready educational system. Some suggested research questions for future researches are:

- What professional development models in Pakistan improve teacher performance?
- How to assess success of Single National Curriculum (SNC) work in different provinces?
- How does AI-assisted tutoring and teacher training impact equity and cost-effectiveness?
- What is the impact of higher-education reforms on graduate employability?

There are limitations regarding interpretation of outcomes of this study. First, the study used one time cross-sectional data without offering causal inferences. Second, the study used self-reported data, therefore, effect of social desirability bias may affect outcomes. Third, generalizability of the study may be limited because few variables were selected and the number of studies selected lacks diversity of perspectives related to issue under investigation. Future studies may include diverse perspectives through a longitudinal study to gain deeper understanding of phenomenon.

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