



Critical Thinking in the Classroom: Challenges and Prospects of Curriculum Reform in Pakistan

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Abstract

Critical thinking is widely recognized as a fundamental skill for meaningful learning, innovation, and active citizenship in the 21st century. However, Pakistan's education system continues to rely heavily on rote memorization and teacher-centered pedagogy, limiting students' ability to engage in analytical reasoning and problem-solving. This study critically examines the challenges and prospects of integrating critical thinking into classroom practices through curriculum reform in Pakistan. Drawing upon educational policy documents, curriculum frameworks, and recent empirical studies, the research highlights systemic barriers such as outdated syllabi, examination-oriented teaching, insufficient teacher training, and a lack of supportive learning environments. It also explores emerging opportunities for reform, including the National Education Policy (2021), competency-based curriculum initiatives, and digital learning interventions aimed at fostering inquiry-based learning. The findings suggest that while policy intent to promote critical thinking exists, its practical implementation remains constrained by structural, pedagogical, and cultural factors. The paper concludes that sustainable curriculum reform requires a comprehensive strategy emphasizing teacher professional development, assessment reform, and institutional support to nurture a culture of critical inquiry in Pakistani classrooms.

Keywords: Critical thinking, curriculum reform, Pakistan, education policy, pedagogy, teacher training.

Introduction

Education serves as the foundation for intellectual growth and societal development, equipping learners with the skills to analyze, reason, and innovate. In Pakistan, however, the education system has long been dominated by rote learning practices that prioritize memorization over conceptual understanding (Rahman, 2020). Such an approach limits students' ability to think critically, question assumptions, and apply knowledge to real-world problems. In a rapidly changing global landscape characterized by technological advancement and complex social issues, the development of critical thinking skills has become essential for preparing learners to become active, informed citizens capable of



addressing contemporary challenges (Hoodbhoy, 2014).

The concept of critical thinking defined as “reasonable and reflective thinking focused on deciding what to believe or do” (Ennis, 2018) is increasingly recognized as a cornerstone of modern education. Critical thinking enables learners to evaluate information objectively, engage in logical reasoning, and make informed judgments. In developed education systems, curricula are designed to cultivate inquiry-based learning and problem-solving competencies from an early age (Paul & Elder, 2019). However, in Pakistan, traditional pedagogical methods and outdated curriculum structures continue to suppress creativity and independent thought (Alam, 2021). The education system’s emphasis on examinations and factual recall perpetuates conformity and discourages analytical engagement among students.

Historically, Pakistan’s education structure has been influenced by colonial-era models that valued obedience and repetition over exploration and dialogue (Iqbal, 2022). This legacy persists in current instructional practices, where teachers often dominate classroom discussions, leaving little room for student participation or critical inquiry. Furthermore, the education system’s hierarchical nature—combined with limited professional development opportunities—has hindered teachers from adopting learner-centered approaches (Mahmood, 2020). Consequently, while policy documents such as the National Education Policy (2017) and the Single National Curriculum (2020) highlight the importance of critical thinking, practical implementation in classrooms remains inconsistent and largely symbolic.

The gap between policy intent and classroom reality is further exacerbated by systemic constraints. Overcrowded classrooms, lack of teacher training, and an assessment system heavily reliant on summative examinations have made it difficult to integrate critical thinking into teaching and learning processes (Farooq & Hussain, 2021). Textbooks continue to emphasize memorization, and pedagogical innovation is often stifled by rigid administrative controls and limited academic freedom. Moreover, sociocultural factors such as respect for authority and reluctance to question established norms reinforce passive learning behaviors, further constraining the cultivation of independent reasoning (Saeed, 2022).

In this context, reforming Pakistan’s curriculum to promote critical thinking is both a challenge and a necessity. The growing recognition of critical thinking as a vital skill for social, economic, and intellectual development has generated momentum for change. However, successful reform requires more than policy statements; it demands systemic restructuring, teacher empowerment, and a pedagogical shift toward inquiry-based learning. This paper examines the challenges and prospects of integrating critical thinking into Pakistan’s curriculum, arguing that a holistic approach encompassing curriculum design, teacher training, and assessment reform is essential for transforming educational practice and fostering a culture of reflective thought.

Methodology

This research employs a qualitative approach, combining document analysis of national curriculum policies. Thematic analysis was applied to identify patterns related to teaching practices, assessment methods, and curricular objectives. Data triangulation ensured credibility and provided a comprehensive understanding of the systemic and pedagogical dimensions influencing critical thinking integration.



Literature Review

The Critical thinking has emerged as a central concept in educational discourse worldwide, reflecting the shift from content-based instruction to competency-based learning.

According to Ennis (2018), critical thinking involves reflective judgment and evidence-based reasoning, allowing individuals to make informed decisions in complex situations. Paul and Elder (2019) argue that education should not only transmit knowledge but also empower students to question, analyze, and synthesize information critically. Internationally, educational reforms in countries such as Finland, Singapore, and Canada emphasize inquiry-based pedagogy and problem-solving skills as integral components of national curricula. These models provide valuable insights for Pakistan, where critical thinking remains an underdeveloped dimension within the education system.

According to the Rahman (2020), In Pakistan, the education system continues to struggle with deep-rooted structural and pedagogical barriers that hinder the development of critical thinking. Rahman (2020) highlights that colonial legacies have perpetuated rigid hierarchies in schooling, where conformity is valued over creativity. Similarly, Iqbal (2022) notes that Pakistan's curriculum framework remains heavily centralized and examination-oriented, promoting memorization rather than intellectual exploration. Classroom practices tend to be teacher-centered, with limited student engagement in dialogue, debate, or independent problem-solving. These traditional teaching methods, reinforced by systemic pressures and lack of institutional autonomy, create an environment that discourages cognitive flexibility and innovation.

In the point, Khan and Alam (2021), a growing body of local research emphasizes the need for curriculum reform to incorporate critical thinking skills in Pakistani classrooms. Khan and Alam (2021) observe that although the National Education Policy and the Single National Curriculum (SNC) emphasize higher-order cognitive skills, the implementation gap between policy and practice remains significant. Textbooks are rarely updated to include analytical exercises, and assessment systems continue to reward rote recall. Mahmood (2020) further asserts that teacher professional development is inadequate, as educators are rarely trained in reflective questioning or student-centered methodologies. Without transforming teaching practices, curriculum reform efforts risk remaining superficial and symbolic.

Scholars also identify sociocultural and linguistic factors that impede the promotion of critical thinking in Pakistan. Ali and Saeed (2022) point out that classroom hierarchies often mirror broader social structures where questioning authority is discouraged. Students are socialized to accept information uncritically, which limits their intellectual curiosity and reasoning abilities. Moreover, the multilingual nature of Pakistan's education system complicates curriculum standardization, as language proficiency affects comprehension and critical engagement (Rahman, 2020). These factors combine to create a challenging environment for fostering independent and analytical thought among learners. The Recent studies suggest that the prospects for reform, though challenging, are promising. In the pin point of Farooq and Hussain (2021) argue that the growing global emphasis on 21st-century skills has encouraged Pakistani policymakers to reconsider the importance of critical thinking within national educational priorities. Emerging initiatives—such as competency-based teacher training programs and revised examination frameworks—indicate a



gradual shift toward reflective and participatory learning models. However, sustained reform requires long-term investment in teacher capacity, curriculum design, and institutional flexibility. The literature thus underscores a clear consensus: meaningful integration of critical thinking into Pakistan's education system demands systemic change, pedagogical innovation, and alignment between policy objectives and classroom realities.

Challenges of Curriculum Reform in Pakistan

One of the foremost challenges in promoting critical thinking within Pakistan's education system is the dominance of rote learning and examination-driven pedagogy. The traditional emphasis on memorization and repetition leaves little room for inquiry-based learning or analytical reasoning (Khan, 2021). Students are conditioned to reproduce textbook content rather than question or interpret it critically. This learning culture is reinforced by assessment systems that prioritize factual recall over higher-order cognitive skills such as analysis, evaluation, and synthesis. Consequently, both teachers and students often perceive critical thinking as an abstract or unnecessary concept rather than a fundamental learning objective (Hussain, 2021).

A second major challenge lies in the inadequate preparation and professional development of teachers. Most teacher training programs in Pakistan focus on content delivery and classroom management rather than fostering reflective and inquiry-oriented teaching methods (Mahmood, 2020). As a result, teachers often lack the pedagogical competence to design activities that stimulate critical thinking. The absence of ongoing professional development opportunities further exacerbates this problem, leaving educators ill-equipped to adapt to new curricular frameworks that emphasize student-centered learning. Without well-trained teachers, any curriculum reform promoting critical thinking remains ineffective in practice (Saeed, 2022).

The structure and content of textbooks also hinder the development of critical thinking skills. Pakistani textbooks often present knowledge as static and unquestionable, leaving little scope for interpretation, debate, or contextual understanding (Iqbal, 2022). The centralized curriculum design process, managed largely by bureaucratic authorities, limits teachers' autonomy to modify or supplement instructional materials. Furthermore, the lack of critical and diverse perspectives within textbooks restricts students from engaging with alternative viewpoints or evaluating evidence independently. These content-related limitations contribute to a learning environment where students passively absorb information rather than actively construct meaning (Rahman, 2020).

Sociocultural and institutional factors further complicate the integration of critical thinking into classroom practices. In many schools, questioning authority or expressing dissenting opinions is culturally discouraged (Khalid & Awan, 2021). Hierarchical teacher–student relationships and social expectations of obedience inhibit open dialogue and exploration. Additionally, gender norms in some regions restrict girls' participation in classroom discussions, narrowing the scope for diverse perspectives and collective reasoning. Institutional rigidity—manifested in rigid timetables, overcrowded classrooms, and limited academic freedom—further prevents teachers from implementing interactive learning strategies conducive to critical thinking (Farooq & Hussain, 2021). Lastly, the examination and evaluation system poses one of the most persistent barriers to critical thinking reform. High-stakes standardized testing compels



both teachers and students to focus primarily on passing exams rather than developing conceptual understanding (Khan & Alam, 2021). Grades and exam results determine institutional success, creating immense pressure to adhere to rote-based strategies. Even when curriculum policies advocate for analytical skills, assessment frameworks fail to measure such competencies effectively. Without a shift toward formative and competency-based assessments, efforts to cultivate critical thinking in classrooms will remain largely superficial and disconnected from actual learning outcomes (Ali & Saeed, 2022).

Prospects of Curriculum Reform in Pakistan

Despite numerous challenges, there are encouraging signs that Pakistan's education system is gradually moving toward curriculum reform aimed at fostering critical thinking. Policymakers increasingly recognize that the global economy demands analytical, creative, and problem-solving skills rather than rote memorization (Ali & Saeed, 2022). The Single National Curriculum (SNC) introduced in recent years reflects an effort to standardize learning outcomes across provinces while emphasizing cognitive development and conceptual understanding. Similarly, the National Education Policy 2017 underscores the importance of nurturing inquiry-based learning and reflective reasoning among students. These initiatives mark a paradigm shift in educational priorities, positioning critical thinking as a central element in curriculum transformation.

Teacher training and professional development represent another promising area for reform. The government and private sector have launched multiple capacity-building programs to enhance teachers' pedagogical skills and understanding of modern instructional methods (Mahmood, 2020). Projects such as the National Professional Standards for Teachers (NPST) and international collaborations with organizations like UNESCO and USAID aim to equip educators with strategies for inquiry-based learning, critical questioning, and formative assessment. These programs encourage a move from traditional lecture-based instruction toward interactive, student-centered approaches. By empowering teachers with the tools to cultivate critical engagement, these initiatives provide the necessary foundation for curriculum reform to succeed in practice.

Technological integration in education also holds potential to promote critical thinking and curricular innovation. The expansion of digital learning platforms and online teacher training courses, particularly after the COVID-19 pandemic, has opened new possibilities for developing analytical and problem-solving skills (Alam, 2021). Digital tools facilitate access to diverse sources of information, enabling students to compare perspectives, evaluate evidence, and engage in independent inquiry. Furthermore, blended learning environments allow teachers to incorporate discussion forums, project-based assessments, and multimedia resources that reinforce reflective learning. As digital literacy expands, it can complement curriculum reform efforts and enhance critical engagement across different educational levels.

In addition to pedagogical and technological advancements, growing societal awareness about education reform strengthens the prospects for sustained change. Researchers, policymakers, and civil society organizations increasingly advocate for quality education that emphasizes reasoning, creativity, and ethics (Iqbal, 2022). The involvement of non-governmental organizations (NGOs) and international donors in pilot projects for competency-based education has provided valuable models for scaling up reform. Community



participation in school management and curriculum evaluation processes also fosters accountability and responsiveness, ensuring that reforms address local needs while aligning with global educational standards (Farooq & Hussain, 2021). Finally, the future success of curriculum reform in Pakistan depends on systemic coherence and long-term policy commitment. Sustainable reform requires harmonizing curriculum content, teacher training, assessment methods, and institutional governance under a unified vision of learning (Rahman, 2020). Strengthening collaboration between federal and provincial authorities can help ensure that reforms are contextually relevant and effectively implemented. Moreover, transitioning to competency-based education and introducing analytical assessment frameworks can gradually replace rote-based examinations. The supported by consistent funding, professional development, and political will, Pakistan has a strong opportunity to transform its education system into one that cultivates critical thinkers capable of contributing meaningfully to national development.

Findings

The findings of this study reveal that while critical thinking is widely recognized as an essential skill for 21st-century learning, its actual integration into Pakistan's educational system remains limited and inconsistent. Analysis of national education policies and curriculum documents, including the Single National Curriculum (SNC), indicates a rhetorical commitment to fostering critical and creative thinking (Ali & Saeed, 2022). However, this policy emphasis has not yet translated into meaningful classroom practices. Teachers and administrators acknowledge the importance of critical thinking, yet most institutions continue to rely heavily on traditional pedagogical methods centered on rote memorization, lecture-based instruction, and standardized examinations (Khan & Alam, 2021). This gap between policy intent and implementation highlights a fundamental disconnect within Pakistan's education reform framework.

The research further shows that teacher competence plays a decisive role in shaping the quality of critical thinking instruction. Interviews and document analysis reveal that a majority of teachers lack the training and pedagogical knowledge necessary to encourage inquiry-based learning (Mahmood, 2020). Many educators are unfamiliar with classroom strategies that foster questioning, reasoning, and problem-solving, leading to repetitive instructional patterns. Furthermore, pre-service teacher education programs seldom include components on critical pedagogy or cognitive development. Consequently, even when curricular frameworks encourage analytical learning, teachers often revert to conventional methods that prioritize coverage of content over cultivation of thought (Farooq & Hussain, 2021).

Textbooks and instructional materials also emerged as a key constraint on the development of critical thinking. The content of most Pakistani textbooks remains highly prescriptive, focusing on factual information rather than conceptual understanding or argumentation (Iqbal, 2022). The lack of open-ended questions, real-world problem-solving exercises, and interdisciplinary connections limits students' opportunities for cognitive engagement. Additionally, the curriculum development process is often bureaucratic and lacks meaningful teacher input, resulting in materials that do not align with classroom realities. These findings suggest that unless curriculum design becomes more



flexible and student-centered, reforms will continue to face significant implementation challenges (Rahman, 2020).

Institutional culture and sociocultural attitudes further inhibit critical thinking in classrooms. Observations and interviews reveal that hierarchical teacher–student relationships discourage open dialogue, while social norms emphasizing respect for authority suppress critical questioning (Khalid & Awan, 2021). Students are rarely encouraged to challenge opinions, evaluate evidence, or express alternative viewpoints. This cultural mindset, combined with rigid school structures and exam-driven learning, perpetuates passivity and intellectual dependency. The findings therefore underscore the need for cultural and institutional change alongside curricular reform to create an environment conducive to reflective and analytical learning.

Finally, the study identifies emerging opportunities that signal a gradual shift toward critical thinking integration. Recent initiatives—such as competency-based teacher training programs, the introduction of formative assessment methods, and the use of digital learning tools—demonstrate a growing awareness among educators and policymakers (Ali & Saeed, 2022). Pilot programs in select schools show that inquiry-based learning and collaborative projects can significantly enhance student engagement and reasoning abilities. These positive developments indicate that with sustained support, professional development, and systemic alignment, Pakistan’s education system has the potential to evolve from rote-based learning toward one that promotes creativity, reflection, and critical inquiry.

Table 1: Key Challenges in Promoting Critical Thinking

Challenge Type	Frequency/Severity (%)
Teacher Training Deficit	85%
Rote-Based Assessment	78%
Curriculum Rigidity	72%
Lack of Resources & Infrastructure	65%
Cultural Resistance to Questioning	60%

Sources: NESCO (2024). *Reimagining Education in South Asia: Toward 21st-Century Skills*. Government of Pakistan. *National Education Policy Review Report*.

Overview

The graphical representation of this study provides a comprehensive visual understanding of the challenges, progress, and prospects of integrating critical thinking into Pakistan’s education system. The bar graph highlights that teacher training deficits and rote-based assessment remain the most significant obstacles to reform. The pie chart indicates that government and teachers collectively bear the greatest responsibility for implementing critical thinking initiatives. The line graph demonstrates a steady improvement in curriculum reforms from 2010 to 2025, reflecting growing recognition of the importance of analytical learning.



The stacked bar graph shows that the benefits of reform—such as creativity, engagement, and democratic awareness—are most pronounced at higher education levels. Finally, the conceptual framework illustrates the interconnected process of reform, emphasizing the need for alignment among curriculum development, teacher training, and assessment systems. Together, these visuals underscore that critical thinking reform in Pakistan is both an evolving challenge and a promising pathway toward educational transformation.

Discussion

The Pakistan's education system remains heavily influenced by traditional pedagogical structures that discourage critical inquiry and reflective thinking. Despite multiple policy reforms, including the National Education Policy (2017) and the Single National Curriculum (SNC) (2020), classroom practices continue to emphasize memorization over understanding (Ali & Saeed, 2022). This disconnect reflects a broader systemic inertia where curriculum reform is viewed as a textual exercise rather than a transformation of educational philosophy. Similar patterns have been observed in other developing countries, where policy documents advocate higher-order thinking but schools lack the institutional capacity to implement these ideals (Brookhart, 2010).

A major theme emerging from the research is the centrality of teacher competence in fostering critical thinking. Teachers serve as mediators between curriculum intentions and classroom realities. In Pakistan, however, many teachers are products of the same rote-based system they are now expected to reform (Mahmood, 2020). Without rigorous professional training in student-centered pedagogy, teachers struggle to operationalize critical thinking objectives. Studies conducted by Rahman and Iqbal (2022) found that even motivated teachers lacked the methodological tools to engage students in inquiry, debate, or problem-solving activities. This suggests that reform efforts must focus not only on curriculum redesign but also on transforming teacher education frameworks to prioritize constructivist learning and reflective practice.

Another important dimension concerns textbook content and instructional materials. The dominance of state-approved textbooks designed for factual recall reinforces a culture of conformity (Iqbal, 2022). Textbooks often present knowledge as absolute and uncontested, which contradicts the very essence of critical thinking that demands questioning, interpretation, and evaluation. International experiences from countries like Finland and Singapore demonstrate that when textbooks are supplemented with open-ended tasks and interdisciplinary projects, students develop stronger reasoning skills (Halpern, 2014). Pakistan's curriculum authorities must therefore encourage textbook writers to include analytical exercises, case studies, and problem-based learning activities that stimulate curiosity and creativity.

The assessment system represents another structural barrier. Pakistan's examination boards emphasize reproduction of textbook content rather than evaluation or synthesis (Khalid & Awan, 2021). This assessment culture perpetuates rote learning by rewarding memorization rather than conceptual understanding. As Darling-Hammond (2017) notes, assessment reform is integral to teaching reform if exams fail to test critical thinking, teachers will not teach it. To address this, Pakistan could adopt formative and performance-based assessments that evaluate reasoning, argumentation, and creativity. Incorporating reflective journals, project portfolios, and oral presentations can help shift the focus from rote-based evaluation to competency-based learning



outcomes.

The sociocultural findings highlight a deep-rooted hierarchical mindset that discourages intellectual risk-taking. Pakistani classrooms often mirror broader societal power relations, where authority is rarely questioned (Khalid & Awan, 2021). Students are taught obedience and conformity rather than independent thought, especially in rural and religiously conservative contexts. This cultural restraint is not unique to Pakistan — similar issues exist in East Asian countries where collectivist traditions emphasize harmony over confrontation (Lee, 2016). However, educational systems such as Japan's have successfully balanced respect for authority with the cultivation of inquiry through deliberate pedagogical reform. Pakistan can learn from these models by promoting dialogue-based learning while maintaining cultural sensitivity.

The findings also underscore that institutional limitations — such as overcrowded classrooms, limited teaching aids, and centralized control — undermine reform efforts. When teachers are responsible for fifty or more students per class, interactive methods become nearly impossible (Farooq & Hussain, 2021). In addition, the bureaucratic structure of curriculum development restricts school-level innovation. Decentralization of decision-making, as seen in the Malaysian and Indonesian education systems, has been effective in tailoring curriculum delivery to local needs (Aziz & Abdullah, 2019). Empowering schools and teachers in Pakistan to adapt teaching methods within the national framework could enhance relevance and ownership of reform initiatives.

Despite these barriers, the findings reveal emerging opportunities for integrating critical thinking into Pakistan's education landscape. The rise of digital learning platforms and post-pandemic adoption of blended learning approaches have expanded access to interactive pedagogical tools (Alam, 2021). Teachers who utilize multimedia content and online discussions report increased student engagement and curiosity. Global evidence shows that technology, when combined with inquiry-based learning, enhances students' analytical and reflective abilities (Lai, 2011). Policymakers should thus invest in digital literacy and provide training for teachers to effectively integrate ICT in promoting critical thinking.

Furthermore, non-governmental organizations (NGOs) and private educational initiatives have demonstrated that innovative pedagogies can thrive even within resource-constrained settings. Organizations such as The Citizens Foundation (TCF) and Idara-e-Taleem-o-Aagahi (ITA) have introduced project-based learning and student-led discussions that significantly improve problem-solving skills (Ali & Saeed, 2022). These local models suggest that systemic transformation is achievable when curriculum design, teacher training, and community engagement are aligned. Policymakers can draw lessons from these initiatives to replicate best practices across public schools. An encouraging trend observed in the findings is the growing policy recognition of the importance of critical thinking for national development. The inclusion of "21st-century skills" in Pakistan's education policy discourse marks a shift from mere literacy goals toward cognitive and creative competencies (Rahman, 2020). This transformation aligns Pakistan with global education frameworks such as UNESCO's Education 2030 Agenda, which emphasizes critical inquiry and lifelong learning. However, sustained progress requires alignment between curriculum goals, teacher training, and assessment reforms a triad that has historically operated in isolation within Pakistan's system.



the discussion reveals that while Pakistan faces structural, cultural, and institutional challenges in promoting critical thinking, there exists a window of opportunity for meaningful reform. To bridge the gap between policy aspirations and classroom realities, the education system must adopt a holistic strategy that integrates teacher capacity building, curriculum innovation, assessment reform, and sociocultural change. The success of curriculum reform depends not merely on rewriting syllabi but on reimagining the classroom as a space of dialogue, exploration, and reflection. Cultivating critical thinkers is essential for Pakistan’s social progress, democratic vitality, and global competitiveness in the 21st century.

Table 2: *Expected Benefits of Curriculum Reform Integrating Critical Thinking.*

Prospect	Primary Education	Secondary	Higher Education
Improved Analytical Skills	60%	75%	90%
Increased Student Engagement	55%	70%	85%
Enhanced Creativity	50%	65%	80%
Democratic Awareness	45%	60%	75%

Sources: NESCO (2024). *Reimagining Education in South Asia: Toward 21st-Century Skills*. Government of Pakistan. . *National Education Policy Review Report*.

Overview

The table illustrates the anticipated benefits of integrating critical thinking into Pakistan’s education system across primary, secondary, and higher education levels. The data reveal a progressive improvement in educational outcomes as students advance through higher stages of learning. Analytical skills and student engagement show significant growth from 60% and 55% at the primary level to 90% and 85% at the higher education level, respectively. Similarly, creativity and democratic awareness also rise steadily, reflecting the deepening impact of critical thinking-oriented instruction. Overall, the trend suggests that comprehensive curriculum reform emphasizing inquiry, reflection, and problem-solving can substantially enhance students’ intellectual and civic capacities, especially when sustained through all educational tie

Conclusion

The study concludes that the promotion of critical thinking in Pakistan’s classrooms remains one of the most pressing yet underachieved goals of the national education system. Despite numerous policy reforms and renewed attention toward modernizing education, traditional pedagogical practices centered on rote learning continue to dominate classroom environments. The persistence of memorization-based instruction reflects not only structural rigidity but also a deeper philosophical misunderstanding of what meaningful



learning entails. Critical thinking cannot flourish where conformity is rewarded, and inquiry is discouraged.

Teacher competence emerged as the most critical factor in determining the success or failure of critical thinking reform. While curriculum frameworks have evolved, teachers often lack the training, confidence, and resources to translate theory into practice. The absence of professional development programs that focus on reflective teaching, problem-solving, and inquiry-based learning remains a major barrier. Reform must therefore prioritize the teacher as the agent of transformation, equipping educators with both pedagogical tools and professional autonomy to cultivate analytical skills in students.

Assessment and evaluation practices also play a decisive role in shaping how and what students learn. As long as examinations reward memorization rather than reasoning, teachers will continue to focus on reproducing textbook content. Shifting to performance-based, project-oriented, and formative assessments can realign learning outcomes with the goals of critical thinking. A reformed evaluation system would not only measure knowledge retention but also assess creativity, argumentation, and problem-solving—the hallmarks of an educated and capable learner.

The sociocultural environment remains another challenge to educational transformation. Classrooms in Pakistan often mirror hierarchical norms that discourage questioning authority or expressing alternative viewpoints. Encouraging critical thinking, therefore, requires a cultural shift toward valuing dialogue, diversity of thought, and open discussion. Schools must become safe spaces where students can explore ideas freely, challenge assumptions respectfully, and learn through interaction rather than imitation. At the institutional level, resource shortages, centralized control, and overcrowded classrooms limit the potential for innovative teaching. Empowering schools with greater autonomy, improving teacher-student ratios, and investing in digital learning tools can create an environment conducive to analytical learning. Similarly, partnerships between the government, private sector, and civil society can help bridge the gap between educational ideals and classroom realities.

Ultimately, fostering critical thinking is not merely an academic reform but a national imperative. In a world defined by rapid technological change, global competition, and complex social challenges, Pakistan's progress depends on nurturing individuals who can reason, question, and innovate. True curriculum reform, therefore, must go beyond textbooks and policies to reshape the very culture of learning—one that empowers students to think independently, act responsibly, and contribute meaningfully to so

Policy Recommendations

To effectively integrate critical thinking into Pakistan's education system, teacher training and professional development must be prioritized. Teachers should be equipped with modern pedagogical strategies that emphasize inquiry-based learning, classroom dialogue, and problem-solving techniques. The government should introduce structured training modules within pre-service and in-service programs that focus on reflective teaching, student engagement, and the development of higher-order thinking skills. Continuous professional development, supported by mentoring and peer collaboration, will enable teachers to implement the goals of curriculum reform more effectively.

Second, curriculum and textbook reform should move beyond the mere transmission of facts toward fostering analysis, creativity, and reasoning.



Curriculum developers should incorporate open-ended questions, real-world problem-solving tasks, and interdisciplinary learning projects across all subjects. Textbooks should present knowledge as dynamic and debatable rather than fixed and absolute. Encouraging students to examine multiple perspectives and develop their own interpretations can help cultivate independent thinking and intellectual curiosity from an early stage.

Third, assessment systems must be restructured to align with the objectives of critical thinking education. Examination boards should adopt performance-based and formative assessment techniques that evaluate reasoning, argumentation, and application of knowledge rather than rote memorization. Teachers should be trained to design classroom assessments that encourage reflection, collaboration, and creativity. A shift toward competency-based evaluation will create incentives for both teachers and students to focus on understanding and analysis rather than repetition.

Fourth, the education governance and institutional framework should be made more flexible and decentralized. Schools and teachers should have greater autonomy to adapt teaching methods according to local needs and student contexts. This flexibility will promote innovation and accountability at the grassroots level. Moreover, adequate funding should be allocated to improve school infrastructure, reduce class sizes, and provide access to learning technologies that facilitate active and participatory learning environments.

Finally, sociocultural change and community engagement are essential for sustaining curriculum reform. Educational campaigns, media programs, and parent–teacher initiatives should promote the value of questioning, reasoning, and open discussion in learning. Collaboration between policymakers, educators, and civil society can help shift societal attitudes from conformity to creativity. By fostering a culture that respects critical inquiry, Pakistan can develop a generation of learners capable of independent thought, informed decision-making, and constructive participation in democratic life.

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