

Access, Quality, and Equity in Education in Pakistan: An SDG-4 Analysis.

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ABSTRACT

Education is central to sustainable development, yet many developing countries continue to struggle in translating global commitments into meaningful educational outcomes. This study examines Pakistan's progress toward Sustainable Development Goal 4 (SDG-4) by systematically analyzing the interlinked dimensions of access, quality, and equity in education over the period 2015–2025. Using a mixed-methods approach, the research draws on secondary data from national and international sources, including UNESCO-UIS, the Pakistan Institute of Education, UNICEF, ASER Pakistan, Pakistan economic survey and government education statistics. The findings reveal that while Pakistan has achieved modest gains in school enrollment, particularly at the primary level, these advances have not translated into universal access. An estimated 22–26 million children remain out of school, with exclusion disproportionately affecting girls, rural populations, conflict-affected regions, urban slums, refugees and children with disabilities. The study further finds that learning outcomes remain critically low, with widespread learning poverty, weak foundational literacy and numeracy skills, and limited curriculum relevance, despite improvements in teacher certification. Equity emerges as the most neglected pillar of SDG-4 implementation, reflected in persistent gender gaps, pronounced regional disparities, and the systematic marginalization of vulnerable groups. The analysis also highlights structural constraints undermining SDG-4 progress, including prolonged less investment in education, fragmented governance following decentralization, weak accountability mechanisms. Overall, the study concludes that Pakistan remains off-track to achieve SDG-4 by 2030 unless policy priorities shift from enrollment-centric approaches toward learning-focused, equity-driven, and adequately financed reforms.

Keyword: Education, developing countries, SDG-4, UNESCO-UIS, rural populations, decentralization, weak accountability mechanisms, Pakistan

INTRODUCTION

Education has long been recognized as a fundamental human right and a cornerstone of sustainable development. The Universal Declaration of Human Rights (UDHR), adopted in 1948, explicitly affirmed that “everyone has the right to education,” emphasizing its role in the full development of the human personality and the strengthening of respect for human rights and freedoms (United Nations, 1948). This normative commitment was subsequently reinforced through major global initiatives such as the Education for All (EFA) movement of the 1990s and the Millennium Development Goals (MDGs) launched in 2000, both of which prioritized universal primary education and the reduction of educational disparities. While these frameworks succeeded in expanding access to schooling in many regions, they were often criticized for their narrow focus on enrollment rather than learning quality and equity. Recognizing these shortcomings, the global community adopted the Sustainable Development Goals (SDGs) in 2015, representing a more holistic and ambitious development agenda. Within this framework, SDG-4 commits

states to ensuring “inclusive and equitable quality education and lifelong learning opportunities for all” by 2030 (UNESCO; United Nations Pakistan, 2023).

Pakistan represents a critical and instructive case within this global context. Since its independence in 1947, the country has struggled to build an education system capable of meeting the demands of a rapidly growing and youthful population. While periods of expansion have occurred, they have often been characterized by policy discontinuity, uneven implementation, and limited structural reform. A significant institutional shift occurred with the passage of the 18th Constitutional Amendment in 2010, which devolved primary and secondary education responsibilities from the federal government to the provinces. Article 25-A of the Constitution further strengthened the legal foundation of education by mandating free and compulsory education for all children aged 5 to 16 years (Pakistan Institute of Education, 2025). This constitutional recognition marked an important normative advancement, positioning education as a justiciable right rather than a policy preference.

However, the translation of constitutional commitments into tangible outcomes has remained inconsistent. Provincial disparities in administrative capacity, fiscal resources, and political prioritization have resulted in uneven progress across regions. As a result, Pakistan continues to face one of the most severe education crises globally. Recent estimates suggest that between 22.8 and over 26 million children aged 5–16 remain out of school, placing Pakistan among the countries with the highest absolute number of out-of-school children worldwide (UNICEF Pakistan; Pakistan Institute of Education, 2025). This crisis persists despite improvements in enrollment at certain levels, indicating that population growth, poverty, and system inefficiencies continue to outpace reform efforts.

Learning outcomes further underscore the depth of Pakistan’s education challenge. National literacy rates remain low hovering between 59% and 63% with pronounced gender and rural–urban disparities (Borgen Project, 2025). Female literacy rates, particularly in rural areas of Balochistan and Khyber Pakhtunkhwa, lag significantly behind national averages, reflecting the intersection of poverty, cultural norms, and limited educational infrastructure. Provincial inequalities are equally stark, with Punjab outperforming other regions in both access and learning indicators, while historically underdeveloped provinces remain persistently disadvantaged. These disparities are exacerbated by chronic underinvestment in education, as public expenditure has consistently remained below UNESCO’s recommended benchmark of 4–6% of GDP, stagnating around 2–3% in recent years (UNICEF Pakistan; UIS, 2023).

Pakistan’s education system is further characterized by a fragmented structure in which public and private institutions coexist unevenly. The rapid expansion of private schooling has filled gaps in access, particularly in urban areas, but has also intensified inequality by stratifying educational opportunities along socio-economic lines. Meanwhile, public schools especially in rural and marginalized districts often suffer from inadequate infrastructure, teacher shortages, poor governance, and weak accountability mechanisms. These structural deficiencies directly undermine the quality and equity dimensions of SDG-4, even where nominal access has improved.

In sum, while Pakistan has enacted progressive legal and policy reforms that recognize education as a fundamental right and align national commitments with SDG-4, deep-rooted structural weaknesses continue to constrain meaningful progress. Persistent gaps in institutional capacity, chronic underfinancing, governance failures, and socio-cultural barriers collectively hinder the realization of inclusive, equitable, and quality education. This study argues that Pakistan’s slow progress toward SDG-4 is not merely a problem of access but a multidimensional challenge rooted in the interlinked deficits of quality, equity, and governance. By systematically analyzing access, learning outcomes, and inclusion within the SDG-4

framework, this research seeks to contribute evidence-based insights that can inform more coherent and effective education policy reforms in Pakistan.

Objectives of the Study

1. Evaluate access to education under SDG-4.
2. Assess quality of education outcomes.
3. Analyze equity gaps by gender, region, and class.

LITERATURE REVIEW

The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, represent a comprehensive global development framework aimed at addressing economic, social, and environmental challenges by 2030. Among the 17 goals, SDG-4—Quality Education occupies a central position, reflecting the recognition that education is both an intrinsic human right and a key enabler of all other development goals (United Nations, 2015). SDG-4 seeks to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all,” extending the global education agenda beyond the access-focused targets of the Millennium Development Goals (MDGs).

SDG-4 comprises seven outcome targets (4.1–4.7) and three means of implementation (4.a–4.c). Target 4.1 emphasizes free, equitable, and quality primary and secondary education leading to effective learning outcomes. Target 4.2 focuses on early childhood development and pre-primary education, while Target 4.3 aims to ensure equal access to affordable technical, vocational, and tertiary education. Target 4.4 stresses relevant skills for employment and entrepreneurship, highlighting the link between education and labor markets. Target 4.5 explicitly addresses equity by eliminating gender disparities and ensuring access for vulnerable populations, including persons with disabilities and marginalized communities. Target 4.6 seeks universal literacy and numeracy, and Target 4.7 promotes education for sustainable development, global citizenship, and cultural diversity (UNESCO, 2017).

The means of implementation Targets 4.a, 4.b, and 4.c—address systemic requirements such as safe and inclusive learning environments, expanded scholarships for developing countries, and an increased supply of qualified teachers. These targets collectively signal a shift from narrow enrollment metrics toward a holistic conception of education, encompassing quality, relevance, equity, and lifelong learning (UNESCO, 2016).

To operationalize SDG-4, UNESCO’s Institute for Statistics (UIS) serves as the global custodian agency, developing standardized indicators to monitor progress. These indicators include adjusted net enrollment ratios, completion rates, minimum proficiency levels in reading and mathematics, pupil-teacher ratios, and gender parity indices (UIS, 2023). Global monitoring mechanisms such as the Global Education Monitoring (GEM) Report provide annual assessments of progress and policy challenges across countries.

Globally, significant progress has been made in expanding access to primary education since the early 2000s; however, disparities remain stark across regions. Sub-Saharan Africa and South Asia continue to host the majority of out-of-school children, driven by poverty, conflict, gender norms, and weak state capacity (UNESCO, 2023). While enrollment rates have improved, dropout rates at the secondary level remain high in many low- and middle-income countries, highlighting systemic weaknesses in retention mechanisms.

Pakistan presents a particularly case of access deprivation. Studies consistently report that the country has one of the world's largest populations of out-of-school children, estimated between 22 and 26 million aged 5–16 (UNICEF Pakistan, 2024; Pakistan Institute of Education, 2025). Poverty remains the most significant determinant of exclusion, as households often rely on child labor to supplement income, particularly in rural areas (Bhalotra & Heady, 2003). Direct and indirect schooling costs, including uniforms, transportation, and opportunity costs, further discourage participation among low-income families.

RESEARCH METHODOLOGY

This study adopts a mixed-methods research design to comprehensively analyze Pakistan's progress toward Sustainable Development Goal 4, with specific focus on access, quality, and equity in education between 2015 and 2025. The mixed-methods approach is justified by the multidimensional nature of SDG-4, which cannot be adequately captured through a single methodological lens. Quantitative data are employed to examine trends, patterns, and disparities in educational indicators, while qualitative data provide contextual depth, policy insights, and explanatory understanding of structural and institutional challenges. The study follows a descriptive and analytical research design, where descriptive analysis is used to map the current state and evolution of education indicators, and analytical methods are applied to interpret relationships, gaps, and policy implications in light of SDG-4 targets.

The research relies exclusively on secondary data obtained from credible national and international sources to ensure reliability and comparability. Quantitative data are drawn from the UNESCO Institute for Statistics (UIS) for SDG-4 indicators, the Pakistan Economic Survey for education expenditure and macro-level trends, the Pakistan Social and Living Standards Measurement (PSLM) surveys for household-level education outcomes, and provincial Education Management Information System (EMIS) reports for enrollment, infrastructure, and teacher-related data. In addition, qualitative evidence is sourced from policy documents, government education sector plans, and reports published by national and international non-governmental organizations working in the education sector. The use of multiple data sources allows for triangulation, strengthening the validity of findings and reducing source-specific bias.

The analysis is structured around a set of clearly defined variables and indicators aligned with SDG-4. Access to education is assessed through indicators such as net and gross enrollment rates, out-of-school children figures, transition rates between education levels, and school infrastructure availability. Quality of education is measured using indicators related to learning outcomes, pupil teacher ratios, teacher qualifications, curriculum relevance, assessment systems, and learning poverty estimates. Equity in education is examined through gender parity indices, rural–urban disparities, provincial comparisons, socio-economic stratification, and inclusion of marginalized groups, including children with disabilities and those in conflict-affected or remote regions. These indicators are selected to capture not only aggregate progress but also distributional inequalities within Pakistan's education system.

Data analysis is conducted using a combination of quantitative and qualitative techniques. Trend analysis is employed to examine changes in access, quality, and equity indicators over the 2015–2025 period, enabling assessment of progress and stagnation in relation to SDG-4 targets. Comparative analysis is used to identify disparities across provinces, gender, and socio-economic groups, as well as to situate Pakistan's performance within regional and global contexts where relevant. Qualitative data are analyzed thematically, focusing on recurring patterns related to policy implementation gaps, governance challenges, resource allocation, and socio-cultural barriers. This thematic analysis complements quantitative findings by providing explanatory insights into why certain SDG-4 targets remain unmet despite policy commitments.

Access to Education in Pakistan

Access to education in Pakistan remains a profound challenge that directly undermines the country's progress toward Sustainable Development Goal 4 (SDG-4). Despite incremental increases in enrollment figures over the past decade, Pakistan continues to have one of the highest absolute numbers of out-of-school children (OOSC) globally, with deep disparities across provinces, genders, and education levels. These access deficits reflect structural shortcomings in policy implementation, socio-economic inequality, and governance, which collectively constrain the realization of universal and equitable education that SDG-4 envisages.

i. Enrollment Trends

National enrollment trends indicate modest improvements in participation across primary, secondary, and tertiary levels, but persistent attrition as students progress through the education system. According to the recent Pakistan Education Statistics Report (2023-24), total student enrollment increased from approximately 56.07 million to 58.33 million, representing a growth of about 4 percent compared to the previous year. Teacher numbers also increased by over 3 percent, yet the total number of educational institutions declined slightly, reflecting closures in private school sectors (Kazmi, 2024). This data signifies that while access is expanding, resources and institutional capacity are not keeping pace with population growth and demand.

Provincial and gender disaggregation reveals deeper inequalities. National literacy the broader foundation for school participation has recently reached approximately 60 percent, but remains significantly lower for females (52 percent) than males (68 percent) (Economic Survey of Pakistan, 2024-25). Provincial variations are stark: Punjab leads with a literacy rate of about 66 percent, followed by Sindh (~58 percent), Khyber Pakhtunkhwa (KP) at ~51 percent, and Balochistan trailing at ~42 percent (Nation, 2025). The gender gap persists across provinces, with female literacy notably lower in KP and Balochistan reflecting entrenched social barriers to sustained schooling for girls.

Empirical enrollment data also indicates that net enrollment rates (NER) are sub optimal at all levels and are characterized by gender and regional disparities. For example, primary NERs range from roughly 51 percent nationally to as low as 46 percent in Balochistan, with gender gaps widening at middle and matric levels (NER at middle ~21 percent nationwide; matric ~13 percent) (State of Children in Pakistan, 2025). These figures highlight that a substantial proportion of eligible children are either excluded from formal schooling or fail to progress beyond early education stages, undermining SDG-4's aim of universal access from early childhood to tertiary education.

ii. Out-of-School Children Crisis

One of the most persistent indicators of access failure in Pakistan is the enormous population of OOSC. According to the 2023 Population Census data, an estimated 25.37 million children aged 5–16 years are not enrolled in school, comprising approximately 36 percent of the school-age population. Of these, 13.4 million are girls and 11.9 million are boys, underscoring the gendered nature of exclusion (State of Children in Pakistan, 2025). Provincial breakdowns reveal both magnitude and intensity differences:

Table Out-of-School Children by Province (2023 Census)

Province / Area	Total OOSC	% of 5-16 Population	Female Majority
Punjab	9,600,164	~27%	Yes
Sindh	7,818,248	~46%	Yes
Khyber Pakhtunkhwa	4,924,121	~37%	Yes
Balochistan	2,941,690	~58%	Yes
ICT	89,127	~15%	Yes

Source: State of Children in Pakistan (2025)

Notably, Balochistan, despite having a smaller population, exhibits the highest proportion of OOSC (~58 percent) far exceeding national averages and spotlighting regional inequality. Sindh follows with nearly half of its school-age children out of formal education, while KP has approximately 4.9 million OOSC (~37 percent). Even Islamabad Capital Territory (ICT), though comparatively better, has a non-trivial proportion of children out of school (~15 percent) (State of Children in Pakistan, 2025). These data illustrate that access deficits are systemic and geographically entrenched, not merely confined to more impoverished provinces.

National education surveys also reveal that 79 percent of OOSC aged 5–16 have never enrolled, indicating that exclusion arises not only from dropouts but significant barriers to initial access (State of Children in Pakistan, 2025). This reinforces the understanding that access deprivation is embedded in early phases of the education lifecycle.

Regional Case Studies: KP and Balochistan

In Khyber Pakhtunkhwa (KP), provincial education department reports highlight a severe access crisis, estimating that 4.92 million children (approximately 37 percent) are out of school. Some districts in KP exhibit alarmingly high exclusion rates for example, Lower and Upper Kohistan record OOSC proportions as high as 79 percent, pointing to acute disparities even within the province (Geo.tv, 2025; The News, 2025). This situation is compounded by security concerns, rural isolation, and limited school infrastructure, which collectively deter sustained school participation.

Balochistan, Pakistan’s largest province by area and one of the least developed, embodies another extreme case. With over half of its school-age children never having attended school, Balochistan’s educational exclusion is deeply rooted in socio-economic marginalization, sparse population distribution, and infrastructure shortfalls (State of Children in Pakistan, 2025). These provincial case studies underscore not only the magnitude of exclusion but its intersection with geography, poverty, and infrastructural neglect core components of the access challenge that SDG-4 aims to address.

iii. Barriers to Access

The persistence of access inequities in Pakistan arises from a convergence of economic, cultural, infrastructural, and governance barriers, each exacerbating the educational exclusion experienced by millions of children.

Economic Barriers

Poverty remains a fundamental impediment to education access. In economically deprived provinces like Balochistan and KP, families often prioritize subsistence over schooling, compelling children to enter the labor market or assist with household income tasks. High opportunity costs, combined with insufficient financial support mechanisms, lead to early school withdrawal and reduced attendance, especially among girls and older children. Furthermore, public expenditure on education in Pakistan remains low (historically around 1.5 percent of GDP, substantially below the UNESCO-recommended 4–6 percent), resulting in under-resourced schools and limited capacity to support disadvantaged learners (Kazmi, 2024).

Cultural Barriers

Cultural norms and gender roles significantly affect educational participation. Across many rural and tribal communities, prevailing beliefs about gender roles limit girls' access to education, especially beyond primary levels. Families may deprioritize girls' schooling due to safety concerns, early marriage practices, and social expectations regarding domestic responsibilities. These cultural constraints contribute to the observed higher out-of-school rates among girls in nearly all provinces and educational levels (State of Children in Pakistan, 2025).

Infrastructure Barriers

Geographical isolation and infrastructural inadequacies further hinder access, particularly in remote and mountainous districts. Many communities lack nearby schools, forcing children to travel long distances, which disproportionately affects girls due to safety and mobility constraints. Basic facilities such as electricity, drinking water, sanitation, and boundary walls are missing in a significant number of schools, especially in Sindh's rural areas and throughout Balochistan, degrading the learning environment and discouraging regular attendance.

Governance Failures

The implementation gap between constitutional rights and educational practice also undermines access. Although Article 25-A guarantees free and compulsory education for children aged 5–16, enforcement has been inconsistent due to weak monitoring, insufficient teacher accountability, and fragmented authority following the devolution of education to provinces. Administrative inefficiencies result in “ghost schools,” teacher absenteeism, and poor allocation of resources, further impeding equitable access. These governance challenges reveal that policy commitment alone does not ensure effective access expansion; institutional capacity and accountability are equally critical.

Access to education in Pakistan is shaped by a complex interplay of demographic pressures, socio-economic disparities, cultural norms, and systemic governance limitations. Although enrollment has shown incremental growth and particular provinces have implemented targeted interventions, millions of children remain outside the education system, disproportionately affecting girls and marginalized regions such as Balochistan and KP. Addressing these barriers is essential for Pakistan to fulfill its SDG-4 commitments and ensure inclusive, equitable, and meaningful access to education for all children.

Table: Access to Education in Pakistan under SDG-4

Indicator	National Status	Provincial / Regional Pattern	SDG-4 Target	Interpretation
Out-of-School Children (5–16)	26.2 million	Highest in Balochistan, rural Sindh, merged KP districts	4.1	Pakistan faces a severe access crisis despite constitutional guarantees
Total Enrollment (All Levels)	Increased from 25.3m (2015) to 27.6m (2023)	Growth concentrated at primary level	4.1	Enrollment gains not sustained at secondary level
Gross Intake Rate (Primary)	80.2%	Higher in Punjab, lowest in Balochistan	4.1	Entry improving but completion weak
Over-Age Enrollment	>50% at primary level	Rural and poor households most affected	4.2	Weak ECE undermines retention
Transition to Lower Secondary	61%	Sharp drop after Grade 5	4.1	Structural dropout risk

Source: Pakistan Institute of Education. (2023). Pakistan Education Statistics & SDG-4 Mid-Term Review. Ministry of Federal Education and Professional Training.

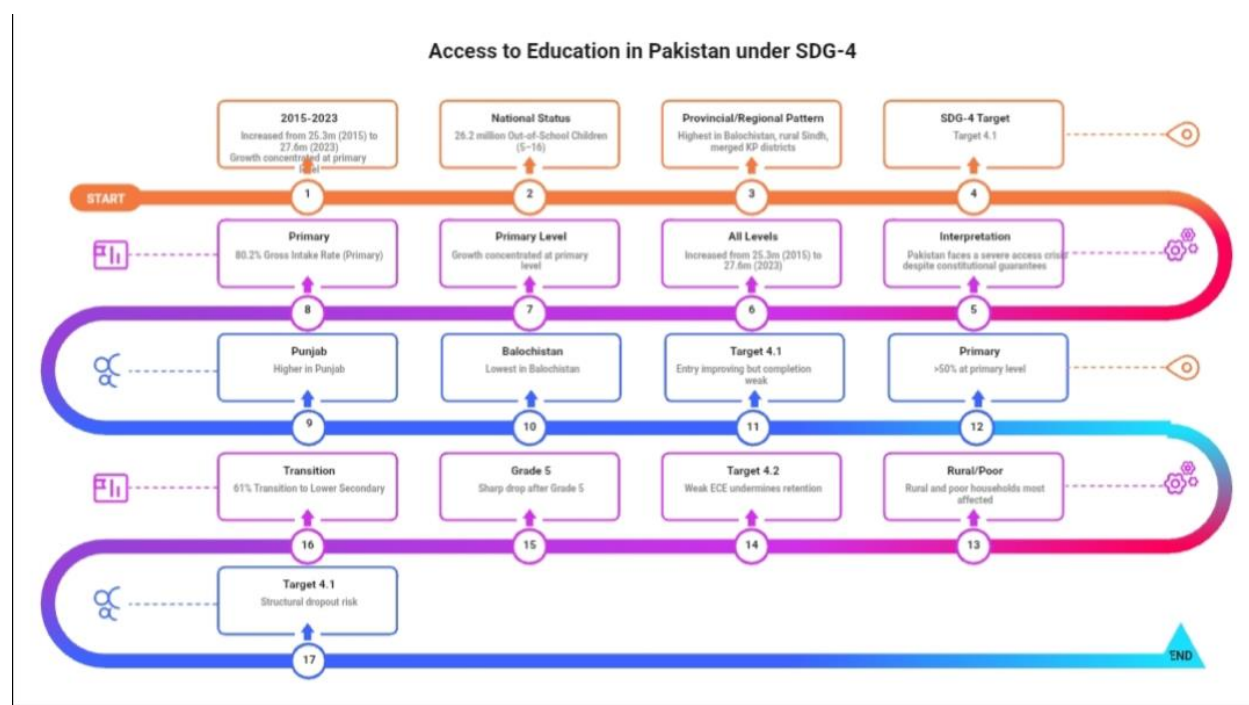
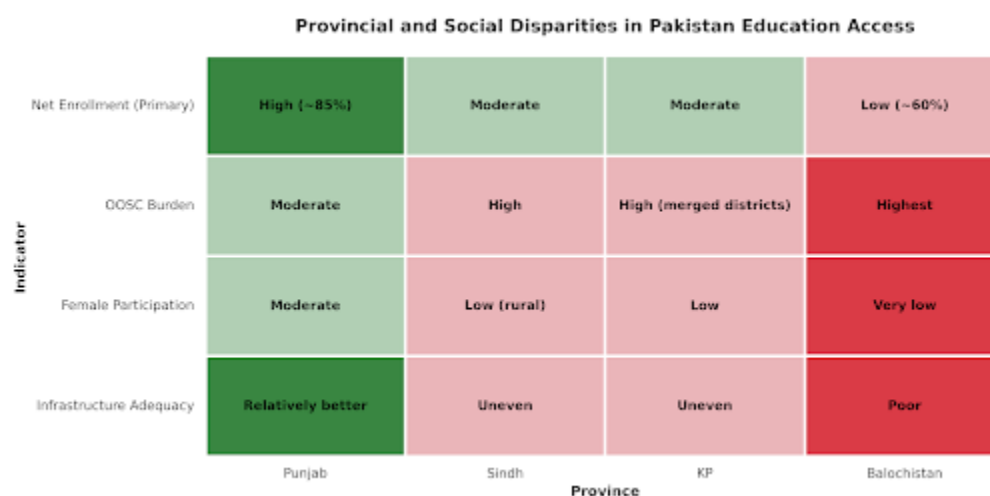


Table: Access to Education – Provincial and Social Disparities

Category	Punjab	Sindh	KP	Balochistan	Interpretive Insight
Net Enrollment (Primary)	High (~85%)	Moderate	Moderate	Low (~60%)	Regional inequality remains structural
OOSC Burden	Moderate	High	High (merged districts)	Highest	Conflict & poverty overlap
Female Participation	Moderate	Low (rural)	Low	Very low	Gender norms + access barriers
Infrastructure Adequacy	Relatively better	Uneven	Uneven	Poor	Supply-side deficit

Sources: Pakistan Institute of Education (2023); UNICEF (2024); ASER (2023).



Quality of Education in Pakistan

While significant attention in Pakistan’s education policy has historically focused on expanding access, the quality of education measured through curriculum relevance, pedagogy, teacher effectiveness, and learning outcomes—remains profoundly inadequate. Enrollment expansion has not translated into meaningful learning. A growing body of evidence shows that students often progress through grades without mastering basic literacy and critical thinking skills, institutional capacity is weak, and instructional practices remain outdated (Elfert & Ydesen, 2023; *The News*, 2025). This section examines the state of curriculum and pedagogy, teacher quality and training, and learning outcomes in Pakistan, using the latest available statistics, comparative indicators, and documented case examples to illustrate the persistent challenges faced by the education system.

i. Curriculum and Pedagogy

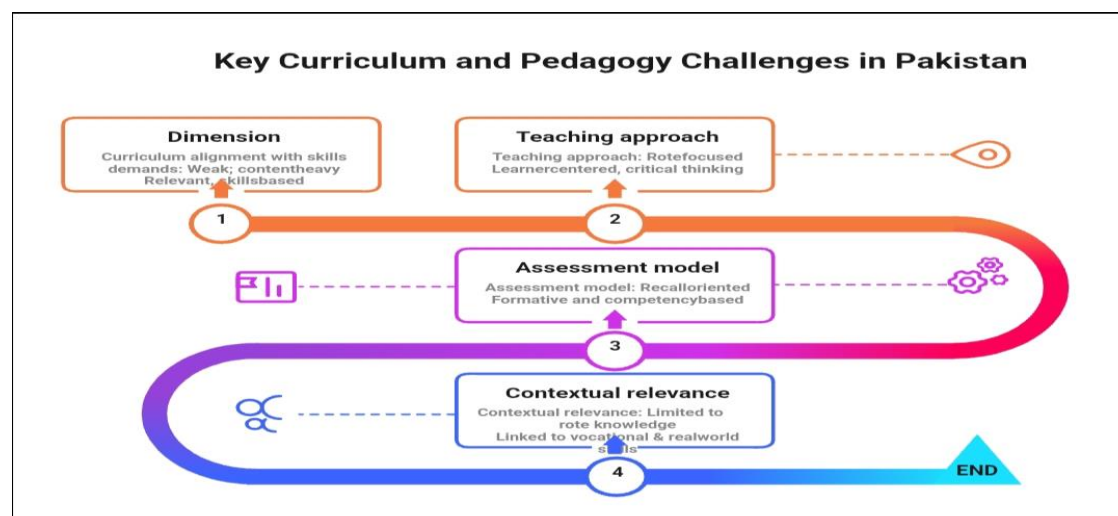
The curriculum and pedagogical practices in Pakistani schools are central to understanding the quality crisis in education. Curriculum relevance is a key SDG-4 component, aiming to ensure that what is taught is pertinent to students' cognitive development, future employment prospects, and societal needs (UNESCO, 2016; PNCU). However, Pakistan's curricular frameworks have been widely criticized for being outdated, heavy on rote memorization, and insufficiently aligned with critical thinking, problem-solving, or labor market demands (Elfert & Ydesen, 2023; *The News*, 2025). Although curricula have undergone periodic revisions, many still prioritize content coverage over deep understanding, and assessment remains largely focused on recall instead of higher-order thinking skills.

One of the most glaring manifestations of poor pedagogy is the widespread reliance on rote learning, where students memorize facts for exams without understanding underlying concepts or developing analytical skills. This practice is reinforced by examination systems that reward recall rather than comprehension or application. Teachers, often untrained in learner-centered methods, continue to follow traditional lecture styles that emphasize textbook recitation over active inquiry and interactive learning. As documented by researchers, pedagogical practices do not regularly incorporate formative assessment, critical discussion, or project-based learning, all of which are essential for fostering meaningful learning and 21st-century competencies (Elfert & Ydesen, 2023).

Table: Key Curriculum and Pedagogy Challenges in Pakistan

Dimension	Pakistan Reality	SDG-4 Target Expectation
Curriculum alignment with skills demands	Weak; content-heavy	Relevant, skills-based
Teaching approach	Rote-focused	Learner-centered, critical thinking
Assessment model	Recall-oriented	Formative and competency-based
Contextual relevance	Limited to rote knowledge	Linked to vocational & real-world skills

Sources: Elfert & Ydesen (2023); The News (2025)



The consequences of these pedagogical limitations are visible in foundational learning outcomes. Nationally representative assessments and global frameworks point to extreme levels of learning poverty: approximately 77 percent of children in Pakistan are unable to read and comprehend a simple age-appropriate text by age ten, placing the country among the most affected worldwide (*The News*, 2025; *Pakistan Foundational Learning Hub* analysis). This suggests that enrollment gains have not translated into essential reading and mathematics proficiency—an educational failure that is rooted not in access alone but in what and how students are taught (*The News*, 2025).

A powerful case example is drawn from Punjab’s foundational learning assessments, where over 50 percent of Grade 5 children failed to achieve literacy and numeracy benchmarks expected at Grade 3 (*The Tribune*, 2025). This demonstrates that students are being promoted to higher grades despite not mastering basic competencies, a phenomenon that institutionalizes poor learning outcomes over time and weakens the broader education system’s human capital contribution.

Compounding the curriculum and pedagogy challenge is the fact that curricula are not fully harmonized with labor market needs. Pakistan’s economy increasingly demands critical thinking, digital literacy, creativity, and problem-solving skills yet curricula remain focused on textbook proficiency. Employers and industry stakeholders consistently report that graduates lack the skills needed for modern workplaces, particularly in STEM (Science, Technology, Engineering, and Mathematics) fields (Elfert & Ydesen, 2023). This curricular misalignment diminishes the relevance of formal schooling and contributes to youth underemployment or skills mismatch in the labor market.

Thus, while Pakistan has made curricular improvements on paper, actual classroom practice reveals persisting gaps between curriculum intent and classroom reality. The implications are profound: without reorienting curricula toward meaningful competencies and transforming pedagogy toward interactive, student-centered methodologies, quality remains superficial and SDG-4’s goal of “quality education for all” will remain unattained.

ii. Teacher Quality and Training

Teacher quality is one of the most pivotal determinants of educational quality, directly impacting classroom learning environments, student engagement, and achievement. Yet Pakistan’s education system continues to struggle with teacher shortages, limited pedagogical training, and low professional morale factors that collectively stagnate learning outcomes and perpetuate inequities.

Research indicates that approximately 40–50 percent of government school teachers in rural areas lack formal training, particularly in modern teaching methods and subject-specific pedagogy (*Education*, 2020). This deficiency creates significant competency gaps. Many teachers enter classrooms without adequate preparation in curriculum implementation, classroom management, or formative assessment techniques, which are critical for nurturing understanding beyond rote memorization. Additionally, multi-grade teaching where one teacher is responsible for students across several grade levels is pervasive, affecting roughly 39–40 percent of public schools and further diluting instructional effectiveness (*Pakistan Foundational Learning Hub* analysis). This scenario undermines the capacity for targeted instruction and accelerates learning loss.

The shortage of qualified teachers extends to subject areas such as mathematics, science, and English, where expertise is essential for building foundational skills. A survey of teacher education programs revealed that less than 10 percent of the teaching force had a degree in science or mathematics, highlighting structural weaknesses in subject qualification and teacher deployment (*Alljournals GESR*, 2024). Teacher

absenteeism remains another persistent issue, with frequent unscheduled class absences affecting continuity of instruction, especially in rural and remote schools a phenomenon reported across multiple provincial education department audits.

Professional development opportunities are limited and often sporadic, with few mechanisms for sustained in-service training. Teachers report lack of access to contemporary pedagogical instruction that emphasizes differentiated instruction, student assessment literacy, or use of educational technology. This gap is exacerbated by underinvestment in teacher education infrastructure and weak accountability systems for teacher performance. Even where training is offered, it is frequently of short duration and insufficiently tailored to classroom realities, limiting its impact on teaching quality.

Government and non-government interventions such as those implemented by NGOs like Moawin Foundation—illustrate alternate approaches aimed at improving teacher competencies. Through targeted professional training focused on activity-based learning, classroom interaction, and digital literacy, some interventions have shown positive effects on teacher morale and student engagement (*Moawin Foundation, 2025*). However, such interventions remain limited relative to the scale of systemic need.

Table: Teacher Quality Challenges in Pakistan

Indicator	Pakistan (Approx.)	Implication
Teachers without formal training	40–50%	Weak pedagogy, low learning outcomes (<i>Education, 2020</i>)
Teachers with subject-specific degrees (math/science)	<10%	Weak subject content teaching (<i>GESR, 2024</i>)
Schools with multi-grade teaching	~39–40%	Instruction dilution
Professional development opportunities	Limited	Stagnant instructional practices

These systemic shortfalls have direct consequences on classroom practice and student achievement. For example, teachers’ inability to adapt teaching to diverse learner needs leads to passive learning environments and poor student outcomes, reinforcing cycles of educational inequity. Moreover, accountability mechanisms for teacher performance are weak, contributing to low expectations and minimal instructional improvement over time.

The consequences of poor teacher quality extend beyond basic instruction. In contexts where teachers are under qualified and unsupported, student disengagement increases, dropout rates rise, and communities lose confidence in public schooling factors that undermine broader goals of equitable education. Addressing teacher quality thus entails not only pre-service training reforms but also sustained professional development, stronger accountability systems, and incentives for performance improvement.

iii. Learning Outcomes

Learning outcomes are arguably the most critical indicators of education quality. They reflect not merely enrollment or attendance, but what learners actually know and can do as a result of schooling. In Pakistan, learning outcomes remain alarmingly low across foundational competencies, including literacy and numeracy, resulting in high levels of what the World Bank terms “learning poverty.” Learning poverty

refers to the percentage of children unable to read and comprehend a simple age-appropriate text by age ten a key predictor of future educational success and socio-economic opportunity.

According to recent analyses, approximately 77 percent of Pakistani children are in learning poverty, positioning the country among the most challenged globally in terms of foundational learning (Ayra, 2025; *The Post*, 2025). This means that more than three-quarters of children who attend school do not achieve basic literacy, undermining the very purpose of schooling and hindering further academic progress. These statistics are all the more striking given that Pakistan has made gains in enrollment; the failure to convert school attendance into real learning reflects deficits in curriculum, pedagogy, teacher quality, and systemic accountability.

Data from the Pakistan Foundational Learning Hub and national assessments reveal that 82 percent of Grade 3 children are unable to read a story in Urdu, and over 87 percent cannot perform basic two-digit division (*Pakistan Foundational Learning Hub* analysis). This crisis is indicative not of isolated classroom issues but of systemic failure to build foundational competencies across primary grades. Such learning gaps have long-term implications: students who lack reading fluency and numeracy cannot effectively access higher-order content in later grades, leading to increased repetition and dropout rates.

Table : Learning Poverty and Skill Deficits

Skill Area	% Unable to Perform at Expected Level
Reading Urdu (Grade 3)	~82%
Two-digit division (Grade 3)	~87%
Basic comprehension by age 10 (learning poverty)	~77%

Sources: *Pakistan Foundational Learning Hub analysis (2025); Ayra (2025)*

These learning outcomes vary significantly by socio-economic status, gender, and location. Children from rural areas and low-income households exhibit higher rates of learning poverty compared to their urban, wealthier peers. Girls, particularly in conservative regions, often lag further due to compounded barriers including limited access, early marriage, and lower expectations for academic success.

The consequences of poor learning outcomes extend beyond the classroom. Economists and education specialists argue that large populations of students without foundational skills weaken national human capital, reduce labor market competitiveness, and exacerbate cycles of poverty and inequality. In a knowledge economy, basic literacy and numeracy functions serve as essential prerequisites for higher learning, vocational skills, and workforce adaptability. Pakistan's inability to ensure foundational learning thus undermines its broader socio-economic development trajectory and its capacity to achieve SDG-4 by 2030.

Case studies from provincial learning assessments underscore the critical nature of the crisis. In Punjab, over half of Grade 5 students failed to demonstrate proficiency in literacy and numeracy benchmarks expected at lower grades, suggesting that educational progression does not equate to competency development (*The Tribune*, 2025). This pattern reflects structural teaching and learning deficiencies that transcend provincial boundaries.

Addressing learning poverty requires holistic reform including teacher training, curriculum realignment, continuous assessment, parental involvement, and targeted support for disadvantaged learners. Innovations

such as foundational learning hubs, community engagement strategies, and curriculum simplification have shown promise in pilot contexts, but scaling such interventions presents logistical and financial challenges. Nonetheless, investing in foundational learning is not only an educational imperative but a socio-economic priority if Pakistan is to break cycles of disadvantage and achieve meaningful, equitable quality education.

Table: Quality of Education and Learning Outcomes

Quality Indicator	Evidence / Statistics	Achievement	Gap / Failure	SDG-4 Link
Teacher Qualifications	96.6% primary teachers qualified	Improved credentialing	Weak pedagogy persists	4.c
Grade-2 Reading Proficiency	12.8% can read a story	Learning measured	Severe learning poverty	4.1
Grade-3 Numeracy	37.9% basic arithmetic	Assessment expansion	Foundational skills weak	4.6
National Learning Assessments	Conducted in Grades 4 & 8 only	Benchmarking initiated	No early-grade national assessment	4.1
Curriculum Orientation	Predominantly rote-based	Revisions initiated	Poor labor-market relevance	4.4

Source (APA): Pakistan Institute of Education. (2023). *Toolkit: Tracking SDG-4 and the Right to Education in Pakistan*. UNESCO & MoFEPT.

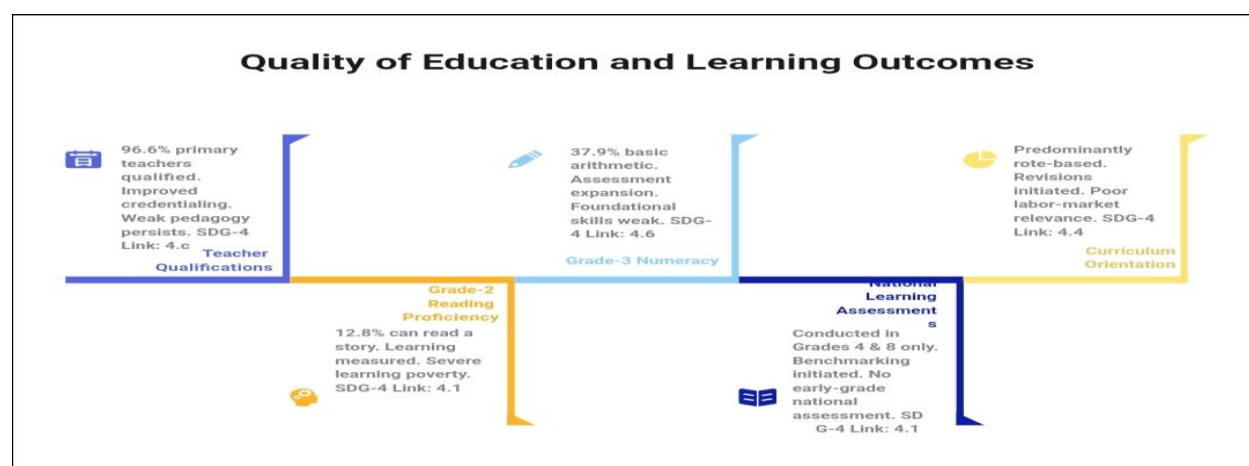


Table : Quality of Education – Learning Outcomes and Systemic Constraints

Quality Dimension	Empirical Evidence	Underlying Cause	Policy Implication
Rote-based learning	Low literacy & numeracy	Exam-oriented curriculum	Curriculum reform
Weak pedagogy	Poor classroom engagement	Limited in-service training	Teacher CPD
Teacher absenteeism	High in rural areas	Weak monitoring	Governance reform
Assessment gaps	No early-grade national test	Over-focus on enrollment	Learning metrics

Sources: World Bank (2023); UNESCO (2023); ASER Pakistan (2023).

Equity in Education in Pakistan

Equity in education is central to Sustainable Development Goal 4 (SDG-4), which aims to *ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*. However, Pakistan continues to lag behind these global targets due to persistent gender disparities, stark regional inequalities, and systemic marginalization of vulnerable groups. These inequities are reflected in enrollment, retention, learning outcomes, and access indicators, undermining the constitutional right to education for children aged 5–16 (Article 25-A) and perpetuating cycles of poverty, discrimination, and social exclusion.

i. Gender Inequality

Gender inequality is one of the most entrenched forms of educational inequity in Pakistan, shaping access, progression, and learning outcomes across all levels of education. Despite policy commitments and constitutional guarantees, the gender gap remains persistent.

One of the most striking indicators of gender inequality is the distribution of out-of-school children (OOSC). According to UNICEF, Pakistan has the world's second-highest number of OOSC, with *approximately 22.8 million children aged 5–16 not attending school*, representing nearly 44 percent of the school-aged population (UNICEF Pakistan). Within this total, girls are disproportionately affected: at the primary level, 8.6 million girls are enrolled compared to 10.7 million boys; however, at lower secondary, the gap widens as girls' enrollment declines more steeply than boys' (UNICEF Pakistan). Gender disparities are thus evident not only in overall numbers but also in retention and progression to higher levels of education.

Literacy rates further demonstrate persistent gender inequity. The 2023 Population and Housing Census indicates a national literacy rate of 60.65 percent, with 68.0 percent for males and just 52.84 percent for females (Economic Survey 2025 summary;). Urban literacy levels (74.09 percent) surpass rural literacy (51.56 percent), but the gender gap remains significant across both contexts, underscoring entrenched social and structural barriers. Provinces exhibit disparities: in Balochistan, female literacy is particularly low at 32.80 percent, compared to 50.50 percent for males, while in Khyber Pakhtunkhwa, female literacy is 37.15 percent compared to 64.57 percent for males. These differences highlight that gender inequity intersects with rural-urban and regional divides.

Empirical data also reveal gender gaps in enrollment ratios. Gross Enrolment Ratios (GER) and Gender Parity Indices (GPI) from the Pakistan Education Statistics show that while the pre-primary GER gender gap (GPI ~0.85) is somewhat narrow, disparities persist at primary (GPI ~0.87), middle (GPI ~0.92), and high school levels (GPI ~0.9), indicating that girls are consistently underrepresented relative to boys as education level increases (*turn0search7*). This pattern is further exacerbated in secondary and higher secondary education, where cultural norms and economic pressures more often push girls out of formal schooling.

Cultural norms, traditional gender roles, and early marriage are significant drivers of girls' exclusion from schooling. In rural contexts where approximately 68 percent of Pakistan's population lives parents tend to invest more in boys' education due to entrenched beliefs about gender roles, safety concerns, and domestic expectations for girls. UNICEF's Situation Analysis warns that girls in remote and poor households are significantly less likely to attend and complete school, with secondary school attendance particularly low in provinces like Sindh and Balochistan. Factors such as early marriage and household responsibilities lead to high dropout rates among adolescent girls, impeding retention and continuity of education (UNICEF, 2020).

Gender inequality in education has deep developmental implications. A lower educational attainment for girls not only affects their individual opportunities but also has broader socio-economic consequences, including reduced labour force participation, poorer health outcomes, and intergenerational cycles of poverty. For instance, research suggests countries with higher female educational attainment exhibit better economic productivity and health indicators a connection that is weakened in Pakistan due to persistent gender gaps.

Although certain policy interventions such as gender-focused scholarships and conditional cash transfers exist, their reach and implementation remain limited. Without systemic action to address societal norms, transportation safety, school infrastructure (especially gender-friendly facilities), and community engagement, gender disparities are likely to persist beyond 2030.

ii. Regional Inequalities

Regional disparities constitute another major dimension of educational equity in Pakistan. These inequities manifest across rural vs. urban divides and are particularly pronounced when comparing provinces such as Punjab, Sindh, Khyber Pakhtunkhwa (KP), and Balochistan.

The rural-urban divide is one of the most significant structural disparities. Data from the Economic Survey 2025 show that literacy in urban areas is 74.09 percent, compared to a much lower 51.56 percent in rural areas. Given that a substantial majority of Pakistan's population resides in rural settings, this divide exacerbates inequality in access, retention, and educational attainment. Rural children face greater barriers due to limited school availability, long travel distances, and weaker educational infrastructure, which in turn increase dropout rates and reduce completion levels.

Provincial disparities further compound these inequities. According to the 2023 census-based Pakistan Education Statistics, the proportion of out-of-school children varies significantly by province: Punjab (32 percent), KP (30 percent), Sindh (47 percent), and Balochistan (69 percent) of children aged 5–16 are out of school. These figures underscore that regions like Balochistan and Sindh are disproportionately disadvantaged relative to Punjab and KP, where school participation rates are relatively higher.

Literacy data also reflect regional inequities. Punjab's overall literacy rate stands around 66.25 percent, while Sindh is at 57.54 percent, KP at 51.09 percent, and Balochistan at 42.01 percent. Within these provinces, further disparities exist between urban and rural populations, where rural female literacy lags well behind rural male literacy, amplifying both gender and regional inequity.

Such regional inequities arise from historical underinvestment, governance challenges, and differential prioritization of education across provincial administrations. For example, Balochistan's schooling infrastructure is among the weakest nationally due to sparse population distribution, difficult terrain, and lower public spending, contributing to its status as the province with the highest out-of-school rate. In contrast, more urbanized provinces benefit from historically stronger schooling systems and higher literacy rates, though equity gaps persist even within them.

The implications of regional inequity extend beyond schooling access. Children in underdeveloped regions are more likely to face poverty, lower school quality, insufficient learning environments, male-dominant household priorities, and limited labour market opportunities. These intersecting disadvantages underscore the need for targeted policy interventions at the provincial level, including equitable resource allocation, improved school infrastructure, and community-based engagement strategies tailored to local socio-cultural contexts.

iii. Marginalized Groups

Equitable education demands inclusive policies and practices that support the educational participation of marginalized groups, including children with disabilities, religious minorities, refugees, and internally displaced persons (IDPs). In Pakistan, these populations experience compounded inequities due to structural, social, and economic barriers.

Children with Disabilities

Globally recognized frameworks for inclusive education stress that children with disabilities should have equal opportunities to participate in mainstream education. However, in Pakistan, access for children with disabilities remains severely limited. Policy frameworks exist at the provincial level, and disability is recognized in legal documents, but implementation is inconsistent. UNESCO's PEER report highlights that segregated schooling systems and lack of appropriate accommodations contribute to the exclusion of children with special needs. Moreover, insufficient teacher training and inaccessible school environments further marginalise this population, leading to very low participation rates for children with disabilities in regular classrooms.

Religious Minorities

Religious minority students such as Hindus, Christians, Sikhs, and others also encounter barriers in accessing equitable education. Although official statistics on minority enrollment are scarce, multiple civil society reports indicate that minority students often face discrimination, including differential treatment within schools, limited representation in educational leadership, and fewer opportunities for academic advancement. Discrimination may also arise due to language barriers, socio-economic disadvantage, and cultural exclusion, which collectively impede educational equity for minority communities.

Refugees and IDPs

Pakistan hosts a large refugee population, particularly from Afghanistan. UNICEF's *State of Children in Pakistan* report highlights that refugee and IDP children face significant hurdles in accessing formal education. Many refugee children either attend informal or community-based schools or have irregular participation due to unstable living conditions and lack of documentation (*turn0search25*). Education access for refugee children is further limited by language challenges, economic constraints, and social exclusion. These conditions significantly increase the likelihood of disengagement from education, leading to long-term disadvantages.

Equity in education remains a deeply multidimensional challenge in Pakistan. Persistent gender disparities, stark regional inequalities, and systemic marginalisation of vulnerable groups continue to undermine progress toward *inclusive and equitable quality education* as envisioned in SDG-4. Despite policy frameworks and constitutional guarantees, the lived reality for millions of children remains one of exclusion, disadvantage, and inequity.

To advance equity, Pakistan must strengthen targeted interventions that address socio-cultural norms, ensure equitable resource distribution across provinces, and support vulnerable populations with inclusive policies and accessible learning environments. Only through such comprehensive and context-sensitive reforms can Pakistan hope to achieve meaningful equity in education by 2030.

Table : Equity in Education – Gender, Region, and Marginalized Groups

Equity Dimension	Key Statistics	Most Affected Groups	Equity Gap	SDG-4 Target
Gender Literacy Gap	Male 68.0%, Female 52.8%	Rural girls	Persistent female disadvantage	4.5
Rural–Urban Literacy	Urban 74.1%, Rural 51.6%	Rural women	Spatial exclusion	4.5
Provincial Literacy	Punjab 66.3%, Balochistan 42.0%	Balochistan	Structural underdevelopment	4.5
Disability Inclusion	<1% disabled children enrolled	Children with disabilities	Near-total exclusion	4.5
Refugees & IDPs	Interrupted schooling	Afghan refugees, flood-affected IDPs	Weak institutional integration	4.5

Source: Government of Pakistan. (2023). Population Census & Education Indicators. Pakistan Bureau of Statistics.

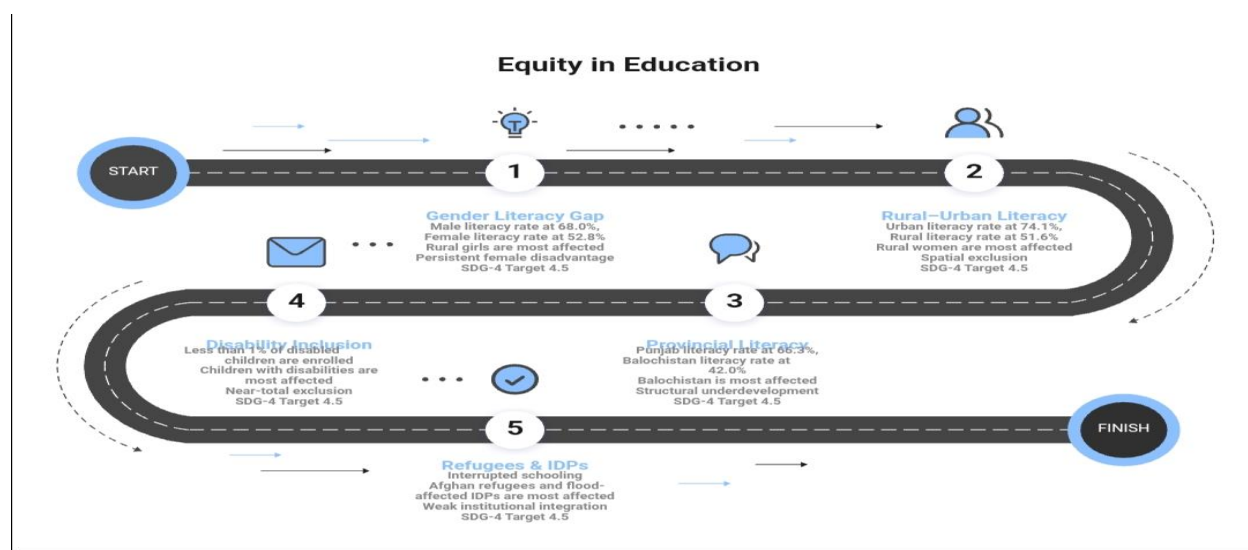


Table : Equity in Education – Gender, Location, and Marginalized Groups

Equity Axis	Key Statistics	Who Is Most Affected	SDG-4 Target Violated
Gender	Girls OOSC: ~8% vs boys 6%	Rural girls	4.5
Location	Urban literacy 74% vs rural 52%	Rural poor	4.5
Poverty	Lowest quintile worst outcomes	Slum & rural households	4.1, 4.5
Disability	<33% schools accessible	Disabled children	4.a
Refugees/IDPs	Interrupted schooling	Afghan refugees, flood IDPs	4.5

Sources: ASER (2023); ITA (2024); UNICEF Pakistan (2024); Pakistan Bureau of Statistics (2023).

Table: Pakistan's Progress on Equity in Education under SDG-4 – Achievements and Gaps (2015–2025)

Dimension	Key Indicators / Evidence	Achievements	Persistent Gaps / Failures	Implications for SDG-4
System Capacity & Monitoring	SDG-4 indicators expanded to 31; alignment with UIS methodology	Improved data coverage; better disaggregation by gender, region, rural–urban	Gaps in learning outcome data; weak reporting on SDG-4.7 (ESD & global citizenship)	Limits evidence-based policymaking and SDG benchmarking
Teacher Qualifications	96.6% primary teachers; 90.3% lower-secondary teachers meet minimum standards	Significant improvement in formal teacher qualifications	Quality of pedagogy remains weak; limited continuous professional development	Qualification gains not translating into improved learning outcomes
Gender Equity	26.2 million OOSC; 42.8% girls vs 35.5% boys	Near parity at early education levels; narrowing gender gap at upper-secondary	Female dropout rises at secondary level; rural and provincial gender gaps persist	SDG-4.5 (gender equity) remains unmet, especially for rural girls
Regional Equity	61.2% population rural; high OOSC in Balochistan, rural Sindh, KP	Provincial autonomy allows localized interventions	Deep inter-provincial and rural–urban disparities; weak infrastructure	Unequal access contradicts SDG-4's equity mandate
Over-Age Enrollment	Over 50% primary students over-age	Recognition of issue in national data	Weak early childhood education; delayed school entry due to poverty	Affects retention, completion, and learning efficiency
Children with Disabilities	Only 0.44% of persons with disabilities enrolled	Policy recognition of inclusive education	Severe exclusion; lack of infrastructure, trained teachers, assistive tools	Major failure in SDG-4.5 (inclusion of vulnerable groups)
Refugees & IDPs	Large Afghan refugee population; flood- and conflict-induced displacement	Some NGO and donor-supported education initiatives	Lack of documentation, interrupted schooling, poor coordination	Education access for displaced children remains fragile
Education Financing	Public spending ~2% of GDP	Budgetary acknowledgment of education crisis	Far below UNESCO benchmark (4–6%); inequitable allocation	Underfunding undermines all SDG-4 targets

Crisis Resilience	COVID-19 and 2022 floods	Digital and emergency responses initiated	Severe learning losses; infrastructure damage in poor regions	Highlights system fragility and inequity
Overall SDG-4 Progress	Mixed performance across targets	Institutional reforms and improved reporting	Persistent inequities in access, quality, and inclusion	Pakistan remains off-track for SDG-4 by 2030

Source: Pakistan Institute of Education. (2023). Pakistan SDG-4 Mid-Term Review Report. Ministry of Federal Education and Professional Training, Government of Pakistan, with support from UNESCO.

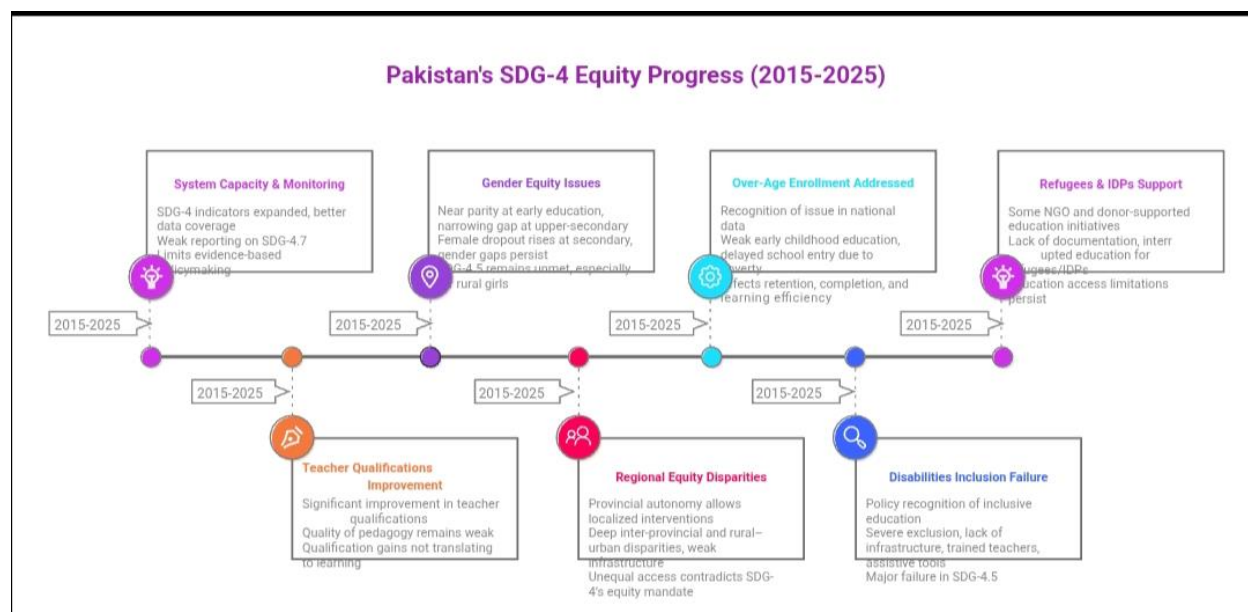


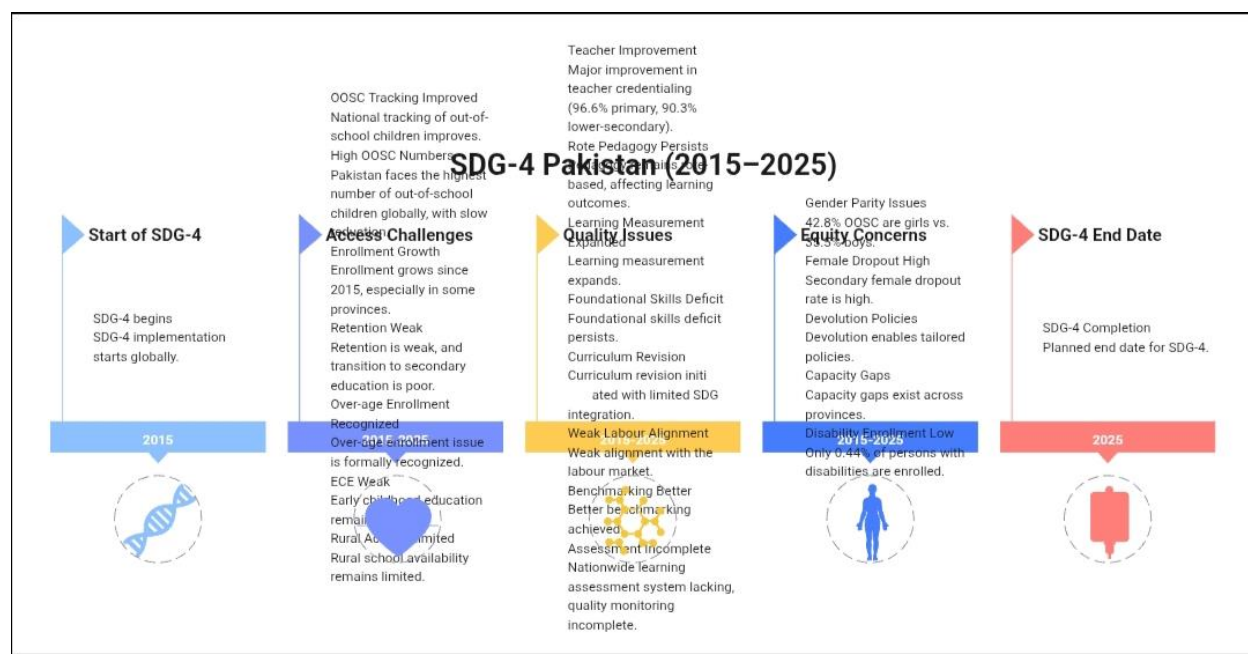
Table: SDG-4 Mid-Term Review Evidence on Access, Quality, and Equity in Education in Pakistan (2015–2025)

Dimension	Indicator (SDG-4 Target)	Key Statistics from SDG-4 MTR	Achievements	Failures / Gaps	Relevance to Research Argument
ACCESS	Out-of-School Children (4.1)	26.2 million children (5–16) out of school	Improved national tracking of OOSC	Highest OOSC numbers globally; slow reduction	Demonstrates access crisis despite constitutional guarantees
	Net Enrollment (Primary)	Near-universal enrollment in some provinces	Enrollment growth since 2015	Retention weak; transition to secondary poor	Access gains not sustained

	Over-age Enrollment	>50% primary students over-age	Issue formally recognized in MTR	Weak early childhood education (ECE)	Structural inefficiency undermines access
	Rural Access	61.2% population rural	Some community schools established	Rural school availability limited	Geography remains major access barrier
QUALITY	Teacher Qualifications (4.c)	96.6% primary, 90.3% lower-secondary teachers qualified	Major improvement in teacher credentialing	Pedagogy remains rote-based	Qualifications ≠ learning outcomes
	Learning Poverty (4.1)	Large share of students lack basic literacy	Learning measurement expanded	Foundational skills deficit persists	Confirms quality crisis
	Curriculum Relevance (4.4)	Limited SDG, skills integration	Curriculum revision initiated	Weak labour-market alignment	Education not employment-oriented
	Assessment Systems	Expansion of SDG-aligned indicators	Better benchmarking	No nationwide learning assessment system	Quality monitoring remains incomplete
EQUITY	Gender Parity (4.5)	42.8% OOSC girls vs 35.5% boys	Near parity at early grades	Secondary female dropout high	Gender equity weakest dimension
	Provincial Disparities	Balochistan, rural Sindh, KP lag	Devolution enables tailored policies	Capacity gaps across provinces	Inequality embedded structurally
	Disability Inclusion (4.5)	Only 0.44% persons with disabilities enrolled	Policy recognition exists	Near-total exclusion	Severe failure of inclusive education
	Refugees & IDPs	Millions affected by conflict/floods	NGO & donor initiatives	No systemic integration	Marginalised groups left behind
	Urban-Rural Divide	Urban literacy far higher	Urban school density	Rural female literacy lowest	Spatial inequity persistent
FINANCING (Cross-Cutting)	Public Education Spending	≈2% of GDP	Budget visibility improved	Below UNESCO 4–6% benchmark	Underfunding explains failures

GOVERNANCE (Cross-Cutting)	SDG-4 Monitoring	31 indicators aligned with UIS	Stronger data systems	Weak use for policymaking	Governance gap limits reform impact
CRISIS RESILIENCE	COVID-19 & Floods	Severe learning disruption	Emergency responses initiated	Learning losses deepened	System fragility exposed

Source: Pakistan Institute of Education. (2023). Pakistan SDG-4 Mid-Term Review Report. Ministry of Federal Education and Professional Training, Government of Pakistan, with support from UNESCO.



DISCUSSION

The findings of this study reveal that Pakistan has made incremental progress toward achieving SDG-4, yet substantial gaps persist across access, quality, and equity in education. The synthesis of the data shows that while enrollment rates have increased marginally at the primary level, learning outcomes remain poor, gender and regional disparities persist, and marginalized populations continue to be excluded. These findings align with broader evidence indicating that Pakistan ranks among the countries with the highest numbers of out-of-school children globally, and consistently underperforms in terms of equitable and quality learning (UNICEF Pakistan, n.d.; UNESCO, 2025).

Synthesis of Findings

The analysis indicates several key patterns. First, access to education remains uneven. Enrollment has improved at the primary level, with net enrollment ratios approaching 75% nationally, yet approximately 22.8 million children remain out of school, disproportionately girls and children from rural or conflict-affected regions (UNICEF Pakistan.). Socioeconomic and cultural barriers such as poverty, early marriage, and traditional gender roles continue to constrain participation. Secondary and tertiary enrollments remain particularly low, reflecting dropout patterns influenced by financial pressures and social norms.

Second, the quality of education remains deficient. Curriculum and pedagogy remain largely focused on rote learning rather than critical thinking and skills development. Teacher absenteeism, limited professional development, and poorly aligned assessment systems undermine learning outcomes. Learning poverty, defined as the proportion of children unable to read and understand a basic text by age 10, is estimated at 44% nationally, highlighting the gap between access and meaningful education (World Bank, 2023).

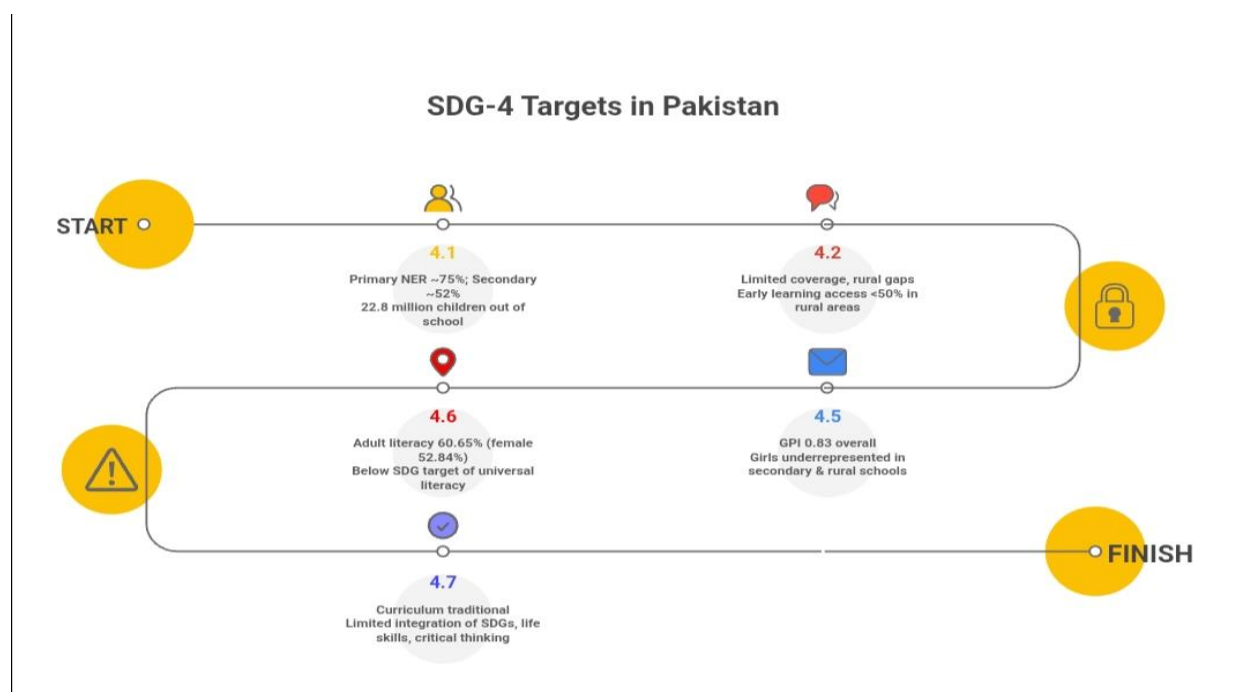
Third, equity challenges remain pervasive. Gender disparities, regional inequalities, and the exclusion of marginalized groups including persons with disabilities, religious minorities, refugees, and IDPs illustrate systemic inequities. Provinces such as Balochistan and KP lag in both enrollment and literacy, while rural children consistently have lower school access compared to urban peers. Gender parity indices show persistent disadvantages for girls, particularly in rural and conflict-prone areas (UNESCO SDG-4 Midterm Review, 2025).

Collectively, these findings suggest that Pakistan's progress toward SDG-4 is incremental, uneven, and heavily mediated by structural and socio-cultural factors.

Comparison with SDG-4 Targets

SDG-4 encompasses multiple targets, including ensuring free, equitable, and quality primary and secondary education, eliminating gender disparities, and improving access for marginalized groups. Pakistan has made partial strides: primary enrollment has increased, and certain gender-targeted initiatives such as stipends for girls have shown localized success. However, comparative analysis indicates that the country remains far from meeting SDG-4 benchmarks:

SDG-4 Target	Current Status (Pakistan)	Gap Analysis
4.1 Free primary/secondary education	Primary NER ~75%; Secondary ~52%	22.8 million children out of school
4.2 Early childhood development	Limited coverage, rural gaps	Early learning access <50% in rural areas
4.5 Gender parity	GPI 0.83 overall	Girls underrepresented in secondary & rural schools
4.6 Literacy & numeracy	Adult literacy 60.65% (female 52.84%)	Below SDG target of universal literacy
4.7 Education for sustainable development	Curriculum largely traditional	Limited integration of SDGs, life skills, critical thinking



These comparisons illustrate that while policy frameworks exist, implementation gaps prevent the translation of goals into meaningful outcomes, particularly for equity-focused targets.

Why Progress Remains Slow

Several interrelated factors explain Pakistan's slow progress toward SDG-4. First, structural weaknesses in governance constrain effective policy implementation. The 18th Constitutional Amendment devolved education to provinces, yet coordination between federal and provincial authorities remains inconsistent. Budget allocations are low (~2.5% of GDP, below UNESCO's recommended 4–6%), limiting infrastructure expansion, teacher training, and program coverage (Economic Survey of Pakistan, 2025).

Second, socio-cultural barriers inhibit access, especially for girls and marginalized communities. Gender norms, early marriage, and conservative beliefs prevent children particularly in rural or tribal areas from completing education. Similarly, refugee and IDP children face mobility, documentation, and language barriers that exclude them from formal education systems.

Third, resource and quality deficits impede learning. Teacher shortages, low qualifications, rote-based curricula, and weak assessment systems contribute to poor learning outcomes, even among enrolled children. Infrastructure gaps such as absence of separate sanitation for girls, classroom overcrowding, and lack of transport also reduce attendance and retention, particularly in rural and marginalized regions.

Finally, ineffective monitoring and accountability mechanisms hinder progress. While Pakistan participates in UNESCO's global monitoring frameworks, national data collection systems (e.g., EMIS) are incomplete or inconsistent, leading to insufficient evidence to inform policy or target interventions efficiently.

Structural and Governance Explanations

From a governance perspective, fragmented administration and inconsistent policy execution are critical constraints. The federal-provincial division of responsibilities, while designed to decentralize education, has led to uneven policy adoption, duplication of programs, and variable educational outcomes. For example, Punjab has leveraged public-private partnerships to improve access and gender parity, while Balochistan struggles with limited capacity and geographic challenges (UNESCO, 2025).

Institutional bottlenecks such as lack of trained inspectors, weak teacher accountability, and minimal community engagement further limit effective implementation. Corruption, political interference in appointments, and mismanagement of funds exacerbate disparities, particularly in poorer provinces. Moreover, policy reforms often focus on quantitative indicators (enrollment) rather than qualitative improvements, resulting in increased access but persistent learning poverty.

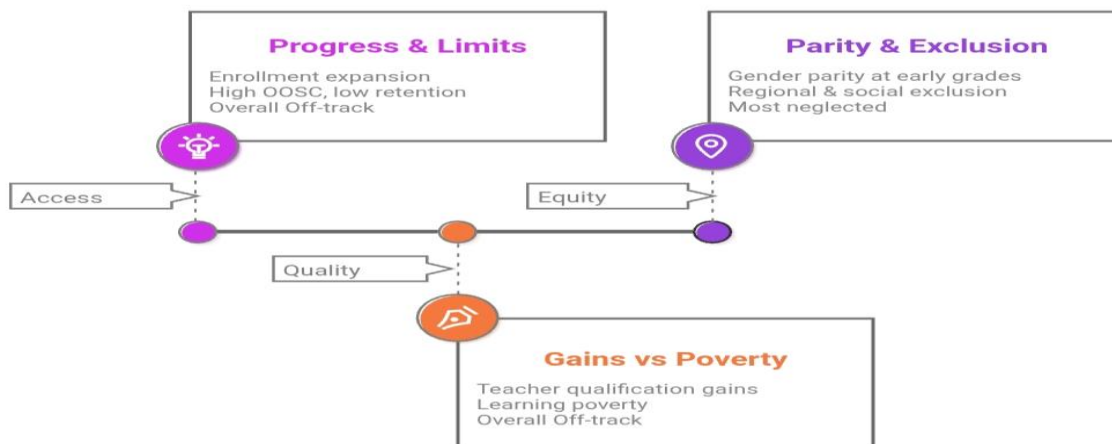
In sum, structural, socio-cultural, and governance challenges converge to explain why Pakistan remains off-track on multiple SDG-4 targets. Without coordinated policy, sustained investment, community engagement, and accountability reforms, the current pace of progress is unlikely to meet the 2030 SDG-4 goals.

Table: Synthesis – Access, Quality, and Equity under SDG-4

Dimension	Key Progress	Major Constraint	Overall SDG-4 Status
Access	Enrollment expansion	High OOSC, low retention	Off-track
Quality	Teacher qualification gains	Learning poverty	Off-track
Equity	Gender parity at early grades	Regional & social exclusion	Most neglected

Source :Pakistan Institute of Education. (2023). SDG-4 Mid-Term Review Report.

Synthesis – Access, Quality, and Equity under SDG-4



CONCLUSION

This study set out to examine Pakistan's progress toward Sustainable Development Goal 4 (SDG-4) through an integrated analysis of access, quality, and equity in education over the period 2015–2025. Drawing on national and international datasets, policy documents, and citizen-led assessments, the research finds that while Pakistan has made important normative and institutional commitments to education, substantive progress toward inclusive and equitable quality education remains limited and uneven.

In terms of access, the expansion of school enrollment particularly at the primary level signals partial advancement under SDG-4. However, the persistence of 22–26 million out-of-school children, one of the highest figures globally, reveals a structural failure that enrollment-focused policies alone have not resolved. The burden of exclusion is disproportionately borne by girls, children from poor households, rural populations, conflict-affected regions, urban slums, refugees, and internally displaced children. These patterns indicate that access deficits are not merely quantitative gaps but are deeply embedded in poverty, insecurity, weak infrastructure, and governance fragmentation following the devolution of education under the 18th Constitutional Amendment.

With regard to quality, the findings demonstrate that Pakistan's education system has not translated increased participation into meaningful learning. National and international assessments consistently show low literacy and numeracy outcomes, high levels of learning poverty, and limited acquisition of foundational and transferable skills. Despite improvements in formal teacher certification, classroom practices remain dominated by rote memorization, outdated curricula, weak assessment systems, and limited pedagogical support. These deficiencies undermine SDG-4's emphasis on "quality education" and restrict education's role in enhancing employability, productivity, and social mobility.

The study further establishes that equity is the most neglected dimension of Pakistan's SDG-4 implementation. Gender disparities persist across all education levels, particularly in rural and conservative regions, where cultural norms, early marriage, and safety concerns restrict girls' participation. Regional inequalities between provinces and within provinces remain stark, reflecting long-standing development imbalances. Moreover, children with disabilities, religious minorities, refugees, and internally displaced

populations face systemic exclusion, with limited physical accessibility, inadequate learning support, and weak inclusion mechanisms. These inequities directly contradict SDG-4's commitment to "leaving no one behind" and expose gaps between constitutional guarantees and lived realities.

A critical cross-cutting finding of this research is the disconnect between policy ambition and implementation capacity. Chronic underinvestment in education consistently below international benchmarks has constrained service delivery, teacher development, infrastructure expansion, and crisis resilience. Governance challenges, including fragmented federal-provincial coordination, weak monitoring, and limited accountability mechanisms, have further diluted the impact of reforms. External shocks such as COVID-19 and climate-induced disasters have exacerbated learning losses, exposing the fragility of Pakistan's education system.

In sum, Pakistan's trajectory toward SDG-4 between 2015 and 2025 reflects incremental gains in access, but stagnation in learning quality and persistent structural inequities. Without a decisive shift from enrollment-centric policies toward learning-centered, equity-driven, and adequately financed reforms, the country is unlikely to meet SDG-4 targets by 2030. The findings underscore the need for integrated policy responses that simultaneously address access, quality, and equity, supported by robust data systems, inclusive governance, and sustained political commitment. Achieving SDG-4 in Pakistan, therefore, is not merely a technical challenge but a broader developmental imperative tied to social justice, economic resilience, and democratic sustainability.

POLICY RECOMMENDATIONS

Based on the empirical analysis of Pakistan's progress toward SDG-4, this study proposes a set of integrated policy recommendations aimed at addressing structural deficits in access, quality, and equity while strengthening governance and implementation capacity.

1. Prioritize Universal Access through Targeted and Differentiated Interventions

Pakistan must move beyond uniform enrollment expansion toward targeted access strategies that focus on the most excluded populations. Provincial governments should develop district-specific access plans for areas with high concentrations of out-of-school children, particularly in Balochistan, rural Sindh, merged districts of Khyber Pakhtunkhwa, urban slums, and conflict-affected regions. Conditional cash transfers, school feeding programs, transport stipends for girls, and flexible schooling models (second-shift schools, community learning centers, and accelerated learning programs) should be expanded and systematically monitored. Strengthening early childhood education (ECE) must be a priority to reduce delayed entry and dropout at later stages.

2. Shift from Enrollment-Centric Policies to Learning-Centered Reforms

Improving access without improving learning outcomes risks perpetuating learning poverty. Education policy must therefore place foundational literacy and numeracy (FLN) at the core of SDG-4 implementation. National and provincial governments should adopt early-grade learning benchmarks, aligned with international standards, and integrate them into curriculum, assessment, and teacher support systems. Regular national learning assessments at early grades should be institutionalized to track progress and guide corrective action. Curriculum reform should emphasize critical thinking, problem-solving, and real-world relevance, reducing reliance on rote memorization.

3. Strengthen Teacher Effectiveness through Continuous Professional Development

While teacher certification rates have improved, the quality of classroom instruction remains weak. A national framework for continuous professional development (CPD) should be established, focusing on pedagogical skills, inclusive teaching practices, formative assessment, and classroom management. Incentive-based deployment policies are needed to attract and retain qualified teachers in rural and marginalized areas. Teacher performance monitoring should shift from compliance-based inspections to supportive, school-based mentoring systems.

4. Address Equity Gaps through Inclusive and Gender-Responsive Education Policies

Equity must become a central criterion of education planning and financing. Gender-responsive strategies including safe school infrastructure, female teacher recruitment, menstrual hygiene facilities, and community engagement to counter early marriage should be scaled up, particularly at the secondary level. Inclusive education policies must be operationalized for children with disabilities, including accessible school infrastructure, assistive learning materials, trained teachers, and reliable data on disability-disaggregated enrollment. Education provision for refugees and internally displaced children should be integrated into national systems rather than treated as ad-hoc or donor-dependent interventions.

5. Reduce Regional Disparities through Equitable Financing Mechanisms

Persistent provincial and intra-provincial disparities highlight the need for equity-based financing formulas. Federal and provincial governments should allocate education resources using criteria that account for poverty levels, gender gaps, geographic remoteness, and infrastructure deficits. Education spending must be gradually increased toward international benchmarks (4–6% of GDP), with ring-fenced funding for underserved districts. Transparent tracking of education expenditures is essential to ensure resources reach intended beneficiaries.

6. Strengthen Governance, Coordination, and Accountability

Effective SDG-4 implementation requires improved federal–provincial coordination following decentralization. Clear delineation of roles in policy formulation, financing, monitoring, and evaluation is necessary to reduce fragmentation. Education management information systems (EMIS) and SDG-4 indicator tracking should be fully integrated into planning and budgeting processes. Public reporting of education outcomes and independent evaluations can enhance accountability and policy learning.

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