



Teacher Education in Pakistan: Issues, Reforms, and Policy Implications

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Abstract

Teacher education plays a central role in improving the quality of education in Pakistan, yet the sector continues to face persistent structural and policy challenges. This study examines the major issues confronting teacher education in Pakistan, including outdated curricula, limited practical training, inadequate professional development, and weak institutional capacity. It also reviews recent reforms aimed at improving teacher preparation, such as curriculum standardization, accreditation mechanisms, and the introduction of continuous professional development frameworks. Despite these initiatives, gaps remain between policy formulation and effective implementation, largely due to governance constraints, resource limitations, and uneven provincial capacities. The study further analyzes the policy implications of these challenges, emphasizing the need for coherent coordination between federal and provincial authorities, strengthened teacher training institutions, and evidence-based policy design. The paper concludes that sustainable improvement in teacher education requires long-term policy commitment, effective monitoring, and alignment with national education goals to enhance teaching quality and learning outcomes in Pakistan.

Keywords: Teacher, education, gap, Policy, Pakistan

Introduction

Teacher education is widely recognized as a fundamental pillar for improving the quality of education and promoting sustainable national development. Teachers play a central role in shaping the intellectual, social, and moral development of students, and their professional competence directly influences learning outcomes in classrooms. In developing countries such as Pakistan, where educational challenges are significant, the preparation and training of teachers become even more crucial. Effective teacher education equips educators with the pedagogical skills, subject knowledge, and professional attitudes necessary to foster critical thinking, creativity, and lifelong learning among students. Consequently, strengthening teacher education systems has become a priority in educational reforms worldwide (Tahira, et, al, 2029).

In Pakistan, teacher education has undergone several transformations since the country's independence in 1947. Initially, teacher training programs focused mainly on basic pedagogical skills and short-term certification courses offered by teacher training colleges. These programs often emphasized theoretical instruction with limited opportunities for practical teaching experience. Over time, policymakers recognized the need to reform teacher education to meet the evolving demands of modern education systems. Various national education policies, including the National Education Policy (1998–2010)



and the National Education Policy (2009), highlighted the importance of improving teacher qualifications, upgrading teacher training institutions, and promoting continuous professional development for educators (Government of Pakistan, 2009). Despite these initiatives, the teacher education system continues to face numerous structural and institutional challenges that affect the quality of teaching and learning in the country. One of the major concerns in Pakistan's education sector is the shortage of professionally trained teachers. Many educators enter the teaching profession without adequate pedagogical preparation or sufficient subject knowledge. This situation is partly due to weak teacher training frameworks and insufficient regulation of teacher education institutions. In addition, many teacher training programs rely on outdated curricula that do not adequately address modern teaching methodologies, student-centered learning approaches, and the integration of technology in education. As a result, teachers often struggle to adapt to contemporary educational requirements and to effectively engage students in the learning process (Ali & Hamid, 2020).

The significant issue affecting teacher education in Pakistan is the limited financial investment in the education sector. Pakistan's expenditure on education has historically remained below international benchmarks, which has constrained the development of teacher training institutions and professional development programs. Insufficient funding affects the availability of modern facilities, instructional resources, and training opportunities for teachers. Moreover, many teacher education institutions face shortages of qualified faculty members and inadequate research capacity, further limiting their ability to prepare teachers effectively (UNESCO, 2015). Without sufficient investment in teacher education, it becomes difficult to ensure high-quality teaching standards across the country (Qureshi, 2022).

The Institutional and governance challenges also contribute to the weaknesses in Pakistan's teacher education system. Administrative inefficiencies, political interference, and weak accountability mechanisms often hinder the effective implementation of educational reforms. In some cases, teacher recruitment and promotion processes are influenced by political considerations rather than merit-based criteria. Such practices undermine professionalism within the teaching profession and reduce motivation among educators. Additionally, disparities between urban and rural areas create unequal access to qualified teachers and training opportunities, which further exacerbates educational inequalities across regions. In response to these challenges, the Government of Pakistan, in collaboration with national and international organizations, has introduced several reforms aimed at improving teacher education. One significant initiative was the introduction of four-year Bachelor of Education (B.Ed.) and two-year Associate Degree in Education (ADE) programs designed to enhance teacher qualifications and align teacher training with international standards. The Higher Education Commission (HEC) has also implemented accreditation and quality assurance mechanisms for teacher education programs to ensure consistency and professionalism in teacher training institutions. These reforms seek to modernize teacher education, promote professional development, and strengthen the overall capacity of the teaching workforce in Pakistan (Ali, 2011).

Despite these reform efforts, substantial gaps remain between policy formulation and effective implementation. Many teacher education reforms face challenges



related to limited resources, insufficient institutional capacity, and lack of coordination among educational authorities. Addressing these issues requires comprehensive policy strategies that focus on improving teacher training curricula, strengthening institutional governance, and expanding professional development opportunities for teachers. Enhancing teacher education is essential not only for improving the quality of education but also for achieving broader national objectives such as economic growth, social cohesion, and human capital development (Chang, 2014).

Therefore, examining the issues, reforms, and policy implications of teacher education in Pakistan is crucial for understanding the strengths and weaknesses of the current system. By identifying existing challenges and evaluating ongoing reform initiatives, policymakers and educational stakeholders can develop more effective strategies to strengthen teacher education and improve the overall quality of education in Pakistan.

Literature Review

Teacher education has been widely recognized as a critical factor in improving the quality of education systems around the world. Researchers emphasize that teachers are the most influential school-based factor affecting student achievement and educational development. According to Darling-Hammond (2017), well-prepared teachers contribute significantly to improving students' academic performance, critical thinking skills, and social development. In developing countries, teacher education is particularly important because it addresses systemic challenges such as low literacy rates, weak educational infrastructure, and limited instructional resources. In Pakistan, teacher education has been the subject of considerable academic discussion due to persistent concerns regarding the quality of teacher preparation and professional development. The historical development of teacher education in Pakistan reflects the broader evolution of the country's education system. Since independence in 1947, Pakistan has established several teacher training institutions to prepare educators for primary and secondary schools. Initially, teacher training programs were mainly certificate-based courses such as Primary Teaching Certificate (PTC) and Certificate of Teaching (CT), which focused on basic pedagogical skills and classroom management. However, critics argued that these programs were insufficient to prepare teachers for modern educational challenges. According to Rizvi and Elliott (2007), early teacher education programs in Pakistan lacked rigorous academic standards and practical training components, which limited their effectiveness in developing competent teachers.

During the past two decades, educational reforms in Pakistan have emphasized improving teacher qualifications and professional standards. The introduction of new teacher education programs such as the Associate Degree in Education (ADE) and the four-year Bachelor of Education (B.Ed. Hons) represents a significant shift toward professionalizing teacher training. These programs aim to replace outdated certification courses with degree-based training aligned with international standards. The reforms were supported by the Higher Education Commission (HEC) and international organizations such as the United States Agency for International Development (USAID). According to HEC (2017), these reforms were designed to strengthen subject knowledge, pedagogical competence, and research skills among prospective teachers. Despite these improvements, numerous studies highlight ongoing challenges



within the teacher education system in Pakistan. One of the most frequently cited issues is the gap between theoretical knowledge and practical teaching skills. Many teacher training institutions focus heavily on theoretical instruction, while practical classroom experience remains limited. Research conducted by Akram and Zepeda (2015) found that student teachers often receive insufficient opportunities for classroom observation, teaching practice, and mentoring during their training programs. This lack of practical exposure reduces teachers' ability to apply pedagogical theories effectively in real classroom environments.

The major concern identified in the literature is the quality of teacher training institutions. Pakistan has a large number of public and private institutions offering teacher education programs; however, the quality of these institutions varies significantly. According to UNESCO (2015), many teacher education institutions lack qualified faculty, modern facilities, and adequate teaching resources. Furthermore, weak regulatory mechanisms allow some institutions to operate without maintaining high academic standards. These institutional weaknesses undermine the effectiveness of teacher training programs and contribute to inconsistencies in teacher preparation across the country. The financial constraints also represent a significant barrier to improving teacher education in Pakistan. Education expenditure in Pakistan has historically remained below international benchmarks, limiting the government's capacity to invest in teacher development programs and training infrastructure. According to the World Bank (2018), insufficient funding affects the availability of training materials, technology integration, and professional development opportunities for teachers. As a result, many educators lack access to modern teaching tools and updated pedagogical knowledge required for effective classroom instruction.

In addition to financial limitations, governance and administrative challenges further complicate teacher education reforms. Political interference in teacher recruitment, transfers, and promotions has been widely documented in the literature. According to Bari (2018), such practices weaken merit-based systems and reduce the overall professionalism of the teaching workforce. Weak accountability mechanisms also contribute to issues such as teacher absenteeism, lack of motivation, and poor instructional performance in schools. Strengthening governance structures and ensuring transparent recruitment processes are therefore essential for improving teacher education outcomes. The literature also highlights the importance of continuous professional development (CPD) for teachers. Initial teacher training alone is insufficient to ensure long-term teaching effectiveness, as educational practices and curriculum requirements evolve over time. Continuous professional development programs provide teachers with opportunities to update their knowledge, improve pedagogical skills, and adapt to new educational technologies. According to Avalos (2011), CPD programs play a crucial role in enhancing teacher competence and promoting lifelong learning among educators. In Pakistan, several provincial governments and educational organizations have introduced in-service training programs; however, the effectiveness of these programs remains uneven due to inconsistent implementation and limited resources.

Another area of concern in teacher education research is the integration of technology in teaching and learning. The rapid advancement of digital technologies has transformed educational practices worldwide, requiring teachers to develop new competencies in information and communication



technologies (ICT). However, studies indicate that many teachers in Pakistan lack adequate training in the use of digital tools for classroom instruction. According to Hussain and Mahmood (2019), insufficient ICT training limits teachers' ability to incorporate technology-based learning strategies, which are increasingly important in modern education systems.

Regional disparities also affect the quality of teacher education in Pakistan. Urban areas generally have better access to qualified teachers, training institutions, and educational resources compared to rural areas. In remote regions, schools often face severe shortages of trained teachers and limited professional development opportunities. These disparities contribute to unequal educational outcomes across provinces and districts. Research by Andrabi, Das, and Khwaja (2013) suggests that addressing regional inequalities in teacher training and recruitment is essential for improving overall educational quality in Pakistan.

Gender disparities represent another significant challenge within the teacher education system. Although female participation in teacher education has increased in recent years, cultural barriers and limited educational opportunities continue to restrict women's access to training programs in certain regions. According to UNESCO (2015), increasing the number of female teachers is particularly important for improving girls' education, especially in rural and conservative communities where female teachers are often preferred for cultural reasons.

Recent policy initiatives have attempted to address many of these issues by introducing standardized teacher education frameworks and accreditation systems. The National Professional Standards for Teachers in Pakistan provide guidelines for teacher competencies, ethical practices, and professional responsibilities. These standards aim to ensure consistency in teacher preparation programs and promote accountability among teacher education institutions. According to the Government of Pakistan (2009), implementing professional standards and strengthening quality assurance mechanisms are essential steps toward improving teacher education. However, scholars argue that policy reforms alone are insufficient without effective implementation strategies. Many educational policies in Pakistan face challenges related to limited institutional capacity, lack of coordination among stakeholders, and inadequate monitoring mechanisms. Rizvi and Elliott (2007) emphasize that successful teacher education reforms require strong political commitment, sustained financial investment, and active collaboration between government agencies, universities, and teacher training institutions.

Overall, the existing literature indicates that teacher education in Pakistan has experienced significant reforms but continues to face structural, institutional, and policy-related challenges. Addressing these issues requires comprehensive strategies that focus on improving teacher training curricula, strengthening institutional governance, expanding professional development opportunities, and increasing investment in education. By enhancing teacher education systems, Pakistan can improve the quality of teaching and learning, which is essential for achieving broader national development goals.

Historical Development of Teacher Education in Pakistan

The historical development of teacher education in Pakistan reflects the broader evolution of the country's education system since independence in 1947. In the



early years after independence, Pakistan inherited a limited number of teacher training institutions from the British colonial system. These institutions primarily focused on producing teachers for primary schools through short-term certificate programs. Teacher training during this period emphasized traditional teaching methods and basic classroom management rather than modern pedagogical approaches. As the demand for education increased rapidly, the government prioritized expanding the number of teachers rather than improving the quality of teacher education, which created long-term challenges for the education system (Fazal, 2014).

During the 1950s and 1960s, Pakistan began to institutionalize teacher education through the establishment of teacher training colleges and education departments within universities. Programs such as the Primary Teaching Certificate (PTC) and Certificate in Teaching (CT) were introduced to train teachers for primary and secondary schools. These programs helped expand the supply of teachers across the country, but they were often criticized for their limited duration and inadequate focus on professional teaching skills. As a result, many teachers entered the profession with insufficient preparation for effective classroom teaching. In the 1970s and 1980s, teacher education expanded further with the introduction of professional degree programs such as the Bachelor of Education (B.Ed.) and Master of Education (M.Ed.). Universities and teacher training colleges started offering these programs to improve teacher qualifications and professional standards. However, teacher education during this period still relied heavily on theoretical instruction and rote learning, with limited emphasis on classroom practice and research-based teaching methods. Consequently, the quality of teacher preparation remained a major concern for policymakers and education experts (Mughal, 2021).

A significant shift occurred in the 1990s when the Government of Pakistan recognized the importance of improving teacher quality to enhance the overall education system. In 1993, the government launched a Teacher Training Project with the support of the Asian Development Bank to expand teacher training opportunities and improve institutional capacity. This initiative led to the establishment of Provincial Institutes for Teacher Education (PITEs) and other professional development institutions aimed at strengthening teacher training programs and improving educational management across the provinces. In the early 2000s, teacher education reforms gained further momentum through collaboration between the Government of Pakistan, the Higher Education Commission (HEC), and international organizations such as USAID. One of the most important reforms was the introduction of modern teacher education programs designed to replace traditional certificate courses. The Associate Degree in Education (ADE) and the four-year Bachelor of Education (B.Ed. Honours) programs were introduced to align teacher education in Pakistan with international standards and to ensure that teachers possess strong pedagogical knowledge and subject expertise (Hoodbhoy, 2014).

In recent years, teacher education in Pakistan has continued to evolve with the introduction of professional standards, accreditation systems, and curriculum reforms. Institutions such as the Higher Education Commission and the National Accreditation Council for Teacher Education have worked to improve the quality and accountability of teacher education programs. Although significant progress has been made, challenges such as limited resources, uneven implementation of reforms, and gaps between policy and practice remain key



Major Issues in Teacher Education in Pakistan

Inadequate Teacher Training

Inadequate teacher training is one of the most significant challenges affecting the quality of education in Pakistan. Many teachers enter the profession without receiving comprehensive pedagogical training or sufficient practical classroom experience. Historically, teacher education programs in Pakistan relied on short-term certification courses such as the Primary Teaching Certificate (PTC) and Certificate of Teaching (CT), which focused mainly on theoretical knowledge rather than practical teaching skills. Although reforms have introduced degree-based programs like the Associate Degree in Education (ADE) and Bachelor of Education (B.Ed. Hons), several teacher training institutions still struggle to provide high-quality training due to outdated curricula, limited instructional resources, and insufficient opportunities for teaching practice. As a result, many teachers lack the necessary competencies to implement student-centered learning methods, classroom management techniques, and modern assessment strategies (Rizvi, 2022).

Another critical issue is the limited availability of continuous professional development opportunities for in-service teachers. Effective teacher education requires ongoing training that enables teachers to update their pedagogical knowledge and adapt to changing educational demands. However, in Pakistan, many professional development programs are irregular, poorly coordinated, or lack adequate funding and institutional support. Additionally, the integration of modern educational technologies and innovative teaching methodologies is often missing in teacher training programs. Consequently, teachers may find it difficult to incorporate digital tools and interactive teaching strategies into their classrooms, which affects the overall quality of learning outcomes. Addressing these shortcomings requires comprehensive reforms that strengthen teacher training curricula, enhance institutional capacity, and expand professional development opportunities for educators (Malik, et, al, 2018).

Outdated Curriculum and Teaching Methods

One of the major challenges in teacher education in Pakistan is the persistence of outdated curricula and traditional teaching methods in many teacher training institutions. Despite the rapid evolution of educational theories and technological advancements in teaching and learning, many teacher education programs continue to rely on conventional approaches that emphasize rote memorization and lecture-based instruction. These outdated curricula often fail to incorporate modern pedagogical strategies such as critical thinking, problem-solving, collaborative learning, and the integration of information and communication technologies (ICT) in the classroom. As a result, teachers trained under such systems may struggle to create engaging and student-centered learning environments that are essential for improving educational outcomes. Scholars argue that the lack of curriculum reform in teacher education programs limits teachers' ability to respond effectively to the diverse learning needs of students and to adopt innovative instructional practices (Mahmood, 2014).

Furthermore, the limited emphasis on practical training and modern teaching methodologies in teacher education institutions contributes to the continued use of outdated instructional practices in schools. Many teacher



training programs focus primarily on theoretical knowledge without providing adequate opportunities for teaching practice, classroom observation, or mentoring. Consequently, newly trained teachers often rely on traditional teaching techniques that prioritize textbook learning rather than interactive and participatory methods. In addition, the integration of digital technologies and modern assessment strategies remains insufficient in many teacher education programs across Pakistan. Experts emphasize that revising teacher education curricula, introducing innovative pedagogical approaches, and strengthening training in educational technology are essential steps for modernizing the education system and improving the quality of teaching in the country (Akram & Zepeda, 2015).

Lack of Professional Development

Continuous professional development (CPD) is essential for improving teachers' skills, knowledge, and instructional practices throughout their careers. Effective CPD enables teachers to stay updated with modern pedagogical approaches, curriculum changes, and emerging educational technologies. In many successful education systems, professional development programs are designed to provide teachers with ongoing training, mentoring, and collaborative learning opportunities. However, in Pakistan, professional development opportunities for teachers remain limited and often lack systematic planning and effective implementation. Many teachers receive minimal in-service training after their initial qualification, which restricts their ability to adapt to evolving educational demands and innovative teaching strategies (Zia, 2022).

Furthermore, existing in-service training programs in Pakistan are frequently criticized for being short-term, poorly organized, and lacking practical relevance to classroom teaching. In many cases, training workshops are conducted without proper follow-up support, monitoring, or evaluation, which reduces their long-term impact on teachers' professional growth. Limited financial resources, weak institutional coordination, and inadequate training facilities also hinder the effectiveness of professional development initiatives. As a result, teachers may struggle to integrate modern teaching techniques, student-centered learning approaches, and digital technologies into their classrooms. Strengthening continuous professional development programs, establishing mentoring systems, and ensuring regular training opportunities are therefore essential for enhancing teacher competence and improving the overall quality of education in Pakistan (Hunzai, 2009).

Weak Institutional Capacity

Weak institutional capacity remains a significant challenge for teacher education in Pakistan. Many teacher training institutions, particularly in the public sector, face shortages of qualified faculty members, modern infrastructure, and adequate academic resources. These limitations affect the quality of teacher preparation programs and reduce the effectiveness of professional training. In several universities and teacher training colleges, faculty members often lack advanced research experience and updated pedagogical knowledge, which restricts their ability to deliver high-quality instruction and guide prospective teachers effectively. Additionally, inadequate facilities such as poorly equipped classrooms, limited libraries, and insufficient access to educational technology



further constrain the teaching and learning process within these institutions (UNESCO, 2015).

Moreover, weak institutional capacity also limits the ability of teacher education institutions to conduct research, develop innovative training programs, and respond to emerging educational challenges. Many institutions lack proper funding and administrative support for academic research and curriculum development, which are essential for improving teacher education standards. The absence of strong quality assurance mechanisms and institutional monitoring further contributes to inconsistencies in teacher training programs across the country. Strengthening institutional capacity through increased investment, faculty development programs, improved infrastructure, and effective governance is therefore essential for enhancing the quality of teacher education in Pakistan and ensuring that future teachers receive adequate preparation for modern educational environments (Zafar, et.al, 2021).

Policy Implementation Gaps

One of the major challenges facing teacher education in Pakistan is the gap between policy formulation and effective implementation. Over the years, the government has introduced several education policies and reform initiatives aimed at improving teacher training, professional standards, and the overall quality of education. For example, policies such as the National Education Policy (2009) emphasized improving teacher qualifications, strengthening teacher education institutions, and promoting continuous professional development. However, despite these well-articulated policy objectives, their implementation has often been inconsistent and uneven across different regions of the country. Limited institutional capacity, bureaucratic inefficiencies, and lack of coordination among educational authorities frequently hinder the effective execution of these reforms. Furthermore, inadequate monitoring and accountability mechanisms contribute to the persistent gap between policy goals and practical outcomes. Many education reforms are introduced without sufficient planning for long-term implementation, resource allocation, or evaluation processes. As a result, teacher education programs often fail to achieve their intended impact on teaching quality and professional development. Scholars argue that weak governance structures, political interference, and insufficient financial investment further complicate the implementation of education policies in Pakistan. Addressing these challenges requires stronger institutional frameworks, transparent monitoring systems, and sustained political commitment to ensure that teacher education policies are effectively translated into practice at the institutional and classroom levels (Saeed, et, al, 2013).

Reforms in Teacher Education

Introduction of ADE and B.Ed. (Hons) Programs

In response to the longstanding challenges in teacher education, Pakistan introduced degree-based teacher education programs such as the Associate Degree in Education (ADE) and the Bachelor of Education (B.Ed. Hons). These programs were designed to replace traditional short-term certificate courses, such as the Primary Teaching Certificate (PTC) and Certificate of Teaching (CT), which were criticized for their limited focus on practical teaching skills and modern pedagogical approaches. The ADE is typically a two-year program aimed



at preparing teachers for primary and middle school levels, while the B.Ed. (Hons) is a four-year program that provides in-depth training for secondary school teachers and emphasizes both subject expertise and pedagogical competence. These degree programs are aligned with international standards and seek to professionalize teaching in Pakistan by providing comprehensive academic preparation and structured practicum experiences (Memon, et, al, 2021)

The introduction of ADE and B.Ed. (Hons) programs also aims to address the mismatch between teacher competencies and the evolving demands of modern classrooms. These programs combine theoretical coursework in educational psychology, curriculum development, and teaching methodology with practical teaching experiences through supervised classroom practice. By integrating research-based teaching strategies and student-centered learning approaches, the programs equip teachers with the skills required to implement innovative instructional practices. Additionally, the Higher Education Commission (HEC) has established accreditation and quality assurance frameworks to ensure consistency and standardization across teacher education institutions offering these degrees. Research indicates that such reforms have the potential to improve teacher preparedness, enhance classroom effectiveness, and elevate the professional status of teachers in Pakistan (Akram & Zepeda, 2015).

Accreditation and Quality Assurance

The establishment of the National Accreditation Council for Teacher Education (NACTE) has been a pivotal step in improving the quality and accountability of teacher education programs in Pakistan. NACTE is responsible for evaluating and accrediting teacher education institutions to ensure they meet nationally defined standards for curriculum design, faculty qualifications, infrastructure, and learning outcomes. Accreditation by NACTE provides a formal mechanism to monitor institutional performance, identify areas for improvement, and maintain consistency across different programs and regions. By establishing clear benchmarks, the council aims to promote professionalism in teacher education and ensure that graduates are adequately prepared to meet the demands of modern classrooms (Idris, 2021).

Accreditation and quality assurance mechanisms also emphasize the continuous improvement of teacher education programs through periodic reviews, institutional audits, and performance-based assessments. These processes encourage institutions to update curricula, adopt innovative teaching methods, and provide professional development opportunities for faculty members. Furthermore, accreditation ensures that teacher education programs integrate both theoretical and practical components, such as supervised teaching practice and research-based coursework, thereby enhancing the overall effectiveness of teacher preparation. Scholars argue that such quality assurance frameworks are essential not only for maintaining high educational standards but also for elevating the professional status of teachers, improving student learning outcomes, and fostering long-term educational reform in Pakistan (Darling-Hammond, 2017).

Professional Development Programs

Professional development programs are essential for enhancing the knowledge, skills, and effectiveness of teachers throughout their careers. In Pakistan, the



government and educational organizations have increasingly recognized the importance of continuous professional development (CPD) as a means to address gaps in teacher competencies and improve overall educational quality. CPD programs aim to equip in-service teachers with updated pedagogical skills, subject knowledge, classroom management techniques, and the ability to integrate modern educational technologies into teaching. These programs often include workshops, seminars, mentoring, peer learning, and training in curriculum innovation, assessment strategies, and ICT-based instruction (Avalos, 2011).

Despite their importance, professional development programs in Pakistan face several challenges. Many initiatives are short-term, sporadic, or lack practical relevance, limiting their long-term impact on teaching quality. In some cases, training sessions are conducted without follow-up support, mentoring, or mechanisms to monitor teacher progress. Additionally, limited financial resources, inadequate institutional capacity, and uneven access to training opportunities—especially in rural and remote areas further constrain the effectiveness of CPD program. Research suggests that sustained investment in professional development, structured in-service training, and systematic monitoring are crucial to strengthen teacher competencies, promote lifelong learning, and enhance the overall quality of education in Pakistan. Well-designed CPD programs also contribute to teacher motivation, job satisfaction, and professional identity, which are critical for long-term educational reform.

Curriculum Reforms

Curriculum reforms in Pakistan have historically been linked to broader efforts to improve the quality of education and align teaching practices with modern pedagogical standards. One of the most significant developments in recent years is the introduction of the Single National Curriculum (SNC). The SNC aims to unify the curriculum across federal and provincial levels, ensuring consistency in educational content and standards for all students in Pakistan. A central focus of this reform is to reduce disparities in learning outcomes caused by regional and institutional differences, which have long affected public and private schools differently. The SNC emphasizes concept-based learning, problem-solving, and critical thinking skills, moving away from the traditional approach of rote memorization that has dominated classrooms for decades. This shift requires teachers to adopt innovative teaching methods that encourage student engagement, creativity, and analytical thinking. For teachers accustomed to lecture-based instruction, this transition represents a significant pedagogical challenge, highlighting the critical need for comprehensive professional training and capacity-building programs (Shah, 2025).

Teacher preparedness is therefore central to the success of curriculum reforms. Studies have shown that without well-trained teachers capable of implementing new teaching strategies, curriculum reforms are unlikely to produce the desired improvement in student learning outcomes. Professional development initiatives, including workshops, in-service training, and continuous mentoring, are essential to equip teachers with the skills needed to apply the SNC effectively in classrooms. In addition to pedagogical changes, the SNC also emphasizes integration of modern assessment techniques. Teachers are expected to design evaluations that test understanding and analytical ability rather than mere memorization. This change requires substantial training in



assessment design and classroom management, reinforcing the importance of teacher education in the curriculum reform process (Ydesen, 2023).

The curriculum reform encourages the use of educational technology as a tool for interactive learning. Teachers need to be proficient in digital resources, multimedia teaching aids, and online learning platforms to engage students effectively. This integration of technology further underscores the need for sustained professional development programs, particularly in regions with limited access to training facilities (Mustafa et al., 2025).

General, the introduction of the SNC has not only standardized content across the country but also highlighted the interdependence between curriculum quality and teacher competence. Effective implementation of these reforms hinges on a robust teacher education framework that provides continuous support, supervision, and evaluation to ensure that pedagogical practices align with modern educational goals.

Policy Implications

The challenges and reforms in teacher education in Pakistan carry significant policy implications for the country's education system. One of the primary implications is the need for stronger alignment between policy formulation and implementation. While Pakistan has developed comprehensive education policies and introduced reforms such as the ADE and B.Ed. (Hons) programs, gaps remain in translating these policies into effective practice at institutional and classroom levels. Policymakers must focus on designing implementation strategies that include clear guidelines, resource allocation, accountability mechanisms, and monitoring frameworks to ensure that teacher education policies achieve their intended outcomes. Another critical policy implication is the necessity of investing in teacher education infrastructure and human resources. Strengthening institutional capacity through adequate funding, qualified faculty recruitment, modern facilities, and research support is essential for delivering high-quality teacher training. Policies should also prioritize continuous professional development programs, ensuring that in-service teachers have access to ongoing training in modern pedagogical practices, curriculum innovation, and digital learning tools. By institutionalizing structured professional development and mentoring programs, policymakers can enhance teacher effectiveness, motivation, and retention (Aziza, et, al, 2022)

The regional and gender disparities in teacher education requires targeted policy interventions. Ensuring equitable access to teacher training programs in rural and remote areas, and promoting the recruitment and professional development of female teachers, is crucial for improving educational outcomes across diverse socio-cultural contexts. Policies should also emphasize curriculum reform, integration of ICT in teacher education, and adoption of student-centered pedagogies to ensure that teachers are equipped to meet the challenges of twenty-first-century classrooms. Overall, these policy implications highlight the importance of a comprehensive and systemic approach to teacher education reforms. By aligning policy objectives with institutional capacity, professional development, and equitable access, Pakistan can enhance the quality of its teaching workforce, improve learning outcomes, and achieve broader educational and socio-economic development goals (Sain, 2023).



Conclusion

Teacher education in Pakistan represents a cornerstone for improving the quality of education and ensuring sustainable socio-economic development. The role of teachers is pivotal in shaping the intellectual, social, and moral development of students. Effective teacher preparation contributes not only to student learning outcomes but also to the broader objectives of national development, including human capital formation and social equity. However, despite multiple reforms and policy initiatives, Pakistan's teacher education system continues to face significant structural, institutional, and operational challenges that hinder its capacity to produce well-prepared and professional educators.

One of the most pressing issues in teacher education is the inadequacy of initial teacher training. Historically, teacher preparation programs such as the Primary Teaching Certificate (PTC) and Certificate of Teaching (CT) emphasized theoretical knowledge over practical classroom skills. Even with the introduction of degree-based programs like the Associate Degree in Education (ADE) and Bachelor of Education (B.Ed. Hons), many training institutions struggle to provide comprehensive pedagogical and practical training. The gap between theoretical instruction and classroom practice limits teachers' ability to apply modern student-centered pedagogical methods, employ innovative assessment techniques, and manage classrooms effectively. Without addressing these gaps, teacher education cannot adequately meet the challenges of contemporary education in Pakistan.

Another critical concern is the prevalence of outdated curricula and traditional teaching methodologies. Many teacher education programs continue to rely on rote memorization and lecture-based instruction rather than promoting critical thinking, collaborative learning, and digital literacy skills. This issue is compounded by weak integration of information and communication technologies (ICT) in teacher training programs, which prevents teachers from incorporating digital tools into classroom instruction. Scholars emphasize that curriculum modernization and the adoption of innovative pedagogical practices are essential for preparing teachers capable of fostering active and participatory learning environments.

The Professional development or the lack thereof also remains a significant challenge. Continuous professional development (CPD) is crucial for enabling teachers to update their skills, adopt new teaching strategies, and integrate educational technologies into their practice. In Pakistan, however, professional development programs are often irregular, poorly coordinated, and inadequately resourced. Many in-service teachers lack access to meaningful training, mentoring, or follow-up support, which limits their ability to respond to evolving classroom demands. Strengthening CPD programs and institutionalizing structured in-service training are vital to improving teacher competence and ensuring long-term professional growth.

Institutional weaknesses further constrain teacher education in Pakistan. Many universities and teacher training colleges lack qualified faculty, adequate infrastructure, and research resources, which limits their ability to deliver high-quality teacher education programs. Weak institutional capacity affects curriculum development, teaching quality, and program monitoring. Without substantial investment in faculty development, infrastructure, and institutional governance, teacher education institutions cannot provide the level of training required to meet modern educational standards.



Policy implementation gaps also continue to undermine reforms in teacher education. While Pakistan has developed multiple education policies and reform strategies aimed at enhancing teacher qualifications and professional standards, the translation of these policies into practice remains inconsistent. Weak monitoring, political interference, and limited coordination among educational authorities have contributed to a significant disconnect between policy objectives and outcomes in schools and teacher training institutions. Addressing these implementation gaps requires clear guidelines, resource allocation, accountability mechanisms, and effective evaluation processes to ensure that reforms achieve their intended goals.

Reforms such as the introduction of ADE and B.Ed. (Hons) programs and the establishment of the National Accreditation Council for Teacher Education (NACTE) have shown promise in improving teacher preparation standards. These initiatives provide structured training, professional recognition, and quality assurance mechanisms that align teacher education with international standards. Accreditation ensures that institutions meet national requirements for curriculum design, faculty qualifications, and learning outcomes, contributing to the professionalization of teaching and the overall enhancement of educational quality. However, their effectiveness depends on sustained implementation, adequate funding, and continuous institutional support.

Professional development programs also play a critical role in teacher reform. Structured CPD initiatives provide opportunities for teachers to engage in lifelong learning, develop modern pedagogical skills, and incorporate ICT-based instruction. When effectively implemented, these programs increase teacher motivation, job satisfaction, and classroom effectiveness, leading to improved student learning outcomes. To maximize their impact, professional development programs must be well-planned, adequately funded, and continuously monitored to address the diverse needs of teachers across different regions and educational contexts.

The Policy implications arising from these challenges and reforms emphasize the need for a systemic and integrated approach to teacher education. Policymakers must focus on improving institutional capacity, enhancing professional development opportunities, modernizing curricula, and ensuring equitable access to teacher training programs across rural and urban areas. Additionally, policies must address gender disparities in teacher education by promoting the recruitment, training, and professional growth of female teachers, especially in regions where cultural constraints limit girls' access to education. Strengthening governance, accountability, and resource allocation is essential for bridging the gap between policy objectives and practical outcomes.

In conclusion, teacher education in Pakistan is at a critical juncture. While significant reforms have been introduced to professionalize teaching and improve educational quality, persistent challenges such as inadequate teacher training, outdated curricula, weak institutional capacity, limited professional development, and policy implementation gaps continue to hinder progress. Addressing these challenges requires comprehensive strategies that combine curriculum modernization, institutional strengthening, effective professional development, and targeted policy interventions. By investing in teacher education as a strategic priority, Pakistan can develop a competent, motivated, and professional teaching workforce capable of meeting the demands of twenty-first-century education. Such reforms will not only improve student learning



outcomes but also contribute to broader national objectives, including social equity, economic development, and human capital formation. The sustained commitment of policymakers, educational institutions, and stakeholders is essential to achieve these transformative outcomes in Pakistan's education system.

Future Policy Recommendations for Teacher Education in Pakistan

• Strengthen Teacher Training and Curriculum Modernization

Future policies should focus on revising teacher education curricula to integrate modern pedagogical methods, critical thinking, problem-solving, and ICT-based instruction. Programs like ADE and B.Ed. (Hons) should emphasize both theory and practical classroom experience to better prepare teachers for contemporary educational challenges.

• Expand and Institutionalize Continuous Professional Development (CPD)

Policies must institutionalize structured in-service training and mentoring programs for teachers. Continuous professional development should be mandatory, regularly monitored, and accessible to teachers in both urban and rural areas, ensuring they can update their skills and adopt innovative teaching methods throughout their careers.

• Enhance Institutional Capacity and Infrastructure

Teacher education institutions need investment in qualified faculty, modern facilities, research resources, and technology infrastructure. Policies should allocate sufficient funding to strengthen institutional capacity, improve teacher preparation programs, and support evidence-based research on education and pedagogy.

• Implement Strong Quality Assurance and Accreditation Mechanisms

Future policies should expand the role of NACTE and other accreditation bodies to enforce consistent quality standards across teacher education institutions. Regular audits, accreditation reviews, and standardized evaluation mechanisms can ensure that institutions maintain curriculum quality, qualified faculty, and effective learning outcomes.

• Promote Equity and Inclusion in Teacher Education

Policies should address regional and gender disparities in teacher training by providing incentives for qualified teachers to serve in rural or underserved areas and promoting female teacher recruitment and professional growth. Equity-focused policies will help ensure all students, regardless of location or gender, have access to high-quality teachers.

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