SCHOOL EDUCATION IN PAKISTAN

A Sector Assessment

JUNE 2019

ASIAN DEVELOPMENT BANK

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6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines
Tel +63 2 632 4444; Fax +63 2 636 2444
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Foreword

Pakistan has made progress in reducing poverty, thanks to economic growth and policy reforms. During 2004–2015, the national poverty rate fell from 55% to 39%, based on the Global Multidimensional Poverty Index of the United Nations Development Programme. But development gaps remain, especially in the education sector.

School education outcome indicators are insufficient to support economic and social development in Pakistan. An estimated 22.9 million children aged 5–16 years are out of school—a worrying statistic for a country whose current workforce is young, mostly unskilled, and poorly prepared for productive employment. The country's high population growth rate and poor health and education outcomes contribute to persistent socioeconomic, gender, and geographic inequalities.

This sector assessment describes the key challenges facing the school education system in Pakistan—with a focus on Punjab and Sindh. It also highlights recent government strategies and reforms that have sought to address these challenges and suggests some possible directions for further reform.

The Governments of Punjab and Sindh have introduced important reforms aimed at lifting the performance of their education systems, including initiatives to improve the accountability and skills of the teacher workforce, and increase the role played by public–private partnerships in the sector. Yet much remains to be done. Increased spending on education, combined with strengthened capacity and broader and deeper sector reforms, could help millions of children who are out of school to access education and boost learning levels in Pakistan.

Werner Liepach
Director General
Central and West Asia Department
Asian Development Bank

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Abbreviations

ADB	–	Asian Development Bank
AEO	–	assistant education officer
ASER	–	Annual Status of Education Report
BISE	–	Boards of Intermediate and Secondary Education
CIF	–	curriculum implementation framework
CPD	–	continuous professional development
DEO	–	district education officer
DFID	–	Department for International Development of the United Kingdom
DSD	–	Directorate of Staff Development
DTE	–	district teacher educator
ECE	–	early childhood education
EMIS	–	education management information system
EMO	–	education management organization
FAS	–	foundation-assisted school
GDP	–	gross domestic product
GER	–	gross enrollment rate
GIZ	–	Deutsche Gesellschaft für Internationale Zusammenarbeit
HEC	–	Higher Education Commission
IBCC	–	Inter Board Committee of Chairmen
IDEAS	–	Institute of Development and Economic Alternatives
IPEMC	–	Inter Provincial Education Ministers Conference
KPI	–	key performance indicator
LEAPS	–	Learning and Education Achievement in Punjab Schools
MOE	–	Ministry of Education
NEAS	–	National Education Assessment System
NEP	–	National Education Policy
NER	–	net enrollment rate
NFC	–	National Finance Commission
NFE	–	nonformal education

NGO	–	nongovernment organization
NSP	–	new school program
PCTB	–	Punjab Curriculum and Textbook Board
PEAS	–	Provincial Education Assessment System
PEC	–	Punjab Examination Commission
PEF	–	Punjab Education Foundation
PITE	–	Provincial Institute for Teacher Education
PMIU	–	project implementation and management unit
PPP	–	public–private partnership
PSLM	–	Pakistan Social and Living Standards Measurement Survey
PTR	–	pupil–teacher ratio
RSU	–	Reform Support Unit
SAT	–	Standardized Achievement Test
SAFED	–	South Asian Forum for Education Development
SAHE	–	Society for the Advancement of Education
SDG	–	Sustainable Development Goal
SEF	–	Sindh Education Foundation
SELD	–	School Education and Literacy Department
SESP	–	Sindh Education Sector Plan
SMC	–	school management committee
SPPRA	–	Sindh Public Procurement Regulatory Authority
STEDA	–	Sindh Teacher Education Development Authority
TVET	–	technical and vocational education and training
UNESCO	–	United Nations Educational, Scientific and Cultural Organization
UNICEF	–	United Nations Children's Fund
USAID	–	United States Agency for International Development

Currency Equivalents

(as of 17 June 2019)

Currency unit	–	Pakistan rupee/s (PRe/PRs)
PRe1.00	=	$0.0064103
$1.00	=	PRs156.00

1 Introduction

Reasonable economic growth, combined with structural reforms, has reduced poverty in Pakistan over the past 15 years. Development outcomes, however, remain mixed, especially in education. While average years of schooling have increased along with life expectancy and per capita income, inequality remains high and, by other education measures, the record remains dismal. Illiteracy is widespread, and almost 23 million children aged 5–16 years are not in school—a worrying statistic for a country whose current workforce is young, mostly unskilled, and poorly prepared for productive employment.[1]

Despite these challenges, public spending on health, nutrition, and education is only at about 3% of gross domestic product (GDP), which is much lower than for comparable countries. Pakistan spends just 2% of gross national product on education, again a much lower percentage than in comparable countries. Education became primarily a provincial responsibility in 2010, and that increased responsibility was accompanied by more funding. But capacity at the provincial and district levels needs to be improved to ensure value for money in public expenditure.

This assessment describes the key issues facing the school education system in Pakistan, highlights the challenges, and suggests some possible directions for reform, with a focus on two provinces: Sindh and Punjab.

Past reform efforts have focused, for the most part, on improving access at the primary education level. Investing in and reforming the secondary education sector and improving the quality of education and governance at all levels in Pakistan are essential to improving education outcomes. These are priorities for the country to ensure inclusive growth so that current geographic, socioeconomic, and gender disparities are not perpetuated. Some of those gaps are very wide now.

Despite higher growth rates and falling poverty, inequality in Pakistan has remained high with the Gini coefficient actually rising from 0.35 in 1987–1988 to 0.41 in 2013–2014.[2] The population growth rate, which declined slightly but remained high at an estimated 2.4% in 2017, poses a major challenge to many sectors, including education, where the public sector struggles to increase facilities and services to keep up with the population growth rate.[3] Pakistan's fertility rate is among the highest in the world. In addition, the country continues to have very poor human development outcome indicators, especially in education and health, compared with other lower middle-income countries and its neighbors in South Asia. The cycle of a high population growth rate and poor health and education outcomes contributes to persistent socioeconomic, gender, and geographic inequalities.

Although its human development index rankings have improved in the last couple of decades, Pakistan's educational indicators are still dismally low. About 43% of the population (age 15+) is

[1] World Bank. 2015. *Tracing the Flow of Public Money, Punjab: Expenditure and Quantity of Service Delivery Survey in Primary School Sector.* Washington, DC.

[2] United Nations Development Programme (UNDP). 2016. *Development Advocate Pakistan.* Volume 3. Issue 2. Islamabad.

[3] *Dawn.* 2017. Pakistan's Population Has Ballooned to 207.77 Million, Provisional Census Results Show. 25 August. https://www.dawn.com/news/1353867.

illiterate with wide discrepancies across provinces, location (urban vs. rural), and gender (Table 1). At the national level, 55% of women aged over 15 are illiterate. In Sindh, as many as 80% of rural women are illiterate. With an average age of 21 years, Pakistan's population is largely comprised of unskilled working-age youth who are unprepared for high-quality productive jobs.

Table 1: Literacy Rates across Pakistan, 2014–2015

	Province	Literacy Rate (%)		
		Total	Male	Female
Overall	Pakistan	57	68	45
	Punjab	60	69	51
	Sindh	58	70	46
Urban	Pakistan	74	81	66
	Punjab	75	81	70
	Sindh	75	82	68
Rural	Pakistan	46	60	33
	Punjab	51	62	41
	Sindh	38	54	20

Source: Pakistan Social and Living Standards Measurement Survey 2014–2015.

The comments above are not meant to diminish the progress that has been made. Pakistan's economy is currently growing at an estimated 5.3%, up from 4.0% in 2013–2014.[4] The country is implementing a structural reform program that has contributed to higher growth and lower fiscal deficits. The growing economy has helped reduce poverty in Pakistan over the past 15 years. According to the new poverty line and revised methodology adopted by the government in 2016, the poverty head count fell from as high as 64% in fiscal year (FY) 2001–2002 to 30% in FY2013–2014.[5] Pakistan's per capita income increased by about 58% between 1990 and 2015.[6] Pakistan's per capita income of $1,629 in 2016 resulted in the classification of Pakistan as a low middle-income country (footnote 4). The country has made some improvement on the Human Development Index, which increased from 0.40 to 0.55 between 1990 and 2015—positioning Pakistan at 147 out of 188 countries and territories (footnote 6). Pakistan's life expectancy at birth increased by 6.3 years, the mean years of schooling increased by 2.8 years, and expected years of schooling increased by 3.5 years during this period (footnote 6).

Despite these improvements, the impact of economic growth on development outcomes remains mixed and investment levels are still low at 15% of GDP (public and private).[7] Public spending on health, nutrition, and education is much lower than that of comparable countries. This is partly driven by the particularly low tax–GDP ratio in Pakistan which stands at 12.4%—one of the lowest in the world. Further reforms to increase tax collections and prioritize public spending for education and health will be necessary as the structural adjustment program goes forward. In addition, budget execution rates, particularly in the education sector, are very low for non-salary expenditures. This is an indication of fund flow and procurement bottlenecks that need to be addressed since they constrain spending in the sector.

[4] Government of Pakistan, Ministry of Finance (MOF). 2017. *Pakistan Economic Survey 2016–2017.* Islamabad.

[5] Government of Pakistan, MOF. 2016. *Pakistan Economic Survey 2015–2016.* Islamabad.

[6] UNDP. 2016. *Human Development Report.* New York.

[7] World Bank. 2017. *Pakistan Country Assessment.* http://www.worldbank.org/en/country/pakistan.

The 2010 18th Constitutional Amendment devolved responsibility for 17 sectors, including education, from the federal government to the provincial governments in Pakistan. This was accompanied by increased funding to provincial governments from the National Finance Commission (NFC), commensurate with their increased responsibilities. However, further capacity building is required at the provincial and district levels to ensure quality service delivery along with enhanced public spending.

Pakistan's school education outcome indicators are inadequate and are lower than those of its neighbors. Pakistan has an estimated 22.9 million children aged 5–16 years who are out of school.[8] School participation and completion rates remain persistently low, particularly at the secondary level. This is true relative to other countries in the region and relative to other low middle-income countries. Wide gender and socioeconomic disparities persist. Learning levels are low, especially in science and mathematics.

There is much to do, and much that can be done, to improve the situation. By broadening and deepening reforms, Pakistan could reach the millions of children who currently get no schooling, thereby improving participation rates in school education at all levels. Targeted investments and programs could improve completion rates and learning levels. Properly focused, reforms could reduce inequalities in education outcomes across gender, socioeconomic strata, geography, and districts. Public–private partnerships (PPPs) can play a key role, as can strengthened mainstream government systems.

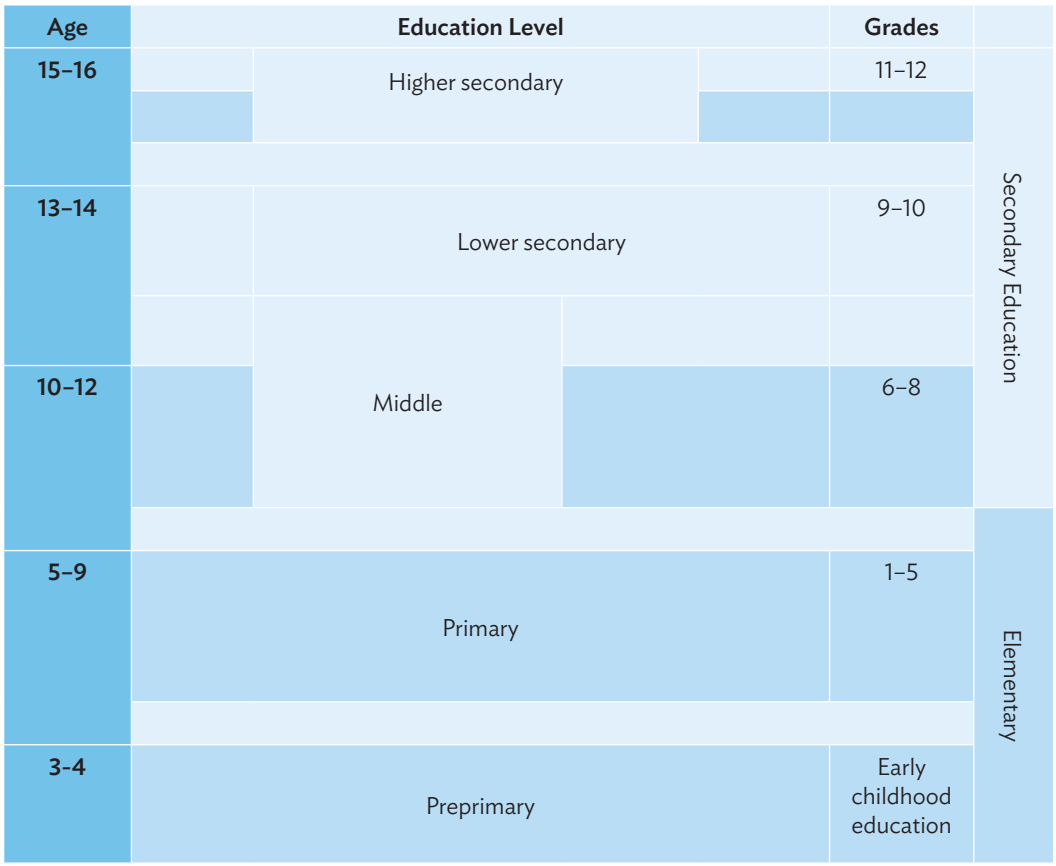
[8] Government of Pakistan, Academy of Education Planning and Management, Ministry of Federal Education and Professional Training. 2017. *Pakistan Education Statistics: 2016–2017.* Islamabad.

II Structure and Policies: The School Education Sector in Pakistan

A. Education System Structure

The structure of the school education system in Pakistan is set out in Figure 1.

Figure 1: Structure of School Education System in Pakistan



Source: Compiled by authors.

Preprimary (*Katchi*) level. The preprimary or *Katchi* grade is the entry level in the education system. According to the National Education Policy (NEP) 2009, the entry age for *Katchi* is 3–4 years with a 1-year curriculum, a separate teacher, and a separate room. However, due to inadequate resources, there are no separate teachers for *Katchi* grades in most public schools and, thus, no formal *Katchi* class is taught in most public schools. Provincial governments have recently begun introducing *Katchi* classes in some public schools, but it is far from universal. Nevertheless, some public schools do incorporate children aged 3–5 years in grade 1 classrooms in multigrade settings.

Primary level (grades 1–5). The primary level consists of 5 years of schooling from grade 1 to grade 5. The age group for primary schooling, according to the NEP 2009, is 5–9 years. Sindh and Punjab have initiated grade 5 public examinations (this will be discussed in more detail in the assessment and curriculum chapter).

Middle level (grades 6–8). The middle level spans 3 years and includes grades 6–8 and is meant for the age group 10–12 years. Most middle schools are the result of primary schools being upgraded rather than teaching solely grades 6–8. Schools that include the primary and middle levels are classified as elementary schools. In some cases, they are part of a high school where all the three levels (primary, middle, and high) exist. Some provinces such as Punjab and Sindh have province-wide public examinations at the end of grade 8 (more on this in the assessment chapter).

Lower secondary or high school level (grades 9–10). This level includes grades 9 and 10 and spans over 2 years, aimed at children aged 13–14 years. Students take a Secondary Schools Certificate public board examination both in grades 9 and 10, conducted by different boards of examinations in the various provinces which are known as "matriculation" or "matric."

Higher secondary or intermediate college level (grades 11–12). This level comprises grades 11 and 12. In the public system, it is offered either in higher secondary schools or in intermediate colleges. In some provinces, such as Sindh, these grades are no longer under the School Education and Literacy Department (SELD) as they have been moved to the College Education Department. However, a few schools under SELD still include these grades. Students take a Higher Secondary School Certificate board examination in both grades 11 and 12. There are multiple boards, with different examinations and differing standards in each province, for both the lower secondary and higher secondary examinations.

Higher education. Universities and colleges offer a 4-year bachelor's degree. After completing this, students are eligible to pursue a 2-year master's degree program at the university level. Universities also offer master of philosophy (MPhil) and doctor of philosophy (PhD) degrees after completion of the master's degree program.

B. Sector Governance

In the last decade, key policy reforms have been undertaken by the Government of Pakistan in the school education sector. These include the 18th Constitutional Amendment in 2010 and a redefinition of the NFC award, which has led to the transfer of substantially increased financial resources from the federal government to the provincial governments.[9] There are two key implications of the 18th Constitutional Amendment for the education sector. First, the introduction of Article 25-A obligates the state to provide free and compulsory education to all children from ages 5 to 16 years. Second, policy, planning, curriculum, and standards, which were the responsibility of the federal government before the 18th Constitutional Amendment, were fully devolved to provincial governments.

[9] The NFC is a constitutional body mainly responsible for distribution of tax proceeds between provinces and grant making by the federal government to provincial governments. The 7th NFC award increases the provincial share to 56% in the first year of the award and to 57.5% in subsequent years.

Prior to the 18th Constitutional Amendment, the NEP 2009 was developed by the then Ministry of Education (MOE) at the federal level, which was ratified by the provinces. After devolution, the provinces adopted the NEP 2009 with slight amendments required in view of the devolution.[10] Education service delivery up to grade 12 is primarily the responsibility of provincial and area governments.[11] They are responsible for policy formulation, sector financing, and implementation through the respective provincial education departments. In provinces such as Sindh, Punjab, and Khyber Pakhtunkhwa, school and college education are managed by different ministries while departments are headed by different ministers and secretaries. Implementing school education policies and day-to-day operations is largely the responsibility of the district education departments and includes teacher recruitment, placement, transfers, school infrastructure maintenance, and other related tasks.[12] After devolution in 2010, the federal MOE was dissolved. However, after discussions between the federal and provincial governments, the MOE was reestablished and renamed the Ministry of Federal Education and Professional Training with the responsibility of ensuring coordination among the provincial and area education offices. The National Curriculum Council (NCC) has also been revived to take on the difficult task of coordinating curriculum and standards development across provinces and areas. A forum called the Inter Provincial Education Ministers' Conference (IPEMC) was proposed in the NEP 2009 and has been serving as coordinating body among the provinces.

Higher education sector governance and management is shared (somewhat ambiguously) between the departments of education in the provinces, some higher education commissions in some of the provinces such as Sindh and Punjab, and the higher education institutes under the Higher Education Commission (HEC). The HEC, although placed under the Ministry of Federal Education and Professional Training, has an autonomous structure and plays the role of coordination, standards setting, and quality assurance among universities across Pakistan. There has been a long debate over the devolution of the HEC after the 18th Constitutional Amendment, but the matter remains unresolved.

Prior to the 18th Constitutional Amendment, student assessments across Pakistan were carried out by the National Education Assessment System (NEAS), a national-level body with its provincial arms, the Provincial Education Assessment System (PEAS). The NEAS conducted diagnostic assessments in subjects such as science, mathematics, and languages in grades 4 and 8 across the public education system in the country on a regular basis. However, after devolution, these activities waned due to lack of government funding.[13] Moreover, provinces have established, or are in the process of establishing, their own assessment systems as well. In Punjab, for example, the Punjab Examination Commission (PEC) has been established to conduct province-wide grades 5 and 8 examinations in all subjects. In Sindh, this is carried out by third-party, private sector institutions. Provinces and local areas also conduct province-wide secondary school examinations in grades 9 and 10 and higher secondary examinations in grades 11 and 12 through their respective sub-provincial Boards of Intermediate and Secondary Education (BISE).

Teacher education was a provincial subject even before the 18th Constitutional Amendment. Provinces have individually established institutional programs to manage both pre-service and in-service teacher education within their provinces. In Punjab, the Directorate of Staff Development (DSD) is the key organization responsible for in-service teacher education, whereas pre-service teacher

[10] Government of Pakistan, Ministry of Education (MOE). 2009. *National Education Policy (NEP)*. Islamabad.

[11] Pakistan is divided administratively into four provinces: Punjab, Sindh, Balochistan, and Khyber Pakhtunkhwa and areas.

[12] Teacher recruitment responsibility moves from district to province depending on the grade and/or level in which the teacher is being recruited. Districts hire teachers up to the grade 16 salary level. The province recruits for grade 17 and up.

[13] United Nations Educational, Scientific and Cultural Organization (UNESCO). 2015. *EFA: Global Education Monitoring Report: Education for All: Achievements and Challenges: 2000–2015.* Paris.

education is imparted by district-level colleges of education. The DSD is now being reformed and will be converted into the Academy for Educational Development. In Sindh, all teacher training is the responsibility of the Provincial Institute for Teacher Education (PITE) and the Curriculum Wing, along with the linked colleges of education (teacher training institutes) at the district level. Sindh also established a Sindh Teacher Education Development Authority (STEDA) in 2010–2011, to play an overarching standard-setting, regulatory, and monitoring role for all teacher education and training initiatives. However, STEDA still needs to be fully staffed to make it functional. In Khyber Pakhtunkhwa and Balochistan, PITEs are responsible for implementing in-service and pre-service training programs, along with regional colleges and training institutions. In Khyber Pakhtunkhwa, the overall management responsibility of teacher training lies with the Directorate of Curriculum and Teacher Education and, in Balochistan, with the Bureau of Curriculum and Extension Services. Private institutions, colleges, and universities also offer pre-service courses as well as in-service diploma and certificate programs. Allama Iqbal Open University, with a main campus located at the federal level, offers a distance learning program and contributes extensively to providing distance teacher education degrees.

Provinces are responsible for developing textbooks through their respective textbook boards in line with the National Curriculum, whereas the review and approval of these books was done by the federal government prior to 2010.

Despite the passage of the 18th Constitutional Amendment, the responsibility for nonformal education (NFE) remains shared by the provincial and federal governments. The federal government implements national programs, whereas provinces have separate programs with almost no coordination with the national programs. In provinces such as Punjab, NFE has a separate department with a separate secretary, whereas in Sindh, it works as a directorate under SELD. The educational institutional structure at the national and provincial levels is presented in Table 2. However, province-level variations exist in the departmental responsibilities.

Table 2: Education Governance Structure in Pakistan

National Platform	Provincial/Area Platform
Ministry of Federal Education and Professional Training	Provincial Ministries of Education and Departments/Secretariats
• Inter Provincial Education Ministers' Conference • National Curriculum Council • Academy for Education Planning and Management • Higher Education Commission • Inter-Board Committee of Chairmen • Federal Board of Intermediate and Secondary Education • National Education Assessment System • National Education Foundation • National Commission for Human Development • National Vocational and Technical Training Commission	• Education Departments/Directorates • Bureau of Curriculum/Directorate of Staff Development • Provincial Institutes of Teacher Education and Regional Institutes of Teacher Education/ Government Colleges of Elementary Teachers • Textbook Boards • Examination Commissions • Boards of Intermediate and Secondary Education • Provincial Education Assessment Systems • Provincial Education Foundations • Literacy and nonformal basic education departments • Technical Education and Vocational Training Authority

Source: Discussions with Punjab and Sindh governments.

The role of interprovincial coordination on education was performed by the IPEMC and Inter-Board Committee of Chairmen (IBCC) before the 18th Constitutional Amendment. Post-amendment, this role was transferred to the Council of Common Interests. This council was conceived in the Constitution of the Islamic Republic of Pakistan, 1973.[14] The federal government, after devolution, has created a coordinating mechanism by reviving the IPEMC to bring national cohesion in education curriculum and standards. The IPEMC meets regularly to discuss issues of common interest. An NCC has also been constituted by the IPEMC at the federal level to look into these matters.

After the approval of the NEP 2009, provinces started developing their respective education sector plans. Provinces carried out a comprehensive analysis of issues and challenges within their respective education systems and considered strategies for improving access, quality, relevance, management, and governance. The sector plans also translate the strategies into operational frameworks while identifying capacity and funding requirements to achieve desired targets. Presently, there is no separate policy document developed by any province. The respective sector plans of each province serve as the road map for implementation of the policies that were adopted based on the NEP 2009.

Discussions on the division of roles and responsibilities between the federal and the provincial governments are still underway in the IPEMC. Several challenges remain as provinces now demand greater autonomy in managing education while the federal government advocates more cohesion at the national level.

C. Nature and Size of the School Education Sector

In 2016–2017, the education system of Pakistan from preprimary to university levels, including both public and private institutions, consisted of 33.2 million students taught in more than 237,000 institutions, excluding technical and vocational institutions (footnote 8). Primary schools go from *Katchi* (preprimary) or grade 1 to grade 5. There are some stand-alone middle schools (grades 6–8). Elementary schools combine the primary and middle grades ending with grade 8. Lower secondary schools are those where grade 10 is the highest, whereas higher secondary schools are those where grade 12 is the highest. These schools may or may not include primary and middle grades.

There are four types of schools in Pakistan: public schools, private schools with the medium of instruction in Urdu or English, religious schools and non-formal schools. In 2016–2017, the major role in imparting education in Pakistan was played by the public sector with more than 164,000 institutions serving 21.6 million students. Private education in Pakistan does have a sizable share even at the school education level (preprimary to higher secondary) with a 31% share in the number of educational institutions and a 35% share in enrollments across Pakistan (footnote 8). The share of enrollments in private schools is much higher in urban areas at about 60%. The private sector ranges from low-cost private schools to high-cost elite schools, and includes stand-alone private schools, franchise schools, schools funded by government subsidies by provincial education foundations, and no-fee schools run by philanthropists and nongovernment organizations (NGOs). The private sector, however, is not regulated in a structured way. There is also a lack of systemized information available about the private sector to determine enrollments and the quality of education provided. The figures here are estimates based on the last private school census which, in some provinces, took place as far back as 2005.

[14] Government of Sindh, School Education and Literacy Department (SELD). 2014. *Sindh Education Sector Plan (SESP) 2014–2018*. Karachi.

Table 3 illustrates that private sector institutions constitute a majority share at the middle and lower and higher secondary levels in terms of number of institutions but not in the share of total enrollment, whereas the public sector dominates the primary level both in terms of number of schools and share of enrollments.

Table 3: Proportion of Education Institutions in Pakistan, by Level and Type, 2016–2017

Level of Education	Public Sector Institutions (%)	Public Sector Enrollments (%)
All	69	65
Primary	88	61
Middle	34	62
Lower Secondary	42	68
Higher Secondary	39	88
Degree College	89	86
University	59	81

Source: Pakistan Education Statistics 2016–2017.

III Challenges in the School Education Sector in Pakistan

A. Participation in School Education

Pakistan has a very high number of children aged 5–16 years who are out of school. There are an estimated 121 million children out of school all over the world and an estimated 22.8 million of them are in Pakistan.[15] There are substantial numbers of out-of-school children of all ages, with as many as 11.3 million teenagers (ages 13–16 years) (Table 4). The number of out-of-school children represents 44% of those at ages 5–16 years, with some variations across provinces. For example, 40% of children in the age group are out of school in Punjab, whereas as many as 52% are out of school in Sindh. Slightly more than half of these are girls.

Table 4: Number of Out-of-School Children in Pakistan, 2016–2017

	Out-of-School Children (million)		
Age Group	**Male**	**Female**	**Total**
5–9	2.1	3.0	5.1
10–12	3.1	3.4	6.5
13–16	5.5	5.8	11.3
5–16	10.7	12.2	22.9

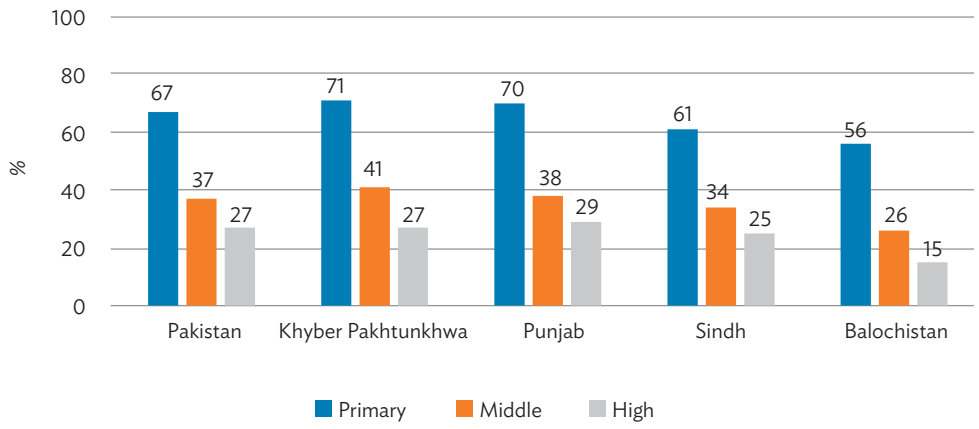
Source: Pakistan Education Statistics 2016–2017.

The size of the challenge for the country is also underscored by the low participation rates in school education at all levels. These participation rates are very low compared with those of other countries and with Pakistan's plans for achieving the Sustainable Development Goal (SDG) targets. Indeed, Pakistan did not achieve the Millennium Development Goals for education either.

A high population growth rate of 1.9% (Sindh 2.8%; Punjab 2.05%) makes raising enrollment rates particularly challenging. As Figure 2 illustrates, Sindh and Balochistan have the lowest net enrollment rates (NERs) of all four provinces at all levels of school education, with Khyber Pakhtunkhwa and Punjab doing somewhat better.

[15] Global Partnership for Education. 2016. *GPE Results Report: 2015–2016.* Washington, DC.

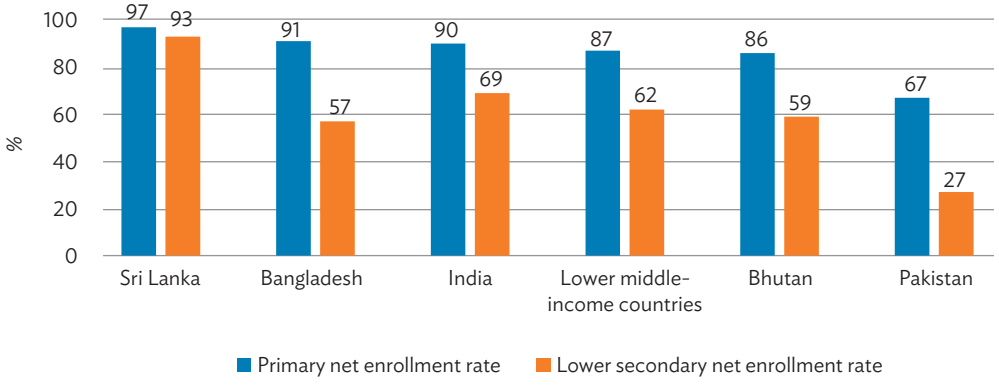
Figure 2: Net Enrollment Rates, Pakistan and by Province, 2014–2015
(%)



Source: Pakistan Social and Living Standards Measurement Survey 2014–2015.

Nevertheless, these NERs are far behind participation rates in comparator countries such as India and Bangladesh and far below the average for lower middle-income countries, as illustrated in Figure 3.

Figure 3: Net Enrollment Rates in Comparator Countries
(%)



Sources: United Nations Educational, Scientific and Cultural Organization Institute for Statistics database, latest available year for each country; Pakistan: Pakistan Social and Living Standards Measurement Survey 2014–2015.

As shown in Table 5, NERs have risen from 2004–2005 levels, but have since stagnated or declined post 2008–2009 at the primary and middle school levels in Punjab and Sindh (while continuing to increase slightly at the high school level). The reasons for this change in trend post 2008–2009 have, surprisingly, not been investigated in any rigorous study. Nevertheless, discussions with stakeholders indicate that the poor quality of education in both provinces has led to high dropout rates in recent years, and the lack of access to middle schools in Sindh has been a major constraint to improving enrollments (discussed in more detail later). It should be noted that these NERs are all based on the 1998 population census and thus are estimates. A census was carried out in Pakistan in 2017, and the results of this census will help compute more accurate NERs. In addition, it is possible that improved data quality on enrollments post-2009 has led to an appearance of stagnation or declines since total enrollments in absolute numbers have indeed continued to increase. Nevertheless, this issue needs further investigation.

Table 5: Net Enrollment Rates at Primary, Middle, and High School Levels

	Primary (%)			Middle (%)			High (%)		
	2004–2005	2008–2009	2014–2015	2004–2005	2008–2009	2014–2015	2004–2005	2008–2009	2014–2015
Pakistan	60	67	67	30	35	37	19	23	27
Punjab	66	71	70	31	36	38	19	24	29
Sindh	54	64	61	31	36	34	20	24	25
Khyber Pakhtunkhwa	57	64	71	29	33	41	17	20	27
Balochistan	44	54	56	17	22	26	9	11	15

Sources: Pakistan Social and Living Standards Measurement Surveys 2004–2005, 2008–2009, and 2014–2015.

NERs may be low because of the high number of overage children at different grade levels, combined with uncertainty about the age of children, especially in rural areas. Nevertheless, as shown in Table 6, even gross enrollment rates (GERs), which measure the proportion of children at different levels of school regardless of their age, are much lower in Pakistan than in comparator countries and are particularly low in Sindh and Balochistan. The middle school GER for Pakistan was, for example, 62% in 2014–2015 (64% in Punjab and 55% in Sindh, having fallen from 59% in 2008–2009).[16] GERs follow a similar pattern to NERs with stagnating GERs in Punjab and falling GERs in Sindh at the primary and middle school levels after 2008–2009 (and slight increases at the high school level). Thus, participation rates, however they are measured, are abysmally low in Pakistan and particularly poor in Sindh where they have, in fact, declined during the last 7 years.

[16] Government of Pakistan, Pakistan Bureau of Statistics. 2016. *Pakistan Social and Living Standards Measurement Survey (PSLM) 2014–2015*. Islamabad.

Table 6: Gross Enrollment Rates at Primary, Middle, and High School Levels

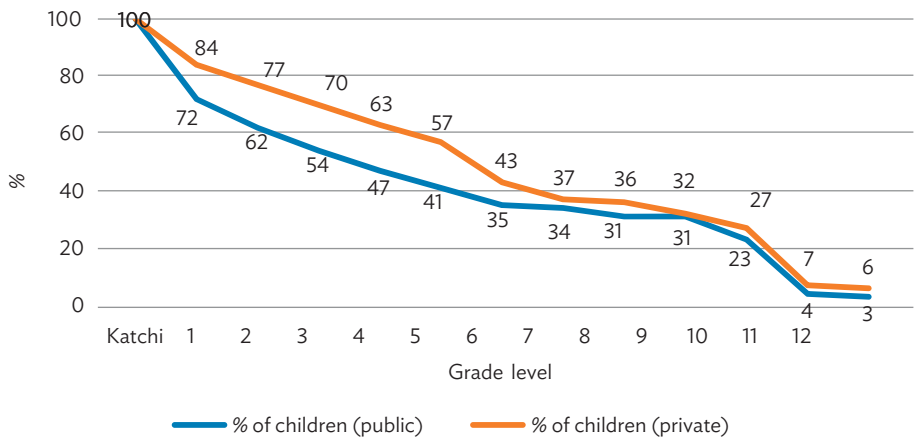
	Primary (%)			Middle (%)			High (%)		
	2004–2005	2008–2009	2014–2015	2004–2005	2008–2009	2014–2015	2004–2005	2008–2009	2014–2015
Pakistan	85	90	91	53	61	62	43	52	58
Punjab	93	97	98	55	63	64	43	56	63
Sindh	74	82	79	52	59	55	43	47	51
Khyber Pakhtunkhwa	80	86	92	53	62	71	42	50	55
Balochistan	65	74	73	39	45	48	32	31	39

Sources: Pakistan Social and Living Standards Measurement Surveys 2004–2005, 2008–2009, and 2014–2015.

At the preprimary or early childhood education (ECE) level, participation rates have improved over the past decade. The ECE GER in Pakistan is 66.4% and ranges from 49% in Sindh, to 64% in Balochistan, 71% in Punjab, and as high as 88% in Khyber Pakhtunkhwa (footnote 13). However, the Annual Status of Education Report (ASER) urban report found that, in 2015–2016, about half of children at ages 3–5 years were in an ECE program, with the majority of those privately provided. Similarly, the ASER rural report found that only 37% of children at ages 3–5 were in an ECE program in the same year, with the majority of those government provided, as part of primary schools. It is likely that the GERs are considerably higher than the NERs because of the large numbers of overage children.

While most out-of-school children in Pakistan have never been to school, about a fourth of them attended school and then dropped out. In fact, only 72% of those enrolled in preprimary school transition to grade 1 (in public sector schools), and this is followed by a constant decline in those enrolled, as is evident in the falling NERs at the middle and high school levels. There are large regular declines in enrollments such that only 23% of those enrolled in *Katchi* (preprimary) level in public schools, and 27% of those enrolled in private schools, reach grade 10, after which there are very high drop-offs at the higher secondary level. While the trajectory is similar in the private sector, transition rates are somewhat better in all grades, particularly at the primary level (Figure 4).

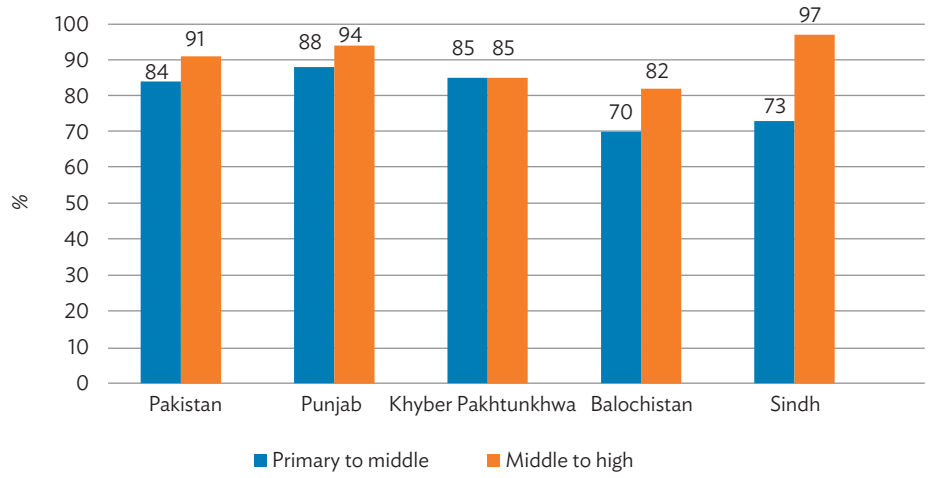
Figure 4: Transition Rates for Each Grade in Pakistan, 2015–2016



Source: Pakistan Education Statistics 2015–2016.

These average transition rates mask wide variations across provinces. As Figure 5 illustrates, transition rates particularly from primary to middle school are very low in Balochistan and Sindh, largely due to the lack of adequate middle and lower secondary schools.

Figure 5: Effective Transition Rates from Primary to Middle and Middle to High School (Public), 2016–2017



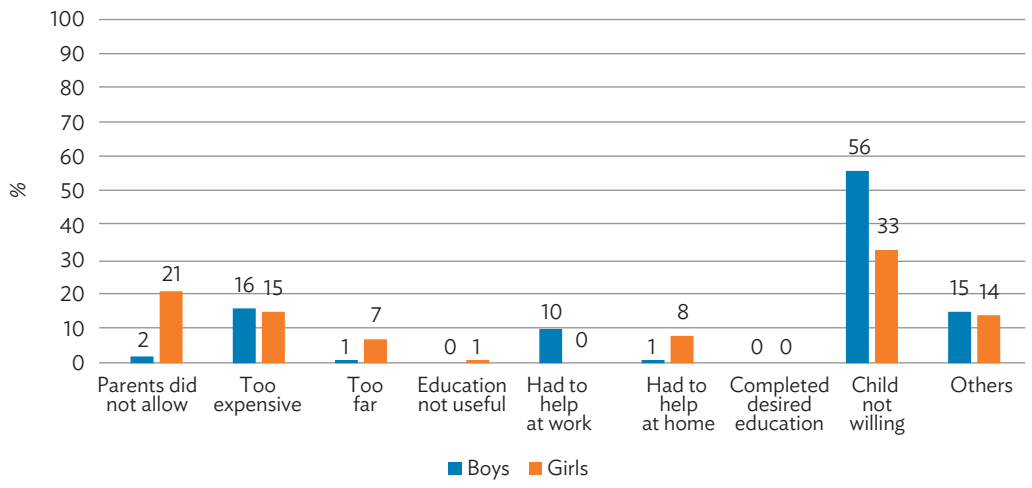
Source: Pakistan Education Statistics 2016–2017.

The high population growth rate certainly poses a challenge to providing adequate numbers of good-quality facilities and teachers for the growing population of children. Nevertheless, there are many supply-side factors that also explain the low participation and transition rates in school education. The Pakistan Social and Living Standards Measurement Survey (PSLM) of households, 2013–2014, explored the reasons for children dropping out without completing primary school.[17] The results are illustrated in Figure 6. It is striking that the main reason given by households for both boys and girls dropping out of school is the unwillingness of the children themselves to attend. International evidence suggests that this "unwillingness" masks several supply-side issues that households do not articulate, including poor facilities and low quality of education. In fact, a study by the Alif Ailaan education campaign organization found that factors contributing to their unwillingness "include lack of basic facilities in schools, poor basic facilities in schools, poor quality of education, teacher absenteeism and corporal punishment in some cases."[18] The next chapters investigate in more detail the major issues related to limited access at the post-primary level, inadequate facilities in public schools, poor quality of teachers, curriculum, textbooks and assessment systems, governance, and education financing problems that plague the Pakistan school education system.

[17] Government of Pakistan, Pakistan Bureau of Statistics. 2015. *PSLM 2013–2014.* Islamabad.

[18] Alif Ailaan. *The Quality of Education in Pakistan.* Islamabad. www. alifailaan.pk.

Figure 6: Reasons for Dropping Out of Primary School



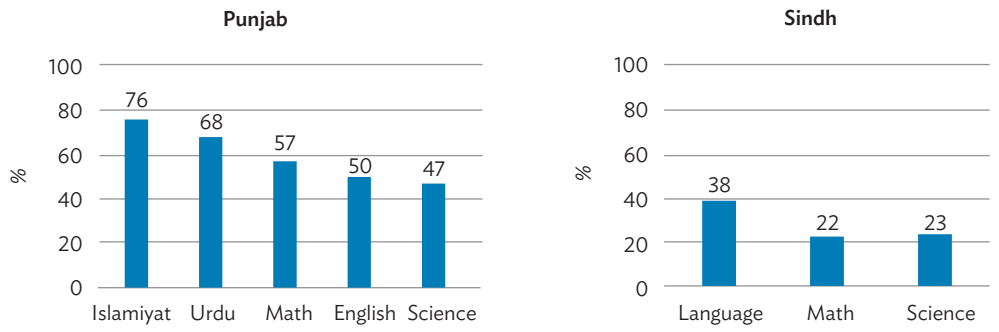
Source: Pakistan Social and Living Standards Measurement Survey 2013–2014.

B. Quality of Learning in School Education

While participation in education is a major challenge in Pakistan, particularly at the post-primary level, it is important to also assess the quality of education received by children in school. While there are no perfect measures of this, student learning assessment results are the most widely accepted indication of the quality of education. The problems related to assessment and examination systems in Pakistan will be discussed in detail later in the report.

The results of grade 5 and grade 8 assessments introduced more recently in Punjab and Sindh are available and offer more reliable indicators of student learning due to better test design, administration, and scoring than those of high school examinations. The results from the 2015 PEC exams for grade 8 students in Punjab are shown in Figure 7A, while results from the 2015 Sindh Student Achievement Test (SAT) for grade 8 students are shown in Figure 7B. While the mean achievement score on many subjects in both provinces is low, the results in Sindh are much worse in all subjects and particularly poor in mathematics and science.

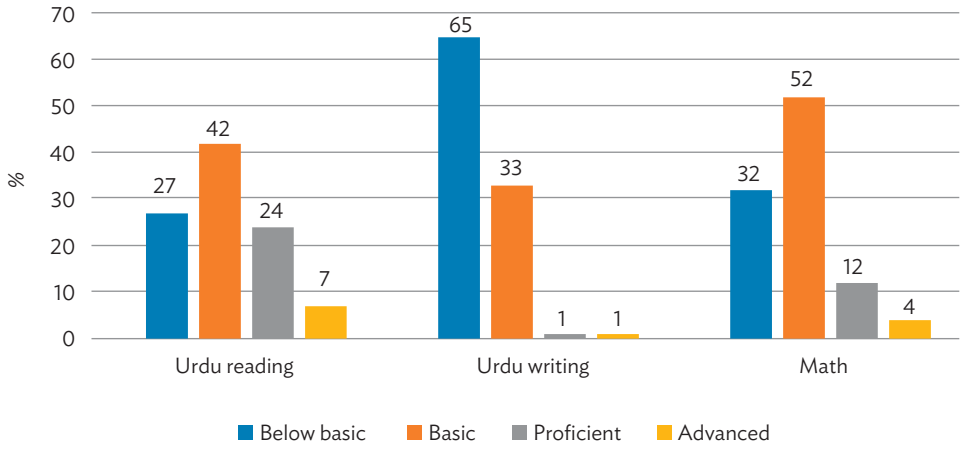
Figures 7A and 7B: Mean Achievement Score for Grade 8 Students, 2015–2016



Sources: Punjab Examination Commission results, 2015; Sindh Student Achievement Test results, 2015–2016.

While the PEC and SAT are census assessments, there are other organizations that conduct sample-based assessments as well. The 2014–2015 National Achievement Test (NAT) results, conducted by the NEAS, a federal-level organization, are reflected in Figure 8. The results once again throw light on the poor learning levels of grade 8 students. In fact, the vast majority of the students who were tested performed below or at the basic level of proficiency on the test in all subjects.

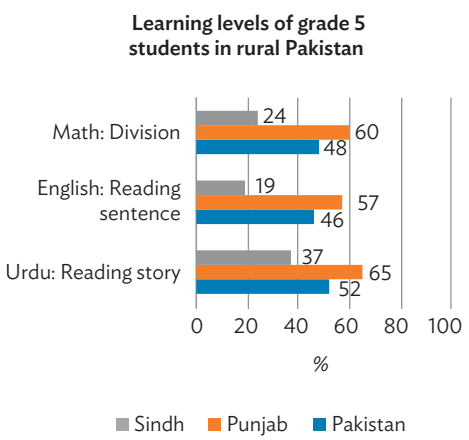
Figure 8: Percentage of Students Achieving Different Levels of Proficiency, 2014–2015

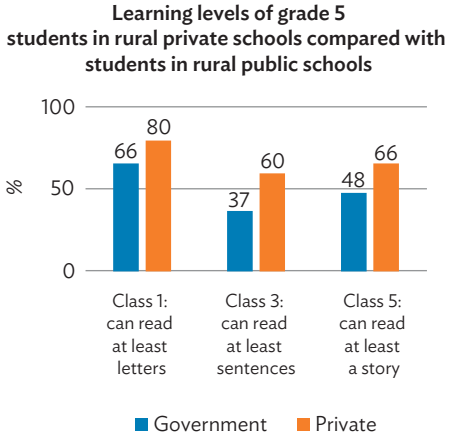


Source: Author's calculations based on National Assessment Report, 2014.

Another independent organization that does sample-based learning assessments in Pakistan for the last decade is the South Asian Forum for Education Development (SAFED), which produces the ASER. While the ASER results also show poor learning levels, the levels of proficiency have improved for the most part, compared with 2014. The results for rural children enrolled in grade 5 in public schools in 2016 are illustrated in Figure 9A. About half or fewer of the children can meet the basic expectations for the grade, despite slight improvements over the last 3 years (compared with previous ASER results). The results in Sindh, particularly in English, are very poor. While the ASER rural sample was much bigger than its urban sample, the assessment results from the urban areas for 2015 were similar, with 44% of the sampled urban children enrolled in grade 5 in public schools who could at least do division, 50% who could at least read sentences in English, and 51% who could at least read a story in Urdu or another local language. The ASER also samples students from private schools. The ASER results for grade 5 rural students in 2016 show that students in private schools performed considerably better than those in public schools (Figure 9B). The ASER results in urban private schools are also similarly better than those for students from urban public schools. Of course, these results should be interpreted with the caveat that students in the more expensive private schools come from more privileged backgrounds than those in public schools and are thus likely to perform better, on average.

Figures 9A and 9B: Learning Levels in Schools





Source: Annual Status of Education Report (ASER) 2016.

C. Inequities in Education Outcomes

The discussion so far has focused on average education outcome indicators in Pakistan and in each province. The averages, however, mask wide variations across genders, different socioeconomic groups, geographic areas, and districts within provinces. While overall participation rates for school education are low in Pakistan, rates for girls are worse at all levels (Table 7). It is striking that the gender gap in participation rates is much higher in Sindh than in Punjab, particularly in the post-primary grades where there are too few middle and high schools available for girls (discussed in the next section on access). At the primary level, gender gaps fell only slightly between 2004–2005 and 2015–2016 from a 15% difference in NERs between boys and girls in Pakistan in 2004–2005 to a 14% difference in 2014–2015 (from 10% to 8% in Punjab and from 22% to 18% in Sindh). However, while overall participation rates remain very low at the middle school level in Pakistan, gender gaps at this level fell from a 21% difference in NERs in 2004–2005 to 13% difference in 2014–2015 (from 9% to 3% in Punjab and from 26% to 19% in Sindh). There was no gender gap in high school NERs in Punjab in 2014–2015, but the gender gap in Sindh, in fact, increased from 22% in 2004–2005 to 31% in 2014–2015.[19] Gender gaps in participation rates continue to be a major concern in Sindh, and this can be at least partially attributed to too few girls' schools and female teachers in Sindh, as will be discussed in the succeeding sections on access and teachers.

Table 7: Gender Gap in Net Enrollment Rates, 2014–2015

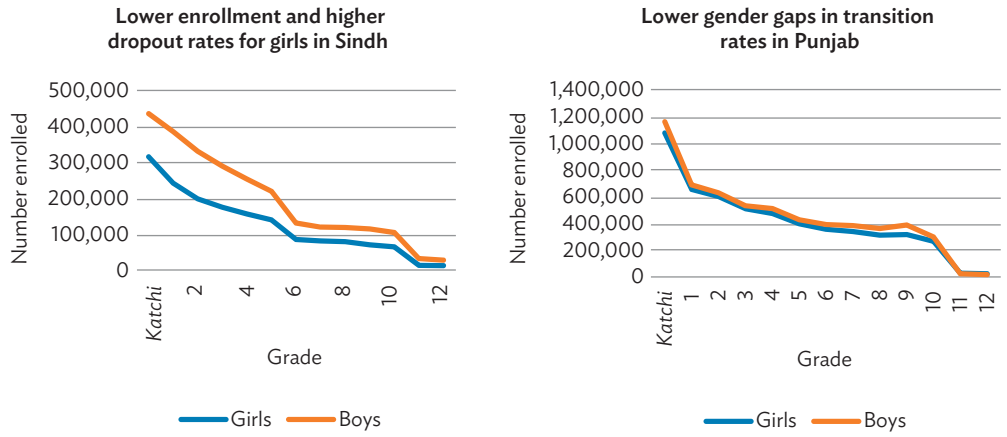
	Primary (%)		Middle (%)		Lower Secondary (%)	
	Boys	Girls	Boys	Girls	Boys	Girls
Pakistan	72	62	39	34	29	24
Punjab	73	67	39	38	29	29
Sindh	67	54	37	30	29	20

Source: Pakistan Social and Living Standards Measurement Survey 2014–2015.

[19] Government of Pakistan, Pakistan Bureau of Statistics. 2016. *PSLM, 2014–2015.* Islamabad; and Government of Pakistan, Pakistan Bureau of Statistics. 2006. *PSLM, 2004–2005.* Islamabad.

The high gender gaps in Sindh compared with those in Punjab are also reflected in the low transition rates (high dropout rates) in Sindh for girls compared with boys for each grade (Figures 10A and 10B). Girls are disadvantaged compared with boys at all levels of school, and gender gaps are much larger and persistent across grades in Sindh than in Punjab.

Figures 10A and 10B: Gender Gaps in Transition Rates in Sindh Compared with Punjab, 2016–2017



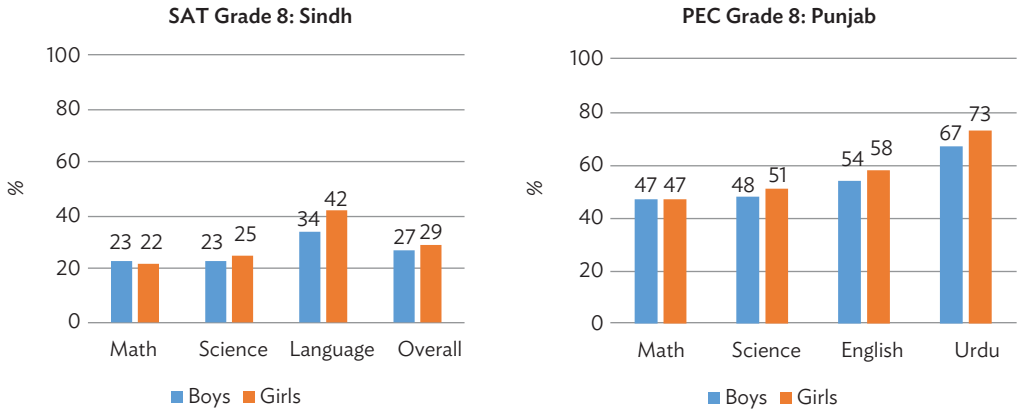
Note: *Katchi* is equivalent to preprimary level of education.
Source: Pakistan Education Statistics 2016–2017.

The evidence on gender disparities in learning levels is mixed. The SAT and PEC results for grades 5 and 8 reveal that girls scored slightly worse or similar to boys in mathematics. In Sindh, girls performed similar to boys; however, girls outperformed boys in Punjab. Girls outperformed boys on the SAT and PEC examinations in both grades 5 and 8 in language (Figures 11A and 11B).

However, the ASER results for rural Pakistan reveal that average learning levels for children aged 5–16 years are about 8–10 percentage points lower for girls compared with boys for all subjects.[20] Since the ASER survey tests children who are of school-going age, regardless of whether they attend school, the gender disparities evident in the ASER results likely reflect the much lower participation rate of girls in school. According to the SAT and PEC results, girls outperform or perform as well as boys when they are in school. The key challenge therefore is getting girls to enroll and stay in school. Nevertheless, it must be noted that overall learning levels are low for both boys and girls.

[20] South Asian Forum for Education Development (SAFED). *Annual Status of Education Report (ASER), Pakistan (National)*. 2016. Islamabad.

Figures 11A and 11B: Gender Gaps in Mean Achievement Scores in Sindh and Punjab, 2015–2016



PEC = Punjab Examination Commission, SAT = Student Achievement Test.
Sources: SAT results, 2015; and PEC results, 2016.

Inequalities are not only evident across genders but also across socioeconomic profiles. Learning levels vary widely across socioeconomic groups. Students from the richest households did substantially better than those from the poorest households in all subjects (Table 8). Furthermore, inequalities based on gender and socioeconomic backgrounds deepen the divide. Only 12% of the girls from the poorest households, for example, performed at the highest competency level on the ASER math test when compared with 39% of boys from the richest households. Similarly, only 13% of the girls from the poorest households performed at the highest competency level in English compared with 43% of boys from the richest households. Finally, only 15% of the girls from the poorest households performed at the highest competency level in Urdu compared with 44% of boys from the richest households. The data in Table 8 illustrate the multiple levels of disparities in education outcomes.

Table 8: Percentage of Students Aged 5–16 Performing at Highest Competency Level by Income Class

	Poorest		Poorer		Richer		Richest	
% Children	**Male** (%)	**Female** (%)	**Male** (%)	**Female** (%)	**Male** (%)	**Female** (%)	**Male** (%)	**Female** (%)
Urdu: Reading story	21	15	31	25	35	30	44	42
English: Reading sentence	19	13	30	25	33	28	43	41
Math: Division	19	12	28	22	33	26	39	36

Source: ASER rural report, 2016.

Another useful measure is the disparities in education outcomes across districts, both across the country, and within individual provinces. According to the Alif Ailaan 2015 report on district rankings for education outcomes, the main challenge at the primary and middle school levels is the poor learning levels across all districts and provinces.[21] These rankings used GERs, survival rates, literacy levels, gender parity indices, and ASER learning results to compose an overall education score at the primary and middle school levels for each district in the country. Overall, Punjab had the highest number of districts at the top of the education outcome rankings, with eight of the top 10 districts in the country at the primary level being from Punjab. Nine of the 10 bottom districts were from conflict-ridden Balochistan. Khyber Pakhtunkhwa had a mix of districts that performed well and some that performed in the middle of the rankings. Sindh performed poorly: as in the past 2 years, only one Sindh district was in the top 50 districts in the country and half of the districts in the province ranked in the bottom third of the distribution.

While most districts in Punjab performed better on participation, retention, and literacy rates, they did not rank high on learning levels, with only three Punjab districts doing well on this measure. As in earlier years, the districts in South Punjab performed considerably worse than those in North Punjab. In Sindh, only Karachi managed to get into the top 50 districts, being ranked 43rd among 148 districts for primary education. Only four districts from Sindh ranked in the top half of the education rankings for primary education in the country. At the middle school level, once again Karachi was the only district to score in the top 50 of 143 districts (ranked 45th). The education score ranged from 46 in Shaheed Benazirabad to 72 in Karachi. While interdistrict variation in education outcomes is high in Pakistan in general and in Sindh in particular, it is important to note that inequities gradually declined between 2013 and 2015. The Alif Ailaan report notes that "the share of the red (score of under 40) and yellow (score of 40–49) has diminished considerably: from a combined 30% of districts to just over 15% this year." This means that the number of districts scoring under 50 almost halved from 42 in 2013 to 24 in 2015. Even more importantly, the proportion of districts scoring over 70 increased from 21.4% in 2013 to 35.2% in 2015 (footnote 21). Intradistrict variation also continues to be high, and further investigation is needed to understand the reasons and help reduce disparities.

[21] Alif Ailaan. 2015. *District Education Rankings.* Islamabad.

IV Key Issues, Current Strategies, and Recommendations for Reform: Sindh and Punjab

A. Access to School Education

1. Issues and Current Strategies

Availability of Public Schools

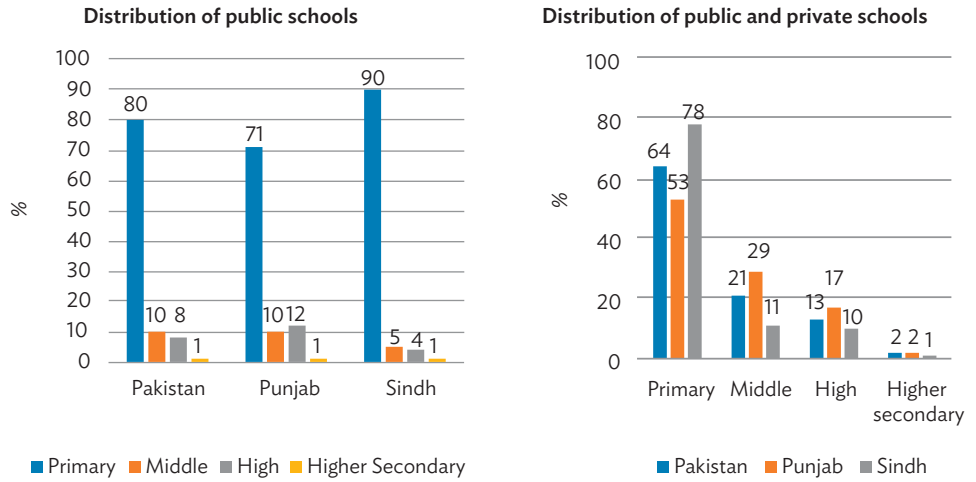
Pakistan continues to grapple with the challenge of very high numbers of out-of-school children, low participation rates at all levels of schooling, and low transition rates from primary to higher grades. Pakistan has 22.6 million children aged 5–16 years who are out of school. Indeed, Pakistan lags behind all its neighbors with the lowest NERs in South Asia. While this situation exists in all provinces, Punjab and Khyber Pakhtunkhwa perform better than the other provinces. Sindh, on the other hand, has abysmally low participation rates at all levels. A rapidly growing school-age population in Pakistan, with higher population growth rates of 2.8% in Sindh compared with 1.9% for Pakistan as a whole, exacerbates the challenge of providing schools for all children. The discussion in section C highlights the high dropout rates, particularly after primary school in Sindh, where about one-third of the students drop out.

A key factor that explains the low participation and high dropout rates at the middle and high school levels in Sindh and, to a lesser extent in Punjab, is the skewed availability of schools in these provinces. At the primary level, there are sufficient numbers of public schools that are available in most districts in both provinces. In Sindh, for example, there is a primary school available within 15 minutes walking distance for all children. In fact, many nonfunctional schools have recently been closed due to zero or very low enrollment, having been created in the first place for political patronage purposes.[22] However, the situation is vastly different at the middle, lower secondary, and higher secondary levels. The majority (80%) of public schools in Pakistan are primary schools with only 10% being middle schools and 8% high schools. The situation is far more skewed in Sindh with 90% of public schools being primary schools. While the situation is slightly less skewed in Punjab, a similar situation does exist there. The picture is a little different when private schools are included, with somewhat better availability of middle and high schools, especially in Punjab (Figures 12A and 12B). Since the poorest cannot afford private schooling, however, this has negative implications for equity although some of these are low-cost schools. Nevertheless, in Sindh, 78% of all schools (public and private) are at the primary level, making higher levels of schooling inaccessible for most households. (The role of the private sector will be discussed in detail in the next section.) Nevertheless, there are clearly too few middle and high schools, even if private schools are included, particularly in Sindh. Any schools

[22] Government of Sindh, SELD. 2014. *SESP 2014–2018.* Karachi.

available would thus be located at quite a distance for many students, making commuting cost and time a major deterrent to enrollment.[23] This is one of the main reasons for low enrollment rates at the post-primary level and high dropout rates after grade 5 in both provinces, with the situation being worse in Sindh.

Figures 12A and 12B: School Distribution by Level of Education



Source: Pakistan Education Statistics 2016–2017.

While the access to middle and high schools is limited for all children, it is even more restricted for girls, particularly in Sindh. This dire lack of availability of public schools for girls in Sindh leads to a high gender gap in NERs at all levels compared with Punjab (Figure 13). The situation is similar in Punjab and Sindh even when private schools are included. There are a fair number of mixed-gender schools and this does marginally increase the availability of schools for girls at the middle and high school levels in Sindh.

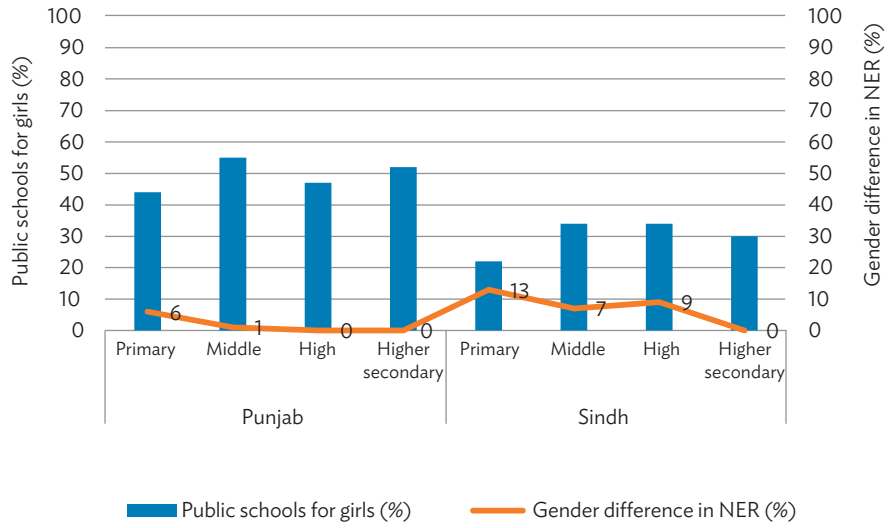
Assessing access at the preprimary level is complicated as there is a lack of consistency in how provinces classify children before grade 1, with some classifying them as "unadmitted" and some as in preprimary grade. There is also a lack of clarity in policy regarding the age of children and number of years for preprimary classes. The NEP 2009 identified the preprimary age group as 3–5 years (2 years prior to grade 1, which is the first grade at the primary level) but also indicated that only 1 year of compulsory preprimary would be provided by the state. Most public schools offer 1 year before grade 1 as the preprimary class. The PSLM does not capture data for children below the age of 4, thus making it difficult to have an accurate assessment of ECE enrollment across the country. The United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute of Statistics (2015) data indicate that ECE enrollment in Pakistan is approximately 72% (ages 3–5 years). However, the ASER report suggests much lower figures, with only about half the children in urban areas and only one-third of the children in rural areas enrolled.[24] It is striking that one-third of the children enrolling in preprimary grades drop out of school before grade 5.[25] This is an area of major concern and one that contributes to the low enrollment rates in primary grades, since it is quite difficult to bring these children back to school in grade 1.

[23] There has been no census of private schools since 2005. Numbers are based on estimates.

[24] SAFED. 2015. *ASER, Pakistan (National)*. Islamabad.

[25] UNESCO. 2015. *Pakistan Education for All: Review Report 2015.* Islamabad.

Figure 13: Percentage of Public Schools for Girls and Gender Gaps in NER, Sindh and Punjab



NER = net enrollment rate.

Sources: Pakistan Education Statistics 2016–2017; Pakistan Social and Living Standards Measurement Survey 2014.

Another challenge in access has been the placement of schools where there is little or no demand. All provinces have clear policies and criteria for new school allocation and upgrades, at all levels. However, these criteria are implemented inconsistently, sometimes due to political patronage, often resulting in multiple schools being established close to one another and upgrades to higher levels done without a clear assessment of need. Interdistrict disparities in NERs are high in both Punjab and Sindh, pointing to the need for more appropriate location of new schools and upgrades to existing schools using data on out-of-school children.[26] The traditional model of one middle and/or high school for every 4–5 primary schools is no longer sustainable and contributes to the high dropout rates after primary school all over the country.

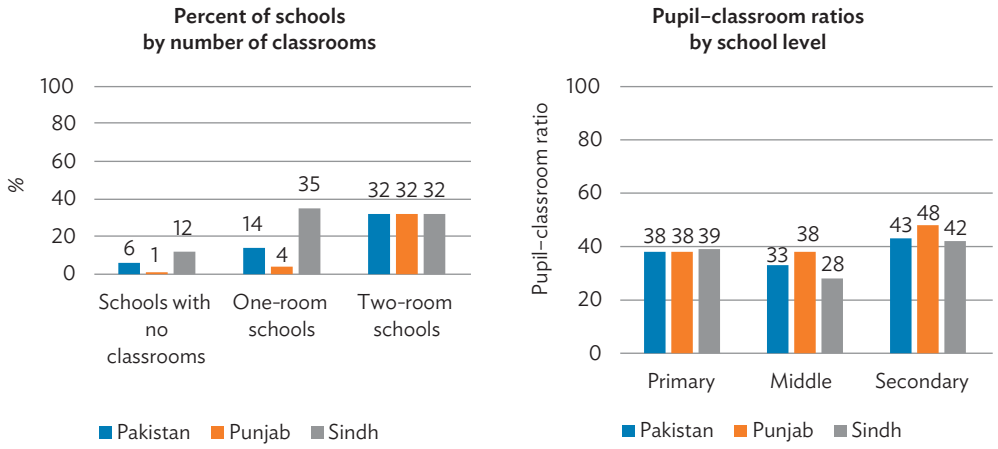
Availability of Physical Facilities in Public Schools

While Punjab has better availability of public schools at all levels than Sindh, both provinces suffer from inadequate availability of classrooms in most public schools. This is another key factor that explains the poor participation and high dropout rates among children, even at the primary level where adequate numbers of schools are available in most districts. More than three-quarters of the public schools in Sindh have either no usable classroom (as high as 12%), one classroom, or two classrooms (Figure 14A). In contrast, Punjab has very few public schools without usable classrooms or with a single classroom. Nevertheless, as many as one-third of the public schools have only two classrooms. The classroom deficit in both provinces leads to high pupil–classroom ratios, as shown in Figures 14A and 14B. These averages mask substantial differences across schools, leading to very crowded classrooms in some middle and high schools. This leads to widespread use of multigrade teaching and many overcrowded classrooms in both provinces. Although global evidence indicates that multigrade teaching is a reasonable option to provide schooling in remote and small communities, this is not

[26] Government of Punjab, School Education Department. 2013. *Punjab Education Sector Plan 2013–2017.* Lahore; and Government of Sindh, SELD. 2014. *SESP 2014–2018.* Karachi.

the case for most schools with adequate numbers of students enrolled. In addition, the lack of good multigrade practices employed by teachers, irregular teacher attendance, and overcrowding can lead to low levels of learning and higher numbers of dropouts from such schools. In fact, preliminary analysis of the Sindh SAT data has shown that student learning outcomes are low in single-teacher and single-room schools. The majority of preprimary classes in public schools exist in multigrade settings. This leads to ineffective teaching–learning practices and difficulties in classroom management in overcrowded and/or multigrade classrooms.

Figures 14A and 14B: Classroom Shortages in Sindh and Punjab



Source: Pakistan Education Statistics 2016–2017.

There are also schools with inefficient utilization of existing space.[27] In Sindh, an assessment of underutilized schools that analyzed pupil–teacher ratios (PTRs) and pupil–classroom ratios to determine available space in existing schools found that 317,000 additional children could be accommodated without additional cost.[28]

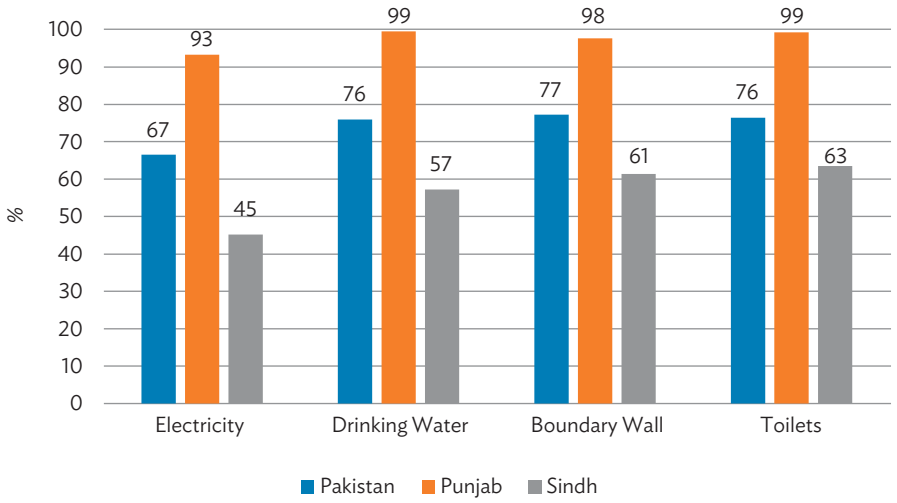
In addition to investigating the availability of adequate numbers of schools and classrooms, it is important to examine the quality of infrastructure and the availability of basic facilities in these schools. In Pakistan, more than half (55%) of all the existing public school buildings have fallen into disrepair and thus are considered to be of unsatisfactory quality or are unsafe. The figures are similar in Punjab but even higher in Sindh, where only 30% of public school buildings were deemed satisfactory (footnote 8). These conditions naturally dissuade parents from sending their children to school.[29] A recent study by Alif Ailaan on the availability of school facilities has revealed that only 52% of public schools in Pakistan have all four components of essential infrastructure, i.e., boundary wall, electricity, drinking water, and toilets. Furthermore, 11% of all public schools do not have any of these four facilities. As Figure 15 illustrates, the situation in Sindh is particularly inadequate.

[27] United Nations Development Programme. 2014. School Facilities and Education Outcomes: A Preliminary Examination. *Development Advocate Pakistan.* Vol.1, Issue 2. May. Islamabad.

[28] Government of Sindh, SELD. 2015. *Executive Sindh Education Profile 2014–2015.* Karachi.

[29] UNICEF. 2013. *All Children in School by 2015. Global Initiative on Out of School Children.* Islamabad.

Figure 15: Percentage of Public Schools with Basic Facilities in Sindh and Punjab



Source: Pakistan Education Statistics 2016–2017.

The Pakistan Economic Survey identifies a shortage of schools (especially for girls) in remote areas, missing basic infrastructure facilities, and poverty as compelling factors for low enrollments and high numbers of out-of-school children.[30] A survey of the quality of infrastructure in Punjab indicates that the attendance of girls triples when schools have proper classrooms. The availability of drinking water also influences enrollment with a 13 percentage-point increase for girls' enrollment and 10 percentage-point increase for boys' enrollment in schools where drinking water is available.[31] Studies in several developing countries, including Bangladesh and India, have pointed out that having toilets, particularly in middle and high schools, is key to improving girls' participation in schooling and reducing dropouts. Alif Ailaan reports that 52% of boys and 30% of girls drop out of school because they are unwilling to go to schools. Household surveys (PSLM 2013–2014) report similar figures. Factors responsible for this unwillingness include the lack of basic facilities in schools, poor quality of basic facilities in schools, poor quality of education, teacher absenteeism, and corporal punishment.[32] It is imperative that the SELD in Sindh and the School Education Department (SED) in Punjab ensure adequate school infrastructure to address these issues to increase enrollments and reduce dropouts. In addition, while the discussion in this chapter has focused on access to adequate, functioning physical infrastructure, the salient component of a well-functioning school is the presence of adequate numbers of good-quality teachers. This important issue will be discussed in detail in Chapter 3.

What are some of the recent and current strategies being used by the Sindh and Punjab provincial governments to address these infrastructure-related issues in public schools? Both governments have used school clustering and consolidation systematically over the last few years to maximize efficient use of space and to reduce the number of single-classroom and single-teacher schools. In

[30] Government of Pakistan, Ministry of Finance. 2016. *Pakistan Economic Survey 2015-2016.* Islamabad.

[31] World Bank. 2015. *Punjab Primary Education: Expenditure and Quantity of Service Delivery Survey.* Islamabad.

[32] Alif Ailaan. 2017. *The State of Education in Pakistan.* Islamabad. www.alifailaan.pk.

Sindh, 4,093 schools have already been consolidated, for example.[33] In addition, both provinces have been upgrading primary schools to middle and high schools—a key strategy for improving access in the sector plans of both SELD in Sindh and SED in Punjab. In addition, geographic information system mapping is being used in both provinces to ensure that new schools are located where they are most needed. The provincial governments of Sindh and Punjab have included infrastructure improvements in their respective education sector plans. Every year, large allocations are made in the development budgets for infrastructure-related activities, including the construction of new schools and colleges, and the provision of new rooms and missing basic facilities in existing institutions. Punjab has systematically improved the infrastructure in schools, as reflected in the data. However, budget execution rates remain low for infrastructure spending in both provinces, with much lower rates in Sindh where there is now an urgent need to consolidate, expand, and upgrade school infrastructure. In recent years, PPPs have been used more extensively by both provinces to expand access to schools. These are discussed in detail in the next chapter on the role of the private sector.

The Sindh Education Sector Plan (SESP) 2014–2018 identifies ECE as an important area of reform and plans are to establish 121 new ECE centers at each *taluka* (administrative subdivision of a district) of the province. While Sindh identified ECE activities as a separate budget line item in its 2016–2017 Annual Development Plan, implementation is slow. In Punjab, the sector plan also identifies ECE as an important area of reform, while acknowledging that an institutionalized ECE policy does not exist. The SED in Punjab has started work on the policy with the support of development partners in the province. The sector plan targets include setting up ECE classes in 5,000 primary schools.

Furthermore, consolidated schools in Sindh have also been provided small grants after consolidation for improvements in infrastructure. Improved data collection processes by independent monitors in Sindh and Punjab now make up-to-date, school-by-school information available to policy makers to make informed decisions regarding provision of basic facilities in schools. Punjab has prioritized providing basic facilities in all schools in the last couple of years, and the results of this effort are evident in the data, which reveal much better coverage of basic facilities in Punjab schools, especially when compared with those in Sindh.

Given the large numbers of out-of-school children, particularly the approximately 11 million out-of-school children who are 13–16 years of age, NFE is necessary to enable alternative pathways to education. Currently, there are 31,685 institutions, both at the national and provincial levels, providing NFE, with enrollments of 1.28 million. Besides covering too few people, the NEP 2009 highlights the multiple weaknesses in the program, including the variable quality of programs across the provinces, an absence of certification and accreditation regimes, ineffective literacy programs, and weak linkages with literacy programs and employment opportunities. Provincial governments are introducing reforms to NFE, but the pace of implementation is slow, owing to the low capacity of the staff. The SED in Punjab will establish, under the Punjab Sector Plan, formal linkages with the Literacy and Non Formal Basic Education Department and develop mechanisms to register and track NFE students. In Sindh, SELD has identified several reform areas under NFE and has recently approved an NFE policy with an emphasis on making the programs relevant to diverse needs and age groups, developing good-quality curriculum and learning materials, capacity building of literacy and NFE teachers, and developing accreditation and certification mechanisms for mainstreaming students.

In addition to these supply-side interventions, the provincial governments of Sindh and Punjab also provide demand-side interventions such as stipends and vouchers to girls, especially for transition from primary to middle and secondary levels. Waseela-e-Taleem is a conditional cash transfer program under the Benazir Income Support Programme, which is the social protection initiative of the federal government in selected districts of Punjab and Sindh.

[33] Government of Sindh, SELD. 2017. *Executive Sindh Education Profile 2016–2017.* Karachi.

Box 1: Success Stories—Alternative Models of Education Service Delivery

Besides the public–private partnerships (PPPs) initiated by the Sindh School Education and Literacy Department and the Punjab School Education Department, several foundations, nongovernment organizations, and private sector organizations have come forward to start and/or manage schools that cater to poor and lower middle-income children in both provinces. This box highlights a few of the success stories, although there are many more. These models demonstrate the possibility of providing good-quality education to poor and lower middle-income students via innovative approaches. Improved infrastructure such as available basic facilities, even in smaller areas; good in-service teacher training; the use of additional contract teachers who are provided incentives to perform well; and ongoing supervision and support to the teachers and head teachers are some of the common features of these successful programs.

Education Fund for Sindh

The Education Fund for Sindh was established in 2012 as a nonprofit public company by several leading private sector corporations and funded by the United Kingdom's Department for International Development (DFID). The fund partnered with low-cost private schools and was successful in providing good-quality education to 138,000 out-of-school children, half of whom were girls, through its voucher scheme and PPP programs. In addition, the fund partnered with other education organizations, such as Building Resources Across Communities, The Citizens Foundation (TCF), and Developments in Literacy, to support students in private schools through these organizations. Unfortunately, the DFID funding lapsed in 2017, and the fund's programs are now in jeopardy despite being very successful.

CARE Foundation

The CARE Foundation, which started operations with the opening of its first school in 1991, currently manages as many as 716 schools across Pakistan with a total enrollment of about 230,000 children. While 33 schools are purpose-built and owned by the CARE Foundation, most are public schools with low enrollments and high dropout rates that have been adopted by the CARE Foundation. All schools under the foundation have English as the medium of instruction and are coeducational. The CARE Foundation has achieved a 400% increase in enrollments and a 10% decrease in dropouts by improving the physical facilities, appointing head teachers, hiring teachers on contract, and providing extensive teacher training to all teachers.

The Citizens Foundation

TCF was founded in 1996 by a group of friends based in Karachi. It is a leading low-cost education service delivery nongovernment organization that has not only scaled up but also maintained the quality of education at its schools. TCF operates purpose-built schools in Sindh and Punjab. The selection for a new school site is based on the number of out-of-school children and the number and functionality of the existing schools in the vicinity. With the support of around 8,000 female teachers, TCF provides low-cost quality education to 175,000 underprivileged children through 1,200 schools in 59 districts across Pakistan. The cost per child is PRs1,400/month, which is lower than in public schools, and a 90% subsidy is provided to the household, making the average fee PRs140/month. The curriculum is designed by academic experts using concepts identified in the National Curriculum and themes identified in international curricula and is constantly refined through ongoing evaluation processes. In-house teaching training is provided.

Source: Compiled by authors.

2. The Way Forward—Recommendations for Further Reform

Upgrading, Consolidating, and Clustering Schools and Using Public–Private Partnership to Ensure Equitable Access

One of the key constraints that restrict participation in school, particularly in Sindh, is the limited number of middle, high, and higher secondary schools. This results in low transition rates from primary to middle and higher levels, particularly for girls in Sindh. While the situation is less acute in Punjab, this is mainly due to the presence of a larger private sector at the middle and high school level there compared with Sindh. While this does improve access to post-primary grades in Punjab, the government needs to consider the ramifications for equity, since many of the private schools are unaffordable, especially for the poorest households. Partnering with the private sector to subsidize education for children from poor households is a cost-effective solution in many districts in both provinces, and PPP schools should be scaled up substantially, particularly in locations where public schools either do not exist or are too small. This is also evident in the success stories highlighted in Box 1, which demonstrate the potential to expand partnerships with NGOs and the private sector. This is discussed further in the next section on the role of the private sector.

Both the Sindh and Punjab governments have highlighted the lack of schools at the post-primary level in their sector plans and have allocated projects and budgets in the annual development plans to upgrade primary schools to include higher grades. Scaling up these upgradation initiatives with sufficient budget allocations, relevant school site selection, and planning and implementation oversight would help achieve these targets. Sindh has already initiated the School Consolidation Policy, whereby schools in the same premises or located nearby are being merged to become a single school with a senior head teacher with authority and accountability. This policy needs implementation support and continuous political backup. Consolidating and clustering of schools using enrollment and out-of-school children data and geographic information system mapping should also be scaled up in both provinces to ensure functioning schools with complete provision of basic facilities. However, consolidation of schools will need to be accompanied by provision of transport for students to reduce dropout rates. Rather than build completely new schools, however, the Government of Punjab has already decided to use the PPP mode to expand access. The Government of Sindh has also begun to do the same, particularly at the middle and high school level where it has a significant shortage. In addition, interim measures, such as using evening shifts in existing primary schools for grades 6–8 or similar shifting measures, could be considered to have a more immediate impact on participation and transition rates.

Strengthening Nonformal Education

Owing to the weak capacity of the departments responsible for providing NFE and the envisaged plans of the provincial governments, substantial technical support will be required to assist the respective governments to develop strong institutions, relevant and effective programs, and robust mechanisms for monitoring and assessment of education delivery. Strong linkages are also required with national programs to align data, standards and accreditation, and certification of the programs offered. The NFE programs, which are currently only targeted at children under 10, need to be scaled up to include older children. Sindh has recently launched a policy for NFE, which requires serious efforts to implement. Targeting out-of-school older children and those unlikely to get back into formal schools is key to the success of these programs.

Increasing Early Childhood Education Coverage

There is widespread global evidence that indicates investment in the early years boosts education outcomes such as completion rates and reduces dropouts at later stages.[34] Every dollar spent on a high-quality ECE program can save $7–$10 later.[35] This is a relatively new subsector for both the SELD in Sindh and the SED in Punjab, and considerable investment and focus will be required to scale this up. The Government of Punjab is already taking steps to introduce quality ECE across the province, with 5,000 new ECE classrooms having recently been introduced in all 36 districts of the province. A PPP or a public-community-partnership model could be introduced through organizations such as the Sindh Education Foundation (SEF), Punjab Education Foundation (PEF), and other NGOs to promote ECE centers in communities. It is important to establish linkages with health, nutrition, and sanitation interventions to ensure holistic development of children.

Providing Enough Classrooms and Basic Facilities in All Schools

The school clustering and consolidation initiatives in Sindh and Punjab will help reduce the number of schools with too few classrooms and no basic facilities such as electricity, water, toilets, and boundary walls. The Punjab SED has already prioritized the provision of basic facilities in all public schools, and the results are evident in the data. The Government of Sindh needs to substantially invest in these efforts and improve the utilization of the infrastructure or development budget to step up timely implementation. Both departments should consider increasing funds and training given to the school management committees (SMCs) and/or school councils and improve utilization of these funds for repair and maintenance of school infrastructure. This is discussed further in Chapter 5 on governance. While the focus is on providing basic facilities in schools, it is also important to ensure other quality-related infrastructure facilities, such as libraries and science and computer laboratories, are provided in middle, high, and higher secondary schools. Equipping these facilities via innovative partnerships with the private sector would reduce the financial burden on governments.

Evaluating and Expanding Select Demand-Side Interventions

Evaluating existing demand-side interventions aimed at improving enrollment and reducing dropout rates, especially for girls, is important before deciding whether to continue with them and/or scale them up. These include stipends and vouchers given to girls in both provinces and conditional cash transfers given to girls at the primary school level. A demand-side intervention that would be useful to explore, perhaps on a pilot basis, is providing transport, particularly to girls in middle, high, and higher secondary schools who cannot walk to school. There have been pilots in Sindh where NGOs have provided transport facilities for girls to reach middle or high and/or higher secondary schools. Pilot initiatives to provide transport such as these need to be evaluated, and scaling-up decisions should be based on their impact and cost-effectiveness. Providing a nutritious meal in school is another demand-side intervention that could be piloted. Such interventions have had a positive impact on enrollment and attendance in other countries such as India.

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[34] Asia–Pacific Regional Network for Early Childhood. 2012. *White Paper on Promoting Holistic Development of Young Children—An Imperative for the Advancement of Nations in Asia-Pacific.*

[35] J. Heckman. 2015. *The Heckman Equation-Four Big Benefits of Investing in Early Childhood Development.* https://heckmanequation.org/resource/4-big-benefits-of-investing-in-early-childhood-development/.

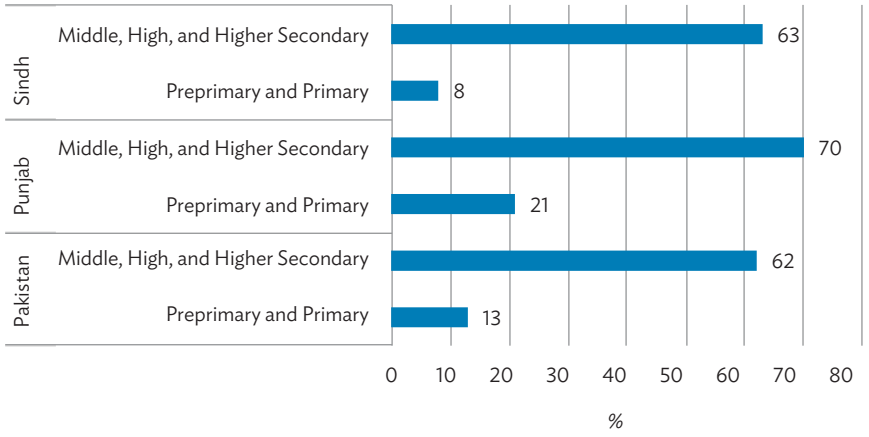
B. Role of the Private Sector

1. Issues and Current Strategies

Growing Role of the Private Sector

The private sector, which includes fee-based low-cost and elite schools, schools supported by provincial education foundations, and schools run by philanthropists and NGOs, plays an important role in educating children in Pakistan. In 2016–2017, the private sector represented 31% of educational institutions and 35% of enrollments in Pakistan. Figure 16 illustrates that 70% of middle, high, and higher secondary schools in Punjab and 63% in Sindh are private schools. Almost two-thirds of all post-primary schools in Pakistan are private schools. It is important to note that there has been no census of private schools in the country since 2005, and these numbers are just estimates for most provinces (Punjab does conduct a private school census every few years). It is imperative that a national census is conducted soon to get more accurate figures.

Figure 16: Percentage of Private Schools in Pakistan



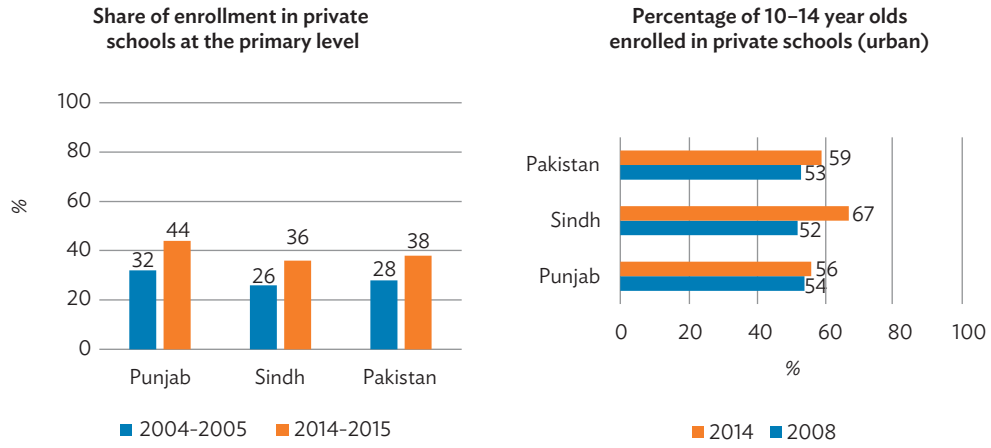
Source: Pakistan Education Statistics 2016–2017.

The role of the private school sector has grown considerably in Pakistan over the past decade, with the share of enrollments in private schools increasing from 28% to 38% at the primary level. In Punjab, almost half of all children in primary grades attend private schools. Similar increases have been observed at the middle and high school levels. For all of Pakistan, the share of enrollments in private schools at all levels of schooling increased from 26% to 38% between 2003 and 2014.[36] This trend reflects the widely acknowledged reality that households are increasingly willing to pay for education due to the poor quality and inadequate access to functioning public schools. A report by the Social Policy and Development Center illustrates the increasing role played by private schools in terms of post-primary-level enrollment, particularly in urban areas (Figures 17A and 17B).[37]

[36] Government of Pakistan, Pakistan Bureau of Statistics. 2005. *PSLM 2004–2005.* Islamabad; Government of Pakistan, Pakistan Bureau of Statistics. 2015. *PSLM 2014–2015.* Islamabad.

[37] Social Policy and Development Center. 2015. *Social Development in Pakistan: Annual Review 2014–2015.* Lahore.

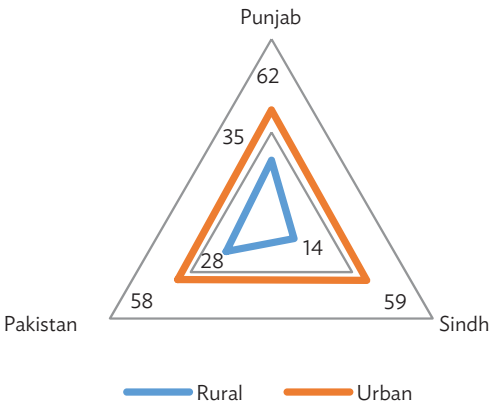
Figures 17A and 17B: Share of Private Sector Enrollments



Source: Pakistan Social and Living Standards Measurement Survey, 2004–2005 and 2014–2015.

Nevertheless, the distribution of private versus public schooling is uneven. As Figure 18 suggests, the proportion of primary-level enrollments in private schools is much higher in urban areas than in rural areas. The difference is most stark in Sindh where 59% of students at the primary level are enrolled in private schools in urban areas and only 14% in rural areas. Thus, while the role of private schooling has grown, it is skewed disproportionately toward urban areas. The Alif Ailaan report notes that 55% of students are enrolled in private schools in urban areas, whereas 28% are enrolled in rural areas (at all levels of schooling).[38] The Learning and Education Achievement in Punjab Schools (LEAPS) report by the World Bank further highlights that private schools are located in wealthier villages and in richer areas within these villages. This skewed situation reflects the low levels of subsidies provided by the governments to the private sector to operate in rural and poor areas of the country.

Figure 18: Proportion of Primary-Level Enrollments in Private Schools in Urban Areas Compared with Rural Areas *(%)*



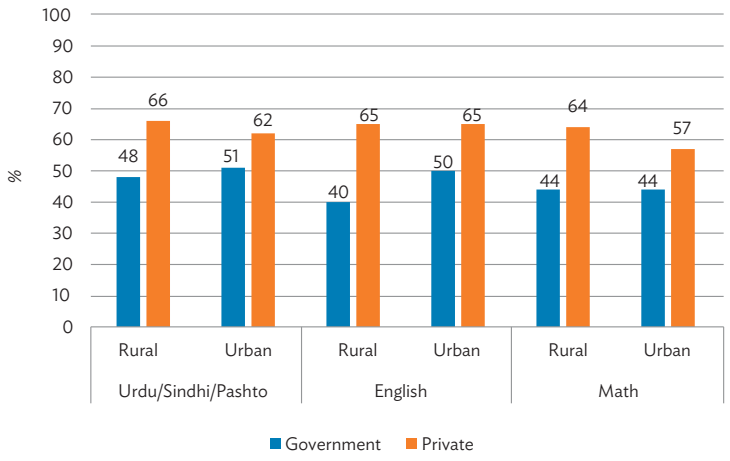
Source: Pakistan Social and Living Standards Measurement Survey 2014–2015.

[38] Alif Ailaan. 2017. *Private and Government Schooling in Pakistan.* Islamabad.

What is the evidence on the quality and functioning of private schools versus public schools in Pakistan? According to the LEAPS report, which is based on an extensive survey and rigorous analysis of data from private schools and public schools in Punjab, students from private schools have higher test scores in all subjects than their counterparts in public schools, in part due to greater effort by their teachers. The study finds that "the differences between public and private schools are so large that it will take public school students between 1.5 to 2.5 years of additional schooling to catch up to where private school students were in Class 3." The study concludes that learning outcomes are not correlated with where students live but rather whether they attend a private or public school. Indeed, most of the variation in outcomes is explained not by differences across villages but by differences across schools within the same village. In addition, the LEAPS report found that the cost of education in private schools is almost half of that in public schools, and is largely driven by higher government teacher salaries. Private school teachers are paid according to local conditions and their wages are also based on performance, whereas public school teachers are paid based on their qualifications, seniority, and experience, and their remuneration does not typically vary with effort or performance.[39]

The ASER reports have consistently found students in private schools perform better than their counterparts in public schools. A much higher percentage of the children in private schools in grade 5, for example, can read basic Urdu and English text and perform basic division (Figure 19). It must be noted that private schools include high fee schools with wealthier students, giving them an advantage in terms of home background and school facilities. Nevertheless, even when low-cost private schools are classified separately, a higher percentage of these students attain basic learning levels compared with students in public schools, although the differences are narrower (this is seen in the data presented in Figure 20 in this chapter).

Figure 19: Percentage of Grade 5 Children in Rural Sindh Who Can Read at Least a Story in Urdu, Read a Few Sentences in English, and Perform Two-Digit Division in Mathematics, 2016



Source: ASER, 2016.

[39] T. Andrabi et al. 2007. *Pakistan Learning and Education Achievement in Punjab Schools: Insights to Inform the Education Policy Debate* (LEAPS). Washington, DC: World Bank.

Public–Private Partnership Models

How has the government responded to this increased role of the private sector in school education, which is largely considered the responsibility of the state? In recent years, provincial governments in Punjab and Sindh have seen the rise of the private sector as an opportunity rather than a threat. Differing models of PPPs have emerged in the school education sector in Punjab and Sindh, with Punjab being the pioneer in Pakistan in this area. In both provinces, there are multiple different PPP schemes which can be grouped into three categories.

The first category comprises government-funded private schools and/or government funding for students to enroll in private schools. These are schools that are owned by nongovernment providers but receive government funding. These models aim to improve access in underserved areas and for disadvantaged households. These include the SEF's promoting private schools in rural Sindh program, which finances the establishment of private schools in underserved localities that rank poorly on three indicators:

- the size of the out-of-school children population (6–10 years),
- distance to the nearest primary school, and
- gender disparity in primary school participation.

Another salient program under this category is the PEF education voucher scheme, launched in 2006, which finances children from the poorest households to receive education in low-cost private sector schools in their neighborhood using a voucher system. The PEF foundation-assisted schools (FAS) program and the SEF-assisted schools program, where the respective government foundations fund students in identified low-cost private schools, are additional examples. The PEF Punjab inclusive education project and the PEF new school program (NSP) have been launched more recently.

The second category of PPP models are privately managed public schools. A recent model in this category is the education management organizations (EMO) model in Sindh, which is overseen by the PPP node in SELD. The government contracts credible EMOs, through a competitive and transparent process, to manage and improve the functioning of public schools. A management fee (capped at 15% of the total proposed budget) is awarded and certain key performance indicators (KPIs), standardized across the province, need to be met by the EMO. Similarly, the SED in Punjab launched the public school support program in 2015, under which it hands over the management of low-performing public schools to the private sector. This program aims to improve the quality and efficiency of school management while also improving access.

A third category of PPP models consists of adopt-a-school programs. Under these programs, teacher salaries and utility payments are made by the government while the "adopter" takes over all other expenses, including hiring additional contract teachers, where necessary. The SEF launched an adopt-a-school program in 1998. Under that program, SEF encourages individuals and organizations (the private sector and civil society) to adopt government-run schools and guides them to ensure public school revival and undertake educational improvements for children.

The use of PPPs has grown in scale and scope over the past decade with exponential increases in enrollments over the last 3–5 years in Sindh and Punjab. Enrollments under programs managed by the PEF were about 2.5 million in 2017 (up from 20,000 in 2005). In December 2015, the Government of Punjab decided to hand over 5,000 of its worst-performing public schools to the PEF. In the 2,300 schools that have already been handed over, enrollments doubled within 6 months. The PEF also embarked on the NSP in 2008, where it partners with private operators to open new schools where no government or PEF schools exist within a 1-kilometer radius and where the population is at least 350. The NSP is now focused on reaching the remaining out-of-school children (5%–7% of the primary-age population) using state-of-the-art geographic information system mapping to locate these schools. This will be far more cost-effective than building public schools in these remote areas

as the PEF schools use existing spaces and/or leased or rented premises. Fully 74% of these schools are in rural areas and 67% of all PEF schools are in southern Punjab, whose education indicators have traditionally lagged the rest of the province. Overall, 66% of the PEF schools and 84% of enrollments are at the middle and high school levels.[40]

SEF schools' coverage has grown rapidly in recent years, although its programs are smaller in scope and coverage than those of the PEF. Enrollments under all programs managed by the SEF were around 530,000 in 2018, more than double the enrollments in 2014–2015 (this does not include those enrolled in the EMO-managed schools facilitated by the SELD's PPP node).[41] Its programs have also become more strategic in nature. Unlike PEF schools, most of the SEF schools (79%) are concentrated at the primary level. The SEF has recently initiated a middle and high school program where existing SEF primary schools are being upgraded to middle and high school levels.

Box 2 describes an example of a successful PPP program in secondary education from the Philippines.[42] Programs such as these could be replicated and scaled up in Sindh and Punjab where private sector providers are available or come forward for such opportunities.

Box 2: Senior High School Voucher Program—A Successful Public–Private Partnership Model in the Secondary Education Sector in the Philippines

The senior high school (SHS) voucher program in the Philippines was launched in 2016 with the aim of fulfilling the government's commitment that every child should have the right to quality secondary education. This voucher program, introduced by the Department of Education (DepEd), uses a public–private partnership (PPP) modality to finance the education of eligible junior high school graduates who wish to enroll in private SHSs (grades 11 and 12), rather than in DepEd SHSs. The use of the private sector to enroll SHS students allowed DepEd to meet its enrollment targets, without the need for a rapid scale-up in school infrastructure and hiring of teachers. In school year 2017–2018, around 1.29 million SHS students were able to enroll in private SHSs through the SHS voucher program. DepEd also uses a PPP modality to finance enrollments at the junior high school level under the education services contracting (ESC) scheme. In school year 2017–2018, nearly 980,000 students were subsidized to attend private junior high schools under the ESC. DepEd's national expenditure program for fiscal year 2018–2019 allocates more than ₱20 billion to spending on the SHS voucher program.

The SHS voucher program allows graduates from public junior high schools to attend either a public DepEd SHS or a non-DepEd private SHS by providing them with a voucher to offset some or all the cost of private SHS tuition. The voucher amount varies based on location of the SHS, taking into consideration the different cost of education delivery around the country, and on whether the student was subsidized under the ESC while attending a private junior high school. In school year 2018–2019, the value of the voucher ranged from ₱14,000 to ₱22,500. The voucher values were initially set so that the average voucher value was approximately the same as the cost of delivering SHS in the public sector. A range of providers, including public and private SHSs, public and private universities and colleges, and technical–vocational institutes, currently offer the SHS program.

In December 2014, the Asian Development Bank approved the Senior High School Support Program, a $300 million results-based lending program to support the design and early implementation of DepEd's K to 12 program, a wide-ranging reform that included the addition of 2 years of SHS, a revised curriculum, and the introduction of the SHS voucher program.

Source: Asian Development Bank.

[40] PEF data, March 2017.

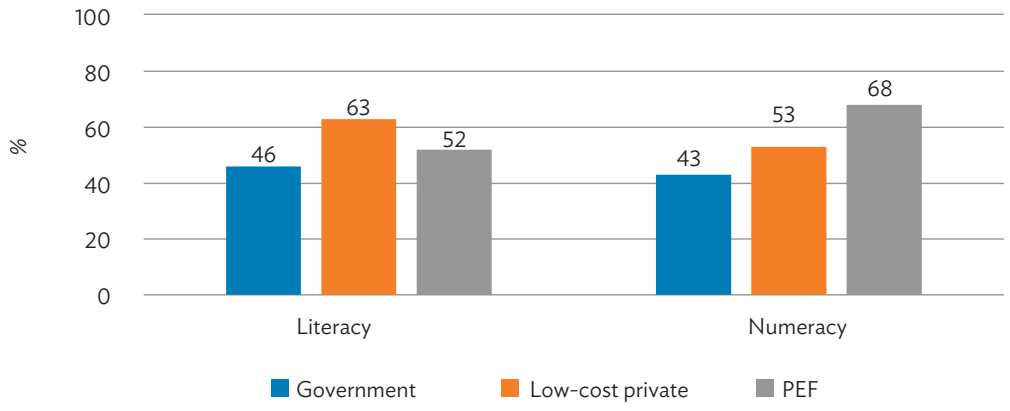
[41] SEF data, 2017–2018.

[42] Government of the Philippines, Department of Education. www.deped.gov.ph; and Asian Development Bank. Projects. https://www.adb.org/projects/45089-002.

PPP models emphasize accountability and quality, with schools undergoing regular assessments of students (and in some cases, of teachers) and contract renewal for private operators tied to the achievement of student outcome targets. PPP schools in Punjab and in Sindh also emphasize regular monitoring and evaluation, as well as in-house teacher training as key to their success. The PEF uses results from internal assessments and PEC to identify teacher training needs. Teacher accountability is higher in PPP schools compared with public schools, since teachers in PPP schools are usually hired on a contract basis and contract renewal is linked to performance. One study assessed the adopt-a-school model in Sindh and Punjab and found that there were significant improvements in indicators of access, quality, and governance in adopted schools. The study concluded that there was a higher rate of increase in enrollments in adopted schools than in other public schools. Furthermore, the adopted schools had better infrastructure and a higher number of teachers, on average, compared with the non-adopted schools. Even more significant is the finding that learning outcomes in adopted schools also improved over time. The study confirmed what has been reported anecdotally—that teachers in adopted schools get more training than public school teachers. They also report that a higher proportion of the teachers in adopted schools were implementing pedagogical best practice in the classroom, likely accounting for the better student outcomes.[43]

Another study, which evaluated the PEF FAS program, used rigorous econometric techniques and concluded that the program had a significant impact on access by increasing the number of students, teachers, classrooms, and blackboards. In addition, the cost-effectiveness analysis revealed that the program was one of the most cost-effective interventions for increasing enrollments among developing countries.[44] Results from the ASER survey of 2015 also highlight the better learning outcomes in PEF schools compared with public schools (and in the case of numeracy, compared with other low-cost private schools as well), as illustrated in Figure 20. This occurred even though the teachers hired in PEF and low-cost private schools are typically paid much lower salaries and have lower qualifications and professional training than public school teachers, highlighting the importance

Figure 20: Percentage of Grade 5 Children Who Can Read at Least a Sentence in English and Perform Two-Digit Division in Mathematics, 2015



PEF = Punjab Education Foundation.

Source: Bill & Melinda Gates Foundation. 2016. *Pakistan School Education Landscape.* Lahore.

[43] Institute of Development and Economic Alternatives (IDEAS). 2015. *Public Private Partnership in Education: Evidence from Pakistan.* Lahore.

[44] F. Barrera-Osorio and D. Raju. 2011. *Evaluating Public Per Student Subsidies to Low Cost Private Schools: Regression-Discontinuity Evidence from Pakistan.* Washington, DC: World Bank.

of better teacher accountability, ongoing and needs-based teacher training, regular assessment and feedback to teachers and students, and incentives to schools and teachers. All of these are practices in PEF- and SEF-supported schools. However, the overall learning levels are very low in all types of schools, with about one-third to one-half of all grade 5 students not being able to read even a sentence in English or perform two-digit division in mathematics.

While the experience with PPPs has been successful in Sindh and Punjab, challenges remain. The most critical constraint to expanding these successful PPP programs is level of funding: the PEF and SEF funding levels are not high enough to support significant scale-up. Second, PPP schools are usually given a per-child subsidy that is lower than the equivalent cost of schooling in a public school, putting the low-cost private schools at a disadvantage. For example, in Punjab, the per-student cost at the primary level in public schools is about PRs1,500 per month, but the government gives the PEF a per-student subsidy of only PRs550 per month. Another significant constraint experienced by PPP schools is that they must retain the government teachers in the schools. This often leads to problems if the teacher does not cooperate to improve teacher performance as expected by the private manager. Sometimes, these teachers are transferred to other public schools. However, this does not solve the systemic issue. Finding and retaining good-quality teachers is a key challenge for all schools operating under the PPP mode in Sindh and Punjab. The lower remuneration and lack of a career path are disincentives, and teacher turnover rates are high in low-cost private schools, including in PPP schools.[45] The issue of low teacher remuneration needs to be addressed since, in some cases, teacher salaries are below minimum wage.

Despite these constraints, both the SEF and PEF are scaling up their programs, and enrollment numbers are expected to rise. While the SEF has traditionally funded primary schools, new initiatives include the middle and high school program where about 150–200 existing SEF primary schools are being upgraded to the middle and eventually secondary levels. The SEF is also assessing the capacity of private sector operators to scale up in a sustainable manner, partnering with good-quality private sector operators. Table 9 summarizes the education PPP programs in Sindh and Punjab.

Table 9: Public–Private Partnerships in the School Education Sector in Sindh and Punjab

Program	Program Oversight and Size	Key Elements
Sindh		
Education Management Organizations	• Overseen by SELD's PPP node • Target of 118 schools under SBEP, with other schools planned • As of June 2018, there were 23 schools under EMO management	• Government contracts private sector EMOs, through a competitive transparent process, to manage and improve public schools. • EMOs are paid a management fee (capped at 15% of budget), which is based on attainment of KPIs. • Continuation of contract is based on performance in meeting KPIs. • Independent monitoring and evaluation of EMO finances and attainment of KPIs. • Schools use government teachers and hire additional contract teachers, as required. • Students do not pay fees. • Contract duration: 10 years • Under new cluster model being introduced, EMO will also manage neighboring public schools.

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[45] Society for the Advancement of Education (SAHE). 2015. *States Engagement with the Private Sector. Education Monitor.* Volume 2. Lahore.

Table 9: *continued*

Program	Program Oversight and Size	Key Elements
Promoting Private Schools in Rural Sindh	• Overseen by SEF • As of August 2018, there were 1,021 schools with 252,020 students	• Provides per-student subsidies to support establishment of LCPS in underserved disadvantaged areas. • Monthly per-student subsidy ranges from PRs700 to PRs1,200 depending on education level. • Students do not pay fees. • Provides training and workshops for teachers and school operators.
SEF-assisted Schools	• Overseen by SEF • As of August 2018, there were 809 schools with 161,329 students	• Provides per-student subsidies to students to attend LCPS. • Operates at the primary, elementary, and secondary education levels. • Monthly per-student subsidy ranges from PRs500 to PRs800 depending on education level. • Students do not pay fees. • Provides free textbooks and other school materials. • Provides training and workshops for teachers and school operators.
Adopt-a-School Program	• Overseen by SEF • As of August 2018, there were 468 schools with 103,972 students	• Launched in 1998 • Individuals and organizations in the private sector and civil society are encouraged to adopt public schools. • Adopters are required to develop and implement a school development plan and monitor progress against targets. • SEF facilitates and provides technical assistance and monitoring.
Middle/High School Program	• Overseen by SEF • As of June 2018, there were 158 schools with 48,628 students	• Launched in 2016 • Provides per-student subsidies to students to attend LCPS at the middle and high school levels. • Students do not pay fees. • Provides free textbooks and other learning materials. • Provides training and workshops for teachers and school operators.
Punjab		
Foundation-Assisted Schools	• Overseen by PEF • As of June 2018, there were 3,700 schools with 1.98 million students	• Flagship program launched in 2005 • Provides per-student subsidy for students enrolling in LCPS. • Monthly per-student subsidy ranges from PRs550 to PRs1,500 depending on education level. • Students do not pay fees. • School selection is through pre-QAT and physical verification. • Continued partnership depends on schools' annual QAT performance. • Annual categorization of schools is based on monitoring. • Incentives such as honoraria and soft loans are provided to schools.

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Table 9: *continued*

Program	Program Oversight and Size	Key Elements
Education Voucher Scheme	• Overseen by PEF • As of June 2018, there were 1671 schools with 500,000 students	• Launched in 2006 • Sponsors children from poorest households to receive education in LCPS in their neighborhood. • Identification of deserving/out-of-school children through household survey • Per-student subsidy ranges from PRs550 to PRs1,100 depending on education level. • Continued partnership conditional on schools' annual QAT performance • Evening classes for child laborers
New School Program	• Overseen by PEF • As of June 2018, there were 2,404 schools and 272,657 students	• Launched in 2008 • Operators establish schools where no public or PEF school exists within a 1-kilometer radius and with a population of at least 350. • Operators may be entrepreneurs or NGOs. • Schools paid monthly per-student subsidy. • Initial 6-month grace period for schools to meet minimum requirements (i.e., 50 students, 2 teachers, 2 classrooms, drinking water, toilet facility, and furniture). • Schools paid per-student subsidies for 50 students for first 6 months and then on actual enrollments. • Students do not pay fees.
Public School Support Program	• Overseen by PEF • As of June 2018, there were 4,283 schools and 600,000 students	• Launched in 2015 • Private operators contracted to manage low-performing public schools. • Private operators may include education chains, civil society organizations, or individuals. • Students do not pay fees.

ADB = Asian Development Bank, EMO = education management organization, KPI = key performance indicator, LCPS = low-cost private school, NGO = nongovernment organization, PEF = Punjab Education Foundation, PPP = public–private partnership, PRs = Pakistan rupees, QAT = quality assurance test, SBEP = Sindh Basic Education Program, SEF = Sindh Education Foundation, SELD = School Education and Literacy Department.

Source: Asian Development Bank.

Responsibility for Public–Private Partnerships

While the private education sector has grown considerably in Pakistan, particularly in Sindh and Punjab, the legal and institutional frameworks governing the private sector remain somewhat fragmented, particularly in Sindh. The NEP 2009 supported the use of PPPs as a strategy for inclusive, quality education in the country. One of the key features of the Sindh education PPP framework is that responsibility for PPPs is split between the SEF (a semiautonomous government body) and the SELD's PPP node. The SEF is the main organization with responsibility for PPPs in the education sector. Its focus has largely been on programs that provide per-student subsidies to primary education. The SELD's PPP node, which was established in 2015, is responsible for the EMO program. The EMO framework, unlike that of the SEF, was developed under the PPP Act of 2010 in Sindh. The PPP node remains constrained by hiring freezes that have prevented the hiring of adequate staff, although this hiring freeze has recently been lifted. Nevertheless, as discussed earlier, contracts with EMOs have

already been signed with almost two dozen schools as of June 2018 and several more are planned for the near future.

In Punjab, the responsibility for PPPs in the education sector lies solely with the PEF. The PEF manages several PPP programs that have been growing in scale and range, from providing student subsidies to providing vouchers, setting up low-cost private schools in underserved areas and taking over low-performing public schools. The PEF is governed by the Punjab Education Foundation Amendment Act of 2016.

Quality Assurance

The SESP 2014–2018 highlights the importance of improving the monitoring and quality assurance of PPP schools. Currently, monitoring and quality assurance is done by the SEF for its individual programs using differentiated strategies as appropriate. As discussed earlier, the emphasis on basing contract renewals for private providers on the outcomes of regular assessments is a key factor in their successful quality assurance. The recent EMO model rolled out by the PPP node uses KPIs, which are the gold standard in PPP projects for monitoring and evaluation. These KPIs include indicators related to financial and quality-of-education achievements and are measured by a third party.

While the Government of Sindh has made considerable headway improving the framework for quality assurance and the legal basis for PPPs in education, the Government of Punjab's PEF has had good quality-assurance initiatives for over a decade now. The PEF was set up in 1991 but is now governed by the PEF Act of 2004, which gives control to its board of directors, making PEF an autonomous body, which helps minimize political interference and improves quality assurance. The Punjab Education Sector Plan (2013–2017) also lays out some key strategies to enhance and improve the PPP processes. These include assessing and enhancing the capacity of the PEF as well as a third party evaluation of the PEF's program. Independent private schools in both Sindh and Punjab are regulated by and expected to be registered with the directorate general of private schools. However, as pointed out in the NEP, there are many unregistered private schools in both provinces and across Pakistan.

The World Bank's System Approach for Better Education Results report for Sindh concluded that provincial government sets student learning standards for independent private schools, government-funded private schools, and privately managed public schools.[46] At the secondary level, all schools need to be affiliated with the examination board. This is expected to help with quality assurance, but the examinations themselves need considerable reform. For PPP schools, as discussed earlier, the SEF and PEF both conduct regular student assessments without informing the schools in advance and are authorized to administer sanctions based on the results of these assessments. Furthermore, both the SEF and PEF require government-funded private schools to undergo surprise inspections, the reports of which may be used to withhold subsidies, if necessary. However, all privately managed schools are not required to undergo inspections since these are based on individual contracts with the "adopter."

The government has only a small role in the quality assurance of private schools and this needs to be strengthened to ensure that all private schools, including the growing number of low-cost private schools, are registered as a first step. However, the provincial governments tend to favor more restrictive, input-based regulation which is counterproductive. There have also been moves by provincial governments, most recently in Punjab, to regulate the fees in private sector schools, which is unrealistic and unnecessary as there are a wide range of private schools from low-cost to high-

[46] World Bank. 2015. *Systems Approach for Better Education Results: Engaging the Private Sector.* Washington, DC.

fee schools catering to different populations.[47] Moving toward outcome-based quality assurance is recommended. This is expanded on in the section on further reforms.

Quality assurance in PPP schools is stronger. With quality assurance via regular assessments and feedback, sanctions and withholding of funds where standards are not met, as well as other measures, accountability is strengthened in these schools, likely leading to better student outcomes found by researchers. However, much more needs to be done to improve the quality of education in all kinds of schools—public, private, and PPP schools—in a holistic manner including improving teacher quality, curriculum, and assessment systems (footnote 47). Improving teacher quality in all kinds of schools is essential. Further measures to institutionalize quality assurance with better incentives for improved quality would go a long way toward improving the teaching–learning process, defined more broadly than results of high-stakes student assessments (footnote 47). These will be discussed further in the section on proposed further reforms.

2. The Way Forward—Recommendations for Further Reform

Strategic Scaling Up of Public–Private Partnerships

Earlier sections have discussed the growing role of the private sector in the education sector in Pakistan. The SELD in Sindh and the SED in Punjab have introduced innovative PPP models over the last decade, and these have grown in strength and scale over the last few years. These models, which provide low-cost private education to complement public schools, should be scaled up to reach a much larger number of students. To do this, an assessment of the capacity of the private sector to fulfill this role would be required.

A subsector in which PPP schools should be strategically scaled up to address the dire need is in providing post-primary schooling, i.e., at the middle and secondary levels, where access to both public schools and PPP schools is limited and participation rates are very low. Upgrading existing PPP schools managed by the SEF, Sindh PPP node, and the PEF to post-primary levels would be a far more cost-effective option than investing in substantial infrastructure that would be required to build public schools in all underserved areas. It would also be important to pay salaries high enough to attract and retain good teachers.

Recently, vouchers have been successfully used in countries such as the Philippines to substantially expand access to higher secondary education. Vouchers may work more effectively in urban areas, such as in Karachi or Lahore, where private schools already exist. However, some of the other programs of the SEF and PEF and the EMO models could also be successfully scaled up substantially to the middle and high and/or higher secondary school levels. This could be done much more rapidly than building new public schools or upgrading existing public schools to expand access to cost-effective, quality schooling, since the PPP models under the SEF and PEF use existing buildings, either lying vacant or in spaces that are leased or rented. The Government of Punjab is already doing this even as it plans to focus on expanding coverage of PPP schools under the PEF umbrella, rather than build new schools. The Governments of Punjab and Sindh could also consider providing stipends to girls in PPP schools as they do in public schools, to encourage girls to attend schools, particularly at post-primary levels where their participation rates are lower.

While enrollments at the primary level have grown in both SEF and PEF schools, the SEF example remains much smaller in scope and coverage. Evaluations of both SEF and PEF programs have shown them to be successful in improving access and, in some cases, quality of education as well. In addition,

[47] SAHE. 2015. *States Engagement with the Private Sector. Education Monitor.* Volume 2. Lahore.

they are cost-effective since teacher salaries are much lower than those in public schools and usually infrastructure costs are much lower due to use of existing or rented spaces. The evaluation of the PEF FAS program found it to be successful in significantly improving access to education. An Asian Development Bank (ADB) report concluded that the PEF programs are "replicable, cost-effective, and competitive... the PPP programs of the PEF have the potential to promote quality education among the underprivileged sections of society at an affordable cost."[48] Another evaluation, discussed earlier, found that the adopt-a-school program in both Sindh and Punjab was successful at improving both enrollment and learning outcomes of students. Other key programs, particularly the education voucher scheme in Punjab and the EMO model recently introduced in Sindh, should also be evaluated.

The Government of Sindh should substantially invest in scaling up the successful SEF programs to reach out-of-school children at all levels and to increase middle and secondary school participation rates. The PPP node in SELD in Sindh needs enough human resources and capacity building to expand the EMO model to include a cluster approach that would benefit more students. The Government of Sindh could consider outlining a clear policy for PPPs in the school education sector. More predictable and increased funding is recommended to increase the number of PPP schools. Strategically expanding PPPs in education would not only support the Sindh and Punjab governments in delivering quality education to a rapidly growing population by supplementing public school delivery, it would also put pressure on public schools to improve.[49]

The flagship PPP programs managed by the SEF in Sindh and the PEF in Punjab have already demonstrated considerable success in terms of scaling up their provision. However, it is unlikely that the SEF and PEF have the staff and capacity to substantially scale up while still maintaining the quality of the programs by ensuring the high standards of inspection and student and teacher assessment. Provincial governments would need to invest in providing substantial enhanced financing for the new PPP schools and for enhancing quality assurance, both technical and financial, as well as program management capacities and provide competitive remuneration to staff to reduce staff turnover. This will be key to assist the SEF and PEF in providing capacity building and training to private operators. In addition, it will be critical to limit political interference in these organizations, thereby ensuring that the SEF and PEF continue to function under the statutory requirements of the respective acts. It would also be useful to undertake an institutional assessment of the SEF to target capacity enhancing and building investments appropriately. Another option that the Government of Sindh could consider would be to bring the SEF and the PPP node in SELD under one umbrella to allow for better collaboration and partnership between these two departments, both of which aim to enhance PPPs in school education.

Strengthening Quality Assurance for All Private Schools

While the share of the private sector and PPP schools in both Sindh and Punjab has grown substantially over the past decade, the earlier discussion has underscored the need to strengthen quality assurance mechanisms, particularly for the private sector and for PPP schools. As a first step, it is imperative that data on private schools are gathered on a regular basis, perhaps by incorporating them in the education management information system (EMIS) of the different provinces or at least by conducting a regular private school census. Punjab has already begun conducting a regular private school census, the results of which are available online. The Society for the Advancement of Education (SAHE) report on the role of the private sector in education lays out several sensible ways for governments to regulate more effectively and strengthen quality assurance of private schools

[48] Asian Development Bank. 2010. *Public–Private Partnerships in Education: Lessons Learned from the Punjab Education Foundation.* Manila.

[49] N. LaRocque. 2006. *Options for Increasing the Scope of Public–Private Partnerships at the Primary and Secondary Education Levels in Sindh.* Islamabad.

in Pakistan, with the purpose of improving quality and encouraging investment, noting that present regulations have the opposite impact. These recommendations include enhancing financial support via the PEF and SEF to provide higher teacher salaries in their schools, ensuring minimum wage regulations for teachers in all low-cost private schools, encouraging private schools to self-regulate, and moving toward output- and outcome-based regulation. A key step in moving toward outcome-based regulation will be for provincial governments to provide all private schools (independent and PPP) autonomy on teacher standards and hold them accountable for student-related outcomes, especially learning outcomes, and improvements in teaching–learning processes. The regulatory and funding frameworks governing private education in both provinces need updating to ensure a flexible operating environment for private schools while also ensuring that quality standards are met. The directorates responsible for private education in the Sindh SELD and Punjab SED need strengthening to make them more effective.

It will be important to require all types of private schools to participate in the standardized assessments at lower grades—for example, the SAT in Sindh and the PEC in Punjab for grades 5 and 8—to get better and comparable information on student outcomes in all schools. While independent private schools and government-funded private schools can set curriculum standards, this is not true for privately managed schools. This should be extended to privately managed schools as well, since it would encourage innovation among private providers to tailor curriculum and learning materials to suit local needs. While government-funded private schools undergo regular inspections, this needs to be uniformly introduced in privately managed schools, hand in hand with a system of sanctions and rewards, to increase accountability. While Sindh has sanctions for poor performance, it does not have a system of rewards which could act as incentives. Punjab's FAS program uses sanctions and rewards to improve student outcomes. The rewards are in the form of teacher and school bonuses based on student performance.[50] Increased accountability should go hand in hand with increased autonomy.

Overall, quality needs to be improved in all schools. The teaching–learning process can improve only with an improved curriculum and assessment system, better teacher training, and improved quality assurance to ensure that all teachers, whether in public or private schools, have adequate training and professional development opportunities and a career path that incentivizes them to stay in the profession. One of the key challenges facing low-cost private schools and PPP schools, is high teacher turnover due to low teacher salaries. The provincial governments should provide enhanced financing for teacher benefits for PPP schools to reduce teacher turnover and attract better-quality teachers.

C. Teacher Quality and Management

1. Issues and Current Strategies

Teacher Recruitment, Deployment, and Transfers

Teachers are the most important component of an education system. International research has established that providing adequate numbers of effective teachers is key to improving student learning levels and reducing dropout rates. The earlier description of the status of school education in Pakistan has revealed that high dropout rates and low learning levels continue to plague the public school system despite decades of investments and reforms.

[50] F. Barrera-Osorio and D. Raju. 2015. *Teacher Performance Pay: Experimental Evidence from Pakistan.* Washington, DC: World Bank.

The Pakistan public school education system consisted of 725,006 teachers in 2016–2017, up from 670,000 teachers in 2008-2009 (footnote 8). In fact, the substantial number of teachers hired in the last few years has improved the average PTR at all levels in the school system nationally and substantially in Punjab, but not the public schools (middle and high schools) in Sindh (Table 10). At the primary level, the fall in PTRs is partially driven by falling enrollments in Pakistan as a whole, and in Sindh and Punjab in particular. This is a most worrying trend that is partly explained by rising enrollments in private schools. While PTRs are reasonable at the primary, middle, and secondary levels on average in Pakistan as a whole, and in both Sindh and Punjab (Table 10), there are wide differences across public schools both within and across districts. According to the 2013 World Bank social sector expenditure report, 49% of public schools in Punjab have optimal PTRs between 20 and 40 pupils per teacher, 20% have PTRs that are lower than 20, and 21% have PTRs that are higher than 40.[51] The Sindh annual school census (2016–2017) reports an average PTR of 28 for the province but wide variations across districts, with PTRs as low as 15 in the urban district of Central Karachi but as high as 38 in the rural district of Ghotki. In Sindh, 6,277 schools have PTRs greater than 50 while 10,814 schools have PTRs less than 14.[52] These differences point to problems with optimal teacher deployment and the need for teacher rationalization.

Table 10: Pupil–Teacher Ratios, Punjab and Sindh Public Middle and High Schools

	Primary		Middle		Secondary	
	2008–2009	2016–2017	2008–2009	2015–2016	2008–2009	2015–2016
Punjab	42	30	30	21	34	23
Sindh	33	29	21	25	22	25
Pakistan	38	32	25	21	28	23

Note: In 2016–2017, the report defined "Secondary" as grades 9–12.

Source: Pakistan Education Statistics 2008–2009 and 2016–2017.

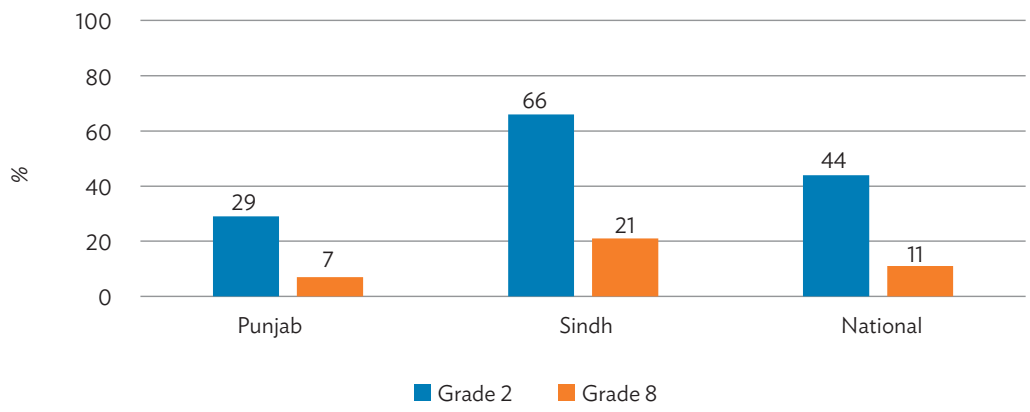
In Pakistan, 29% of government primary schools are single-teacher schools, and this figure is as high as 47% in Sindh. This is also reflected in the fact that multigrade teaching is still widely prevalent across the country with as many as 44% of rural grade 2 classrooms and 11% of rural grade 8 classrooms reporting multigrade teaching (Figure 21).[53] While the situation is better in Punjab, the incidence of multigrade teaching is very high in rural Sindh with 66% of rural grade 2 and 21% of rural grade 8 classrooms having multigrade teaching. This trend is particularly concerning since more than 200,000 new teachers have been hired in the last 6 years. An increase in the proportion of multigrade classrooms once again highlights the problems with teacher deployment across schools and across grades within schools.

[51] World Bank. 2013. *Punjab Social Sector Public Expenditure Review.* Islamabad.

[52] SELD Reform Support Unit (RSU) data, 2017. Karachi.

[53] SAFED. 2016. *ASER Pakistan (National).* Islamabad.

Figure 21: Percentage of Multigrade Classrooms in Rural Pakistan



Source: ASER 2016.

At the middle and high and/or higher secondary school levels, subject specialist teachers are essential. The Reform Support Unit (RSU) biometric report found that there is a major imbalance in the availability of subject specialist teachers at the secondary and higher secondary levels. There was, on average, one arts teacher per arts pupil, whereas there was one science teacher per 75 science pupils and one commerce teacher per seven commerce pupils. In Sindh, 88% of all public school teachers had an arts degree.[54] There is clearly a dire shortage of science, math, and English teachers in Sindh, particularly of female teachers in girls' middle and high schools. The grades 5 and 8 Sindh SAT reports the average provincial mathematics and science score in Sindh public schools to be around 24%, reflecting the lack of adequate teachers for these subjects as well.[55] The Punjab Sector Plan for Education also highlights the shortage of required teachers. However, recent recruitment rounds have focused on hiring math and science teachers in Punjab, largely addressing this gap. Last year, the Government of Sindh initiated the process of hiring 6,000 additional teachers for English, science, and math to begin to address these gaps.

In Sindh, the low numbers of female teachers in schools, particularly in remote areas, are a key challenge. Increasing the availability of female teachers is a priority given the impact of this strategy on girls' participation in school. The percentage of female teachers rose from 40% to 44% in Pakistan and from 46% to 55% in Punjab between 2011–2012 and 2016–2017. In Sindh, the figure fell slightly from 32% to 31% during the same period, despite attempts by the Government of Sindh to recruit more female teachers. In Sindh, while 72% of teachers in urban schools were female, only 21% of teachers in rural schools were female (footnote 8). Given the low primary-level NER (54% for girls at the primary level compared with 67% for boys) in Sindh, the low percentage of female teachers is especially critical.[56]

Despite considerable numbers of teachers hired by Punjab and Sindh in the recent past, gaps and inequities in teacher availability persist, particularly in rural Sindh.

[54] SELD RSU data. 2017. Karachi.

[55] Government of Sindh, SELD. 2016. *Standardized Achievement Test 4 2015–2016: Analysis Report.* Karachi.

[56] Government of Pakistan. Pakistan Bureau of Statistics. 2017. *PSLM 2016–2017.* Islamabad.

The presence of teachers in school has been further complicated by the matter of "ghost" teachers and "proxy" teachers. "Ghost" teachers are those who are on the provincial payroll but are not employed by the department as teachers. "Ghost" teachers are on the payroll by illegal means such as using photocopied employment letters or bribing clerks. In addition, some teachers, who are employed but live far away from their school of posting, employ relatives or unemployed youth to cover for them as "proxies" in school.

The problem of optimal teacher deployment has historically been compounded by the lack of transparency and nepotism in the teacher recruitment and transfer processes. This has exacerbated the disparities between schools in urban centers and remote rural areas from which teachers frequently request to be transferred. A study on teacher recruitment and retention by the Institute of Development and Economic Alternatives (IDEAS) concluded that "political interference in the recruitment, retention and deployment processes and design flaws in the policies relating to these processes have been identified as the main reasons for policy failures and the ineffective management of teaching resources."[57] Furthermore, the lack of incentives for career progression has made the teaching profession an unattractive career choice in Pakistan. This also leads to high turnover of teachers with about one-fifth of all teachers leaving the profession and not necessarily being replaced soon.[58]

The Sindh SELD and the Punjab SED have taken important steps and embarked on some key reforms during the last decade, particularly in the last couple of years, to address these constraints. Punjab has recruited considerable numbers of teachers at all levels of schooling as is evident in the falling PTRs. In fact, 240,000 teachers were recruited in the last 3 years, and most of these teachers were subject specialists in science. In contrast, while Sindh has recruited almost 30,000 teachers since 2008, these are still not enough for all schools. The falling PTR at the primary level reveals falling enrollments rather than large increases in numbers of teachers. In the last decade, the PTR at the middle and high school level has risen in Sindh but has fallen in Punjab. In 2017, Sindh began the process of recruiting 6,000 teachers for primary and middle schools with a focus on specialists in math and science. However, since about 2,000 teachers retire every year, on average, hiring additional teachers on a regular basis is an important step that needs to be taken in Sindh to ensure adequate numbers of teachers in public schools.

SELD in Sindh and SED in Punjab have also taken bold steps to eliminate "ghost" and "proxy" teachers from the system. In 2016, Sindh introduced a biometric system to monitor teachers using digital technology. Monitors were hired to visit schools every month for biometric verification. Teachers (and nonteaching staff) who are on the payroll but do not come for the biometric verification do not get their salaries. Punjab instituted a similar system earlier in 2010, and "ghost" teachers have virtually been eliminated from the cadre. The Government of Sindh has also begun creating a human resources management information system which they plan to link with the payroll system to improve teacher management and deployment.

Punjab adopted a teacher rationalization policy in 2010 and made a concerted effort to rationalize teacher placement and reallocate teacher positions based on a formula for primary, middle, and high schools. However, anecdotal reports indicate that some teachers got themselves transferred back to their schools of choice through political pressure at the local level. In Sindh and Punjab, a new recruitment policy requires new applicants to remain in the appointed school for a minimum of 3 years before becoming eligible for transfer. This has, to some extent, curtailed the movement of teachers from rural to urban areas and frequent transfers on a political basis. Nevertheless, not

[57] F. Bari et al. 2013. *An Investigation into Teacher Recruitment and Retention in Punjab.* IDEAS. Lahore.

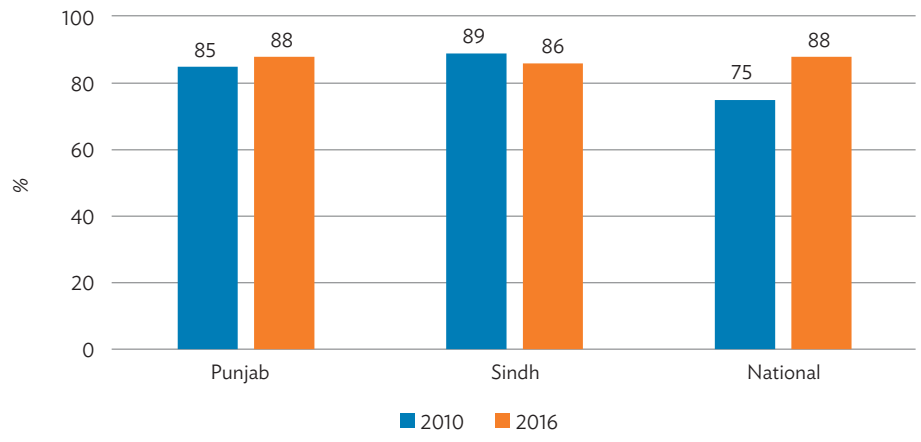
[58] UNESCO. 2013. *Status of Teachers in Pakistan.* Islamabad.

enough has been done to address the disparities in PTRs and frequent transfer of teachers that exacerbate these inequities. There is considerable political interference in this process, and the current recruitment policies in both provinces do not address the issue of teachers being posted far away from their place of residence, making it more likely that they will request transfers (footnote 57). In 2013, Punjab introduced a new transfer policy, where transfers are to be done on merit alone and only after a teacher has completed 3 years at her or his current post, only into vacant positions, giving head teachers the authority to recommend teacher transfers. Despite this policy, some political interference continues, and PTRs continue to be skewed across districts as well as within districts. Sindh has recently introduced school-specific hiring, and this is likely to improve the deployment situation.

Teacher Attendance

While it is important to improve teacher recruitment and deployment, ensuring regular teacher presence in the classroom is critical. Teacher absenteeism has historically been quite high in Pakistan. Recent initiatives by the SELD in Sindh and SED in Punjab have focused on improving the monitoring of teacher presence using biometric technology, enabling departments to take some action against absences. While national data on teacher attendance are not available, the ASER reports indicate that this has improved in recent years in rural areas in Punjab, and Pakistan as a whole, but not in Sindh (Figure 22). The results are similar in urban areas and at higher levels of schooling.[59] Thus, teacher absenteeism rates are now in the range of 8%–12%, down from almost 24% in 2009 when they were comparable to high absenteeism rates in countries such as India and Bangladesh.[60]

Figure 22: Teacher Attendance in Public Primary Schools



Source: ASER 2010 and 2016.

The World Bank LEAPS study in Punjab found that teacher absenteeism in public schools (15%) was almost double that of private schools in the province (8%) and attributed the gap to the likely difference in accountability for teachers. Another possible reason could be non-teaching responsibilities that are often assigned to public school teachers. In 2007, Punjab introduced real-time teacher monitoring

[59] SAFED. 2015. *ASER, Pakistan (Urban)*. Islamabad.

[60] F. H. Rogers and E. Vegas. 2009. No More Cutting Class? Reducing Teacher Absence and Providing Incentives for Performance. *World Bank Policy Research Working Paper.* No. WPS 4847. Washington, DC: World Bank.

and began to act against absent teachers. It is evident that teacher absenteeism has now fallen to levels similar to that in private schools, likely due to these interventions.

Sindh still has about 29% of teachers absent in public schools (average for all levels) but introduced the biometric teacher monitoring system only 2 years ago. This is a real-time monitoring of teachers by assistants using biometric machines, and the education department attempts to withhold salaries of those teachers who are absent frequently. These data show higher absenteeism than the ASER data.[61] However, this sometimes leads to legal problems since there is no legal basis for initiating disciplinary measures such as this against frequently absent or nonperforming teachers. Attempts to terminate teachers' employments are often reversed by politicians, including the chief minister, under pressure from local politicians in the district. There is, in fact, a Supreme Court ruling that teacher salaries should not be stopped until all disciplinary proceedings are complete, which rarely happens in practice.

Teacher Qualifications, and Pre-Service and In-Service Training

While little independent evidence on teacher competency levels is available, the very low learning levels of students reflect poor-quality teaching, among other factors. There have been improvements in the number and presence of teachers in Sindh and Punjab. However, the quality of the teaching workforce is primarily affected by the education and training of the teachers themselves. A 2017 report by Alif Ailaan concluded that the management and development of the teaching profession is one of the major reasons for the low state of math and science competency in the country. Teachers make up the largest number of government employees in the provincial workforce. Unfortunately, the large numbers of jobs associated with the education sector have been exploited by various political regimes in the past, resulting in recruitment of unqualified or under-skilled people in the teaching profession. Previous policies allowed recruitment of teachers who had a grade 10 (matric) education and a 9-month teaching certificate, with no entry tests conducted to evaluate the knowledge and teaching capability of the applicants.

An important initiative in both provinces (with Punjab embarking on this reform in 2002 and Sindh in 2013) is that the process of recruitment is now merit-based with minimal political interference. Both provinces (and the other provinces as well) now use a rigorous written test conducted by a third party, the National Testing Services. In Pakistan, about 20% of public school teachers currently employed have been hired under this merit-based selection system.[62] This has resulted in better screening of applicants at entry, followed by a contract period of 3 years before confirmation of employment (although almost all teachers do get confirmed and this is not used as a probationary period). The only teachers who are not confirmed are those found guilty of major misdemeanors such as fraud. This has made the teacher recruitment process far more transparent and accountable and has raised the quality of teachers hired. In addition, the issue of the need for subject specialist teachers is also being addressed in the newly introduced merit-based recruitment system via the revised rules for recruitment.

Furthermore, the minimum qualifications for public school teachers have been raised all over Pakistan: all new public school teachers need to have a minimum of a bachelor's degree and, if their subject was not education, also a professional 4-year bachelor of education (BEd) degree, as recommended in the NEP 2009, making this a more attractive career option. This recommendation was based on the transformative Strengthening Teacher Education in Pakistan program supported by the United States

[61] Government of Sindh, RSU. 2016. *Biometric Monitoring Report.* Karachi.

[62] Alif Ailaan. 2017. *Powering Pakistan for the 21st Century. Volume III of III. A Roadmap to Transform Maths and Science Education.* Islamabad.

Agency for International Development (USAID) and UNESCO. In 2012, the HEC revised the curriculum of the BEd program to make it a 4-year program to develop competent, professional teachers. The curriculum is comprehensive and considered to be of good quality and relevance, including classroom practice teaching. It is too early, however, to assess its impact on teaching–learning in the classroom.[63] It will be essential to implement this curriculum and build the capacity of the teacher training institutions (the elementary education colleges and universities that offer the teacher preparation programs) to be able to do this. For subject specialist teachers, the provinces are recruiting teachers, particularly in Punjab, with only their subject degrees without any requirement of a professional education degree. This is not a good trend and will undermine the professional qualifications which are essential for good-quality teachers. The education sector plans of the provinces have highlighted teacher education and training as one of the key focus areas to address quality of education in the classroom. However, the government colleges of education in Punjab face a shortage of adequate numbers of teacher educators. In Sindh, while the number of teacher educators is not an issue, their poor quality and the lack of science teacher educators need to be addressed urgently.[64] Furthermore, in Pakistan, about 20% of teacher preparation institutions are private. Due to poor regulation, many of these teacher preparation institutions offer poor-quality and shorter-duration BEd programs. The quality of distance-based teacher training degree programs has also been questioned as it produces huge numbers of poorly qualified teachers.

Nevertheless, the earlier initiation of this policy in Punjab, in 2002, has resulted in increases in the proportion of teachers with BEd and master of education (MEd) qualifications there over the last 7 years at all levels compared with Sindh, where the proportions are yet to increase at the secondary school level (Table 11). The number of teachers with BEd or MEd qualifications is expected to increase in the system as Pakistan has discontinued the 9-month primary teaching certificate course after grade 10, and the certificate of teaching after grade 12.[65] Teacher recruitment policies in Sindh and Punjab now include better incentives to enhanced degree holders by offering them a higher salary grade at the time of entry into the service. In addition, the Government of Punjab offers financial aid and tuition waivers to teachers to encourage them to upgrade their professional degree to the new BEd honors degree (footnote 64).

Table 11: Percentage of Teachers with BEd or MEd Qualifications

	Pakistan (%)		Punjab (%)		Sindh (%)	
	2008–2009	2016–2017	2008–2009	2016–2017	2008–2009	2016–2017
Primary	22	39	21	54	30	40
Middle	41	56	44	67	52	54
Lower Secondary	55	63	54	75	77	59
Higher Secondary	69	74	66	81	84	63
All levels	36	52	39	66	43	48

BEd = bachelor of education, MEd = master of education.

Source: Pakistan Education Statistics 2008–2009 and 2016–2017.

[63] M. Rizvi. 2015. The Teacher Education Pedagogy Related to Preparing Pre-Service Teachers as Leaders in Pakistan. *International Teacher Education: Promising Pedagogies (Part B) (Advances in Research on Teaching)*. Lahore.

[64] SAHE. 2014. *Reviewing Quality of Key Education Inputs in Pakistan. Education Monitor.* Volume 1. Lahore.

[65] Government of Pakistan, MOE. 2009. *NEP.* Islamabad.

A situation analysis of teacher education in Pakistan, conducted in 2006 by UNESCO, identified a lack of policy and standards for teacher training programs. Over the last decade, there has been some progress in developing policies and institutions for teacher training, both pre-service and in-service. Sindh has developed STEDA, mandated to oversee and regulate all teacher preparation (pre-service) programs and continuous professional development (CPD) programs in the province. Sindh also has the newly created Curriculum Authority and the PITE which have, as part of their mandate, a similar role. This mandate of STEDA also conflicts with the mandate of another federal body, the National Accreditation Council for Teacher Education under the HEC. This creates confusion and difficulties in coordination. Several efforts have been made by the SELD to delineate their roles, but a lack of leadership continuity and capacity in these institutions has been a major roadblock to implementation. Legally, their mandates are clear in the Sindh School Education Standards and Curriculum Act, 2014, but in practice, there is an urgent need to rationalize their roles. A similar mandate is also held by the DSD in Punjab, which is the sole institution responsible for overseeing teacher preparation and training in Punjab, making it more effective.

In February 2009, prior to devolution, the policy and planning wing of the MOE also developed the National Professional Standards for Teachers in Pakistan. These standards were adopted by the provinces after devolution. Despite the presence of standards and institutions mandated to implement the standards, there has been very little implementation to improve pre-service teacher training across the country. The lack of coordination among the various units of the education departments and weak capacity in the elementary colleges of education, which are the main public sector pre-service training institutes, can be seen as two major causes of slow progress in improving teacher education programs in Sindh (although Punjab has made more rapid progress). Indeed, many of the private sector pre-service teacher training institutes also provide an education of questionable quality. Furthermore, there is a serious lack of funding for all training providers. Despite the 2014–2015 allocations indicating an improvement in teacher education budgets in Punjab (8%) and in Sindh (31%), these institutes usually have very little funds allocated for teacher preparation and capacity-building activities.[66] Funds are usually available for salaries of staff and maintenance of basic infrastructure, but almost none for teacher preparation activities, development of teacher training materials, or research activities for teacher education. In fact, the lack of a regular budget for teacher training is the biggest stumbling block in developing a regular system of CPD by the SELD in Sindh.

Historically, in-service teacher training and/or CPD has been sporadic and of poor quality in Pakistan. Even when teachers have received several rounds of in-service training (and indeed many donor-funded projects have invested substantially in this), it has not shown much impact on their classroom practices. The lack of impact needs to be investigated further, but some of the reasons are certainly due to the lack of regular budgetary support, the dependence on donors for ad hoc funds for specific project-based training, and the lack of sustained scaling up of the models that work.[67] The PITEs have traditionally been responsible for this but have been constrained by a limited mandate and budgets. Teacher resource centers were set up about a decade ago at the *Tehsil* and district levels to help support in-service training but have proved to be largely ineffective. These teacher resource centers were shut down in Sindh in 2002 but were converted into district and cluster resource centers in Punjab. More recently, the importance of a cluster-based approach to teacher training, based on actual teacher needs, has gained traction, and the DSD in Punjab institutionalized this approach in 2004. A CPD framework was developed by the DSD and focuses on holistic CPD rather than one-off training courses as provided in the past. This is implemented in Punjab by the District Teacher

[66] Institute of Social and Policy Sciences. 2015. *Public Financing of Education in Pakistan: Analysis of Federal, Provincial and District Budgets 2010–2011 to 2014–2015.* Islamabad.

[67] Campaign for Quality Education. 2007. *Education in Pakistan What Works and Why.* Lahore.

Support Centers based on them identifying the training needs of teachers in their districts, referencing the PEC results of students in grades 10 and 12 examinations. Despite these positive reforms, the DSD relies too heavily on donor funding for the CPD activities, with government funding being used primarily for salaries. In 2017, Sindh approved a CPD framework. Nevertheless, there is also a dearth of good-quality district teacher educators (DTEs) and resource people, putting a heavy burden on those in the system (footnote 64). A third-party evaluation carried out in 2007 identified the need to strengthen the CPD program by developing better coordination and linkages with SED. A similar recommendation has been made in the annual review (2016) by the United Kingdom's Department for International Development (DFID), advising the DSD to develop linkages with PEC and the Punjab Curriculum and Textbook Board (PCTB) for better results.[68] The DFID review in 2016 also suggested that the program should look more to coaching and mentoring and less to monitoring teachers. The Government of Punjab is currently reviewing the continuity of the CPD initiative through the DSD (through the DTEs) and is reviewing the possibility of the giving this role to the assistant education officer (AEO) in the district education office. The DSD was phased out and was replaced by the Academy of Education Development in 2017 to address many of the shortcomings identified with the DSD. Its substantive work will be clearer in the near future. Furthermore, there is an urgent need to provide CPD to middle and high and/or higher secondary school teachers as well (as currently it is provided only to primary school teachers). Given the large numbers of public school teachers, the move toward school-based support and mentoring rather than large-scale in-service training is a step in the right direction.

SELD has set up a new curriculum authority this year, responsible for overseeing curriculum, textbooks, assessments, and in-service teacher training in a holistic manner. Traditionally, the PITE and the Bureau of Curriculum of SELD have been responsible for in-service training. STEDA is also supposed to oversee in-service training but lacks adequate staff and capacity to do so. While the RSU in SELD has been attempting to rationalize the roles of the various apex bodies, this is still a work in progress. As mentioned earlier, a law has been passed in this regard to rationalize the roles of different agencies, but traditional roles and deep-rooted organizational routines still prevail, continuing role confusion. In addition, the in-service programs offered by the PITE have not been regular, largely due to inadequate funding by the Government of Sindh. There is once again a lack of quality teacher educators. STEDA has recently approved a CPD framework which is still in early stages of implementation, and this will, hopefully, create regular structures of in-service teacher training in Sindh. It is important to note that, due to absence of regular government structures, various donor-led programs have continued to provide in-service short training in Sindh, for example, training under the Education Sector Reforms Assistance program, pre-STEP, and more recently under the STEP program. All these programs tried to develop cluster-based mentoring and district-based structures. Despite continuation of such programs for extensive periods during project implementation, they have never become part of the regular government training structures. The new CPD framework, if backed by regular budget by the government, can build on these experiences and resources.

Aslam and Kingdon (2011) found that the teacher qualifications on paper, however, do not explain student learning differences in the classroom in schools in Lahore, but rather these differences are explained partly by the actual knowledge and competence of teachers as measured by scores on teacher tests. In their study in rural Pakistan, Rawal, Aslam, and Jamil (2013) found teachers substantially lacking in basic competencies in teaching the primary curriculum.[69] It is thus critical to significantly improve teacher competencies of new teachers through pre-service training and/or

[68] Government of Punjab. Directorate of Staff Development. 2007. *Final Report on Quality Assurance of Teacher Training Programs.* Lahore.

[69] S. Rawal, M. Aslam, and B. Jamil. 2013. Teacher Characteristics, Actions and Perceptions: What Matters for Student Achievement in Pakistan? Center for the Study of African Economies. *Working Paper*. WPS 2013–19. London.

teacher preparation and of existing teachers through in-service training and/or CPD. Key aspects of CPD in the sector plans include school-based mentoring of teachers, formative assessment of students, coordination of professional development activities among a cluster of schools, and monitoring of student learning outcomes. Challenges still exist regarding school-based support, due to the low capacity of district education staff engaged in the mentoring process with teachers. In addition to the capacity of staff, the logistics of reaching schools in rural areas, especially by female staff, is a huge challenge, specifically in some rural districts of Sindh and South Punjab.

Punjab has made attempts to introduce a teacher certification and licensing policy; however, actual policy formulation, the legal requirements for implementing this, and institutional arrangements to manage it are still under discussion. Sindh also tried to introduce a certification process through STEDA; however, very little implementation has been possible due to a lack of capacity in the province to implement these reforms.

Teacher Incentives and Accountability

Teacher quality is also affected by the lack of a governance structure that provides performance incentives. The UNESCO study on teachers in Pakistan describes how salaries and benefits of public school teachers, which were very low in the past, have been raised in the past 2 decades. In the private sector, teacher salaries are variable, with elitist institutions paying much more than the public sector. However, most private schools often pay salaries that are lower than those paid by public schools. Pay in low-cost private schools is sometimes below even the statutory minimum wage.[70]

The IDEAS study on teacher recruitment and retention in Punjab highlighted the lack of incentives for public school teachers to perform since, prior to 2010, promotion was only based on seniority (footnote 57). In fact, nepotism and political connections were often used by teachers to obtain promotions. The study reported that a new teacher promotion policy was instituted by the Government of Punjab in 2010 where teachers had to complete their probationary period in a satisfactory manner, have the necessary qualifications and experience for the promotion, finished a minimum service period, passed the required examination, and had to receive a satisfactory performance evaluation report to be promoted. However, the authors commented that this had not been implemented well since teachers who passed their highest degree in the third division have had the highest number of average promotions—likely due to political connections. While similar data are not available for Sindh, it is widely acknowledged that political connections and seniority are what determine teacher promotions. Thus, promotions, as currently structured, do not provide incentives for teachers to improve performance. In fact, public primary school teachers have a lower salary grade than those in middle and high and/or higher secondary school, creating a disincentive for well-qualified and high-performing teachers to remain in primary schools.

In addition, like all civil servants, government teachers are guaranteed jobs and pensions when they retire, and their appointments cannot be terminated except under very rare circumstances. This is, of course, common across many civil service regimes in the region as well as in other developing countries. This further lowers teacher accountability and reduces the incentive to perform well. In contrast, teachers in the private sector, while most often paid far less than those in public schools, are rewarded based on performance. As the World Bank LEAPS study in Punjab explained "compensation for teachers in the government sector focuses on inputs and in the private sector on outcomes... in the private sector, teachers are paid more when they exert greater effort and produce

[70] UNESCO. 2013. *Status of Teachers in Pakistan.* Islamabad.

better outcomes."[71] In addition, private school teachers are hired on contract and can lose their jobs if they do not perform well. As illustrated in earlier sections, learning levels are higher even in low-cost private schools compared with public schools even though the teachers are usually less qualified and paid substantially lower salaries. Nevertheless, overall learning levels are low in all schools, except in the elite private schools, underscoring the need to attract and retain better-quality teachers. While there is no rigorous study in Pakistan linking the greater accountability of, and incentives for, teachers in private schools to better student learning, several international studies have found this to be the case. Box 3 summarizes teacher-related reforms in Khyber Pakhtunkhwa that could be replicated in Sindh with suitable modifications.

Box 3: Teacher-Related Reforms in Khyber Pakhtunkhwa

Khyber Pakhtunkhwa has introduced several teacher-related reforms in the last few years. And the results are promising: teacher absenteeism is down 50%, student absenteeism has dropped to 22% from 35%, and 34,000 former private school students have enrolled in public schools across 23 districts. Here are some of the salient teacher-related reforms that could, perhaps, be replicated in Sindh and Punjab (although the two provinces have also undertaken some of these reforms).

- Khyber Pakhtunkhwa has, following in the footsteps of Sindh and Punjab, introduced the merit-based testing system for recruitment of teachers. It follows Sindh in making attainment of a minimum score mandatory for selection.
- Khyber Pakhtunkhwa has, like Sindh and Punjab, introduced a global positioning system-based biometric system to monitor the attendance of teacher and students.
- A school-based teacher recruitment policy has been adopted by the Khyber Pakhtunkhwa provincial government where a teacher will be hired by the school, and will stay in the school, thereby overcoming the challenge of political interference in transfer of teachers to their preferred schools and locations.
- Khyber Pakhtunkhwa has also initiated a policy of hiring only female teachers in primary schools. In addition, female teachers are being given incentives to work in remote areas.
- Khyber Pakhtunkhwa, like Sindh, is in the process of creating a separate cadre of teacher educators to ensure better quality and adequate availability of teacher educators in the teacher training institutions.
- Three hundred local circle offices are being set up, and these will be integral to the proposed cluster-based, in-service teacher training and monitoring system by establishing a link between mentors and primary school teachers and monthly in-service training.

Source: Survey conducted by the Khyber Pakhtunkhwa Elementary and Secondary Education Department.

2. The Way Forward—Recommendations for Further Reform

Improving Teacher Deployment

In Sindh, teachers, especially subject specialists in English, math, and science, need to be hired on a more regular basis to replace those retiring every year and to address the shortages on the subject teacher front. In Punjab, while large numbers of teachers have been hired in recent years, a significant challenge in the school education systems is the considerable variation in PTRs across schools. More than half of the schools in Sindh and Punjab have either "excess" or too few teachers when compared with the provinces' goal of achieving an approximate ratio of 1:40 in primary schools and 3:100 in secondary schools. This formula needs to be adjusted to take into account the subject specialist

[71] T. Andrabi et al. 2007. *LEAPS*. Washington, DC: World Bank.

teachers at higher grades, and be adjusted for small schools, as well as reducing the incidence of multigrade teaching in remote areas. Nevertheless, these numbers do indicate that substantial redeployment of teachers would be very beneficial to student learning in many schools. This situation has been caused not only by skewed norms and teacher hiring policies, but also by excessive teacher transfers based not on the need of the school but on teacher preferences and political interference in the process.

In 2014, Punjab announced a policy of reallocation of teacher posts in accordance with PTRs. It is yet to be implemented fully, however, and this needs to be prioritized. In Sindh, teacher transfers have been done in the last couple of years based on school need as per PTRs and based on a 2013 order on the rationalization policy. Nevertheless, media reports and anecdotal evidence indicate that political interference is still rife.[72] While the 2013 transfer policy in Punjab does emphasize the rule of no transfers within the first 3 years of appointment at a school, it appears that implementation has once again been weak. Both provinces have adopted and amended teacher rationalization and transfer policies in recent years. Nevertheless, the PTR disparities illustrate that it is essential for both provinces to hold district education officers (DEOs) more accountable to these policies. One simple measure has been effective in helping target new teacher positions and enabling teacher transfer to needy schools based on PTRs. For example, in the Philippines, "color coding" of schools based on PTR (from black for those with the highest PTRs to gold for those with very low PTRs) has been applied successfully. This increased transparency has led to much less inequity in PTRs across schools in the Philippines.[73] A similar transparent policy should be considered in Sindh and Punjab.

Minimizing political interference in the teacher transfer process will be key to increased accountability. The study by IDEAS on teachers in Punjab suggests that minimizing the role of clerks and personal assistants at the district level in teacher recruitment and transfers would help reduce political interference. Furthermore, it also recommends transferring clerks more often to reduce their power over teacher-related decisions (footnote 57). Financial incentives to teachers to stay in schools in remote areas away from their families have been proven effective in countries such as the Republic of Korea, The Gambia, and Rwanda. Experience from these countries where initiatives have succeeded suggests that the financial allowances must be large enough for them to be effective (footnote 25). Such financial incentives could be considered in Punjab and Sindh and could target female teachers, as has been done in Khyber Pakhtunkhwa, due to the shortage of female teachers, especially in remote areas. Implementation of differential incentives does need to be carefully implemented, however, so that these are not misused to select teachers based on nepotism or corrupt practices.

Alternatively, school-specific teacher cadres with strict rules banning teacher transfers (except in extreme circumstances, such as adopted in Khyber Pakhtunkhwa), or locally hired teachers who have a natural incentive to stay in the area, could help address this challenge and have been effective in reducing urban–rural disparities in Lesotho, for example. They have also been seen to improve student learning levels in some states in India (footnote 25). While Punjab has already experimented with school-specific hiring in the last few years, the wide disparities in PTRs indicate that this has not been implemented fully. Sindh is now experimenting with school-based hiring as well.

[72] *The Express Tribune.* 2014. Rationalisation Policy: Teachers Demand Transparency in Transfers. 29 April. https://tribune.com.pk/story/701592/rationalisation-policy-teachers-demand-transparency-in-transfers/.

[73] J. Albert. 2012. *Improving Teacher Deployment Practices in the Philippines.* Manila: Philippine Institute for Development Studies.

Strengthening Accountability to Enhance Teacher Performance

International research has found that an effective teacher has a much larger impact on learning outcomes of students than most other interventions such as improving facilities or decreasing class size.[74] Teacher subject knowledge and teaching practices in the classroom are, of course, an important component of what makes an effective teacher, and these have been discussed earlier. However, effective teachers are also those who consistently attend schools and are motivated to perform well. Increased teacher accountability is important from the point of view of increasing their attendance as well as their effort and performance in the classroom. The LEAPS study on Punjab concludes that "the benefits of increased accountability and effort trumps the marginal increases from increased educational qualifications, which are small" (footnote 71).

Hiring teachers who belong to the local area has the advantage of potentially reducing teacher absenteeism. While both Punjab and Sindh have introduced biometric monitoring—which has already reduced absenteeism rates in Punjab and is likely to reduce absenteeism in Sindh—further improvements would be desirable. One of the limitations of the current policies in both provinces is the difficulty government officials face in withholding salaries or taking any punitive action against teachers who are found to be persistently absent. International studies have found that even financial incentives to improve teacher attendance are effective only if monitoring is done by external parties who are not stakeholders and action can be taken by education officials.[75]

One alternative that many developing countries have experimented with to increase accountability (but often also to lower the salary burden on public funds) is to hire "contract" teachers. Many of these contract teachers are also locally hired. There have been several studies documenting the positive impact of contract teachers on student learning and often on teacher attendance as well. However, in most cases, contract teachers are hired in addition to "regular" government teachers and, thus, there are no evaluations of how a school would do if all teachers were hired on a contract basis (footnote 25). One of the significant challenges that governments face when dealing with contract teachers is the political and legal pressure by these teachers and teacher unions to "regularize" them. In fact, both Sindh and Punjab hired contract teachers between 2006 and 2014 but have had to "regularize" most of them under political and judicial pressure.

Another initiative that has seen considerable success in some countries is "pay for performance." Public school systems in most countries, including Pakistan, use qualifications and seniority as a basis for career advancement and higher remuneration. However, studies have consistently shown a weak correlation between these teacher characteristics and their effectiveness in improving student outcomes. Many countries have experimented with different versions of a "pay for performance" initiative, with mixed results. Nevertheless, most rigorous studies of well-designed initiatives in developing countries have found positive impacts on student learning.[76] Ferraz and Bruns (2012) undertook an in-depth study of a group school-based teacher bonus program in Brazil based on school improvements in test scores against specific targets, combined with targets for pass rates. They found strong evidence that the program improved learning levels. In fact, a randomized controlled trial of a pilot teacher performance pay program in Punjab, Pakistan, has also been evaluated.[77] This program gives annual bonuses to teachers, targeting government primary schools with the lowest student

[74] B. Bruns and J. Luque. 2014. *Great Teachers: How to Raise Student Learning in Latin America and the Caribbean.* Washington, DC: World Bank.

[75] A. Ganimian and R. Murnane. 2014. Improving Educational Outcomes in Developing Countries: Lessons from Rigorous Evaluations. *NBER Working Paper.* No. 20284. Cambridge, MA.

[76] C. Ferraz and B. Bruns. 2015. *Paying Teachers to Perform: The Impact of Teachers' Bonus Pay in Pernambuco, Brazil.* Brazil.

[77] F. Barrera-Osorio and D. Raju. 2015. *Teacher Performance Pay: Experimental Evidence from Pakistan.* Washington, DC: World Bank.

examination performance. The bonuses are tied to improvements in student exam scores, school enrollments, and exam participation. The study also found that the initiative increased enrollment and examination participation rates but not student examination scores. In addition, the LEAPS study found that better-paid teachers in low-cost private schools performed better than poorly paid teachers. While it would be useful to experiment further and draw on international evidence to see what variant of pay for performance would be suitable in different contexts in Sindh and Punjab, performance incentives, both in terms of financial incentives and career progression opportunities, would help strengthen teacher accountability and performance. Nevertheless, it is important to experiment with linking these incentives with low-stakes assessments rather than high-stakes examinations since the latter often puts too much pressure on students.

In addition to providing financial incentives for better accountability and performance, it is also important to develop career progression paths which base promotions on effective teaching rather than solely on seniority, and salary grades available to primary teachers should be the same as those for middle and high and/or higher secondary school teachers. These career paths should also allow effective head teachers and teachers to move up the career ladder while still staying in the teaching realm, rather than being moved into management as is currently the case. Currently, the performance appraisal system of teachers known as the annual confidential reports are merely a formality since they fail to provide any useful feedback or insights on teacher performance. Promotions are mostly based on seniority rather than capability. In Punjab, the teachers verified by the DSD as poor-performing teachers (through the CPD initiatives) had no action taken against them as the system does not have any comprehensive mechanism to record teacher performance and link it with accountability and career development. The annual confidential reports for teachers should be revamped to make them effective tools for career progression based on merit.

Building Institutional Capacity for Pre-Service and In-Service Training

Teacher recruitment reforms have improved the quality of new teachers entering the system. However, there is still a need to build the capacity of existing teachers in the system as well as further improve the teacher preparation programs. The SESP 2014–2018 identifies the need to improve teacher quality by improving teacher induction, reforming the institutions that provide pre-service and in-service teacher education, introducing a CPD model for in-service teachers, teacher rationalization, and subject teacher hiring. In the Punjab sector plan, teacher quality improvement is also linked with introducing regulations and standards for in-service and pre-service training.

Investing in the leadership and management capacity of institutions that are responsible for pre-service, in-service, and standard-setting for teachers needs to be a key priority for both Sindh and Punjab. In Sindh, these include STEDA, the newly set up Curriculum Authority in SELD, and the PITE. In Punjab, this is the Academy of Education Development, evolved from the DSD, and a soon-to-be established body to oversee teacher certification. Hiring of specialized personnel in STEDA and technical support that enables them to use learning assessment results to understand teacher training needs is essential. It is imperative to build the capacity of the teacher education institutes themselves to enable them to deliver the new BEd program, including attracting better quality and higher numbers of teacher educators. It is also important to utilize existing capacity more effectively. Reducing institutional clutter and clarifying roles for the apex teacher preparation and training bodies is key in Sindh, where this remains a problem. There is a need for management and academic collaboration between the pre-service and in-service providers (colleges of education and teacher training institutions), apex bodies (e.g., STEDA, PITE, DSD, and bureaus of curriculum), and universities responsible for certifying pre-service diploma and degree programs. This will require technical support to review and improve policies and implementation mechanisms, as well as the development of institutional coordination mechanisms. Leadership of these institutions is at times passed on to bureaucrats who may be good managers but know very little about professional

development of teachers. In addition, common standards need to be established and enforced for pre-service teacher preparation institutes from the private and public sectors to ensure better prepared teachers (footnote 64).

Ensuring regular and adequate funding for teacher preparation colleges (pre-service training institutes) in Punjab and Sindh should be a priority for the provincial governments. Similarly, assuring that these institutions have adequate numbers of quality teacher educators is essential, and Punjab should consider creating a separate cadre for teacher educators, like that in Sindh. Both provinces need to invest in attracting and retaining good-quality teacher educators, especially for English, science, and math (footnote 64).

In-service teacher training and/or CPD needs considerable revamping and scaling up in Sindh and Punjab. This will also require regular funding from the provincial budgets. Substantial content knowledge upgrading is required for existing teachers in school via regular in-service training, which must be needs-based rather than supply-driven. It is essential to have school- and subdistrict-based mechanisms to support and mentor teachers in the classroom. Pakistan, with the support of various development partners, has implemented several initiatives with cluster-based and school-based mentoring programs. However, these initiatives have not been sustained since they relied largely on development partner funding. Using clustering of schools as a device to keep teachers connected with other teachers and support their peers, including considering clustering around high schools, would help provide more in-classroom support and mentoring. The district and subdistrict authorities would find it easier to monitor and support in-service training in this manner. Sindh has recently finalized the CPD framework based on clustering, and it is imperative that adequate funds are provided, and implementation is rolled out in a systematic manner.

Teacher quality improvement in specific subjects such as science, mathematics, and English is key to ensure quality improvements in schools. Many children drop out of middle and high schools due to a lack of subject specialist teachers in the system or poor quality of teaching in higher grades. In-service teacher training activities have mostly focused on primary grade teacher capacity development. An important reform area would be to develop resource material and capacity development of ECE teachers (in early grades' teaching and learning methodologies), and middle and secondary school teachers (especially in science and mathematics). Modern technologies to improve teaching–learning should be used, drawing on successful examples both within and outside the country. Any reforms in teacher quality need to be closely aligned with governance and accountability reforms to ensure successful implementation. One reality of education systems in Punjab and Sindh, particularly in the latter, is the multigrade schools. This will remain a challenge for many years. Thus, in-service teacher training needs to focus on special strategies for multigrade teaching. In this regard, the ECE policies need to be clarified to understand what it means, and what age group and grade levels are included in ECE. The government usually considers ECE as a simple preprimary (*Katchi*) class. However, it needs to expand the concept of ECE to include early grades of primary level to cover children up to the age of 8 years, as globally recognized under ECE definitions.[78] In this way, in multigrade schools, instead of constructing a separate classroom and assigning or hiring a separate teacher, one teacher could get ECE training and could teach *Katchi* to grade 2 (if trained properly to deal with multigrade situations). Both the Sindh and Punjab governments have adopted ECE policies recently, and this is an important step in the right direction.

[78] UNESCO. 2018. Early Childhood Care and Education. http://en.unesco.org/themes/early-childhood-care-and-education.

D. Assessment and Curriculum

1. Issues and Current Strategies

Assessment and Examinations

Improving student learning is one of the key outcomes that all stakeholders of an education system focus on. A good understanding of student learning is important for teachers, so they can focus their efforts on key areas that need to be improved and enhance teaching–learning practices in the classroom. Examination and assessment data are also useful for policy makers to understand what factors hinder effective learning, to inform future policies. In addition, examinations are used to signal student performance for admission to higher studies and for the job market. A sound assessment and examination system are thus integral to a good education system.

In Pakistan, there has been a system of traditional examinations at the secondary level since the 1950s. At the lower secondary and higher secondary levels, province-wide annual examinations are held for students in grade 10 (matriculation or matric) and grade 12 (intermediate) by the provincial BISE, which are government funded and managed. There are 28 BISE in the country, responsible for designing and conducting these annual examinations for affiliated public- and private-sector schools (Table 12). The only private sector provider of secondary-level examinations is the Aga Khan Examination Board (AKU–EB) in Sindh which works, thus far, only with private sector schools. Some of the elite private schools are affiliated with international boards such as the United Kingdom's International General Certificate of Secondary Education and Cambridge International Examinations (O and A level examinations) and a few with the International Baccalaureate. The activities of the boards are coordinated by IBCC established at the national level. The IBCC provides a platform for discussions on paper setting, curricular, and examination standards. Other important functions of the IBCC are to maintain a measure of uniformity across the boards and to provide equivalency certifications for foreign qualified degree holders. While the BISE Act provides some uniformity in the structure and mandate of the different BISE across provinces, it is problematic in that there are so many different examination boards, even within each province. This makes establishing equivalency difficult, and the standards across the boards vary considerably.

Table 12: Provincial Boards of Intermediate and Secondary Education

Province/Area	Number of BISE
Punjab	9
Sindh	7 (public) + 1 (private)
Khyber Pakhtunkhwa	8
Balochistan	3
Total	**28**

BISE = Boards of Intermediate and Secondary Education.

Source: Inter Board Committee of Chairmen, Islamabad. http://www.ibcc.edu.pk.

The quality of exams at the secondary and higher secondary levels conducted by the BISE is poor across the board, with a focus on rote learning and memorization rather than higher-order skills. Almost all the BISE lack the capacity to effectively design and score test papers and/or to use the data for analysis and feedback to improve teaching. Most test setting and scoring is outsourced, and the quality of these outside professionals is often quite poor. There is no mandate and funding

for data analysis and research in any of the public sector BISE, and development partners have also not provided any support for this important function, largely due to their emphasis on elementary education. Research cells in the BISE, which are mandated to carry out research and improve the assessment systems, are either not established or nonfunctional. Thus, there has been very little effort in any of the provinces to reform the BISE. There is a disjointed approach to reform formulation for teacher preparation, induction, and performance evaluation, as well as curriculum and textbook development, leaving student learning results unutilized as a guide to reforms.[79] The implementation of the matric and intermediate examinations has also been criticized in the media, with allegations of cheating at exam centers and poor-quality exam papers. The private sector AKU–EB, which was established to address some of these weaknesses, has remained small, and no public sector schools have been affiliated with it yet due to difficulties with the Government of Sindh.[80] Despite small numbers, AKU–EB has shown that locally administered examinations can be made transparent and used as effective tools of assessment (Box 4).[81]

Box 4: Innovations and Impact—Aga Khan University Examination Board

The Aga Khan University Examination Board (AKU–EB) is the preeminent private sector secondary exam board in Pakistan. Evaluations of examinations and their impact reveal that AKU–EB has been successful in developing and administering secondary examinations of high quality. Several aspects of their positive impact stand out:

- Designing examinations so that they are aligned with the local curriculum but requiring a different style of teaching compared with the rote learning used by the public sector Boards of Intermediate and Secondary Education (BISE).
- Developing examinations and question papers of uniquely high quality.
- Providing support to in-service teacher professional development resulting in teachers being more learner-centered, practical, and innovative in teaching–learning practices.
- Moving from rote learning as in examinations developed by the public sector BISE to conceptual learning and use of higher order skills.
- Developing a computer-based examination processing system at low cost.
- Using an innovative approach to practical testing in science subjects.

The AKU–EB is an innovative example of public–private partnership in education. However, its potential to have a systematic impact has been constrained by the inability of public schools to affiliate with it. In addition, public-sector BISE could be reformed drawing on some of the innovations of the AKU–EB, but resistance to these changes would need to be handled with care.

Source: AKU–EB. https://examinationboard.aku.edu/Pages/home.aspx.

While the assessment or examination systems at the secondary level in public schools have not been reformed to align with best practices, modern standardized assessments have been introduced during the last decade at the elementary level in Punjab and Sindh. The PEC, a semiautonomous unit fully funded by the Government of Punjab, was established in 2006, through the Punjab Examination Commission Act. It was approved by the Punjab assembly with a mandate to design, develop, implement, monitor, and evaluate an assessment or examination system for elementary education. It

[79] DSD discussions. 2017. Lahore.

[80] SAHE. 2015. *Assessment Systems in Pakistan: Consideration of Quality, Effectiveness and Use. Education Monitor.* Volume 3. Lahore.

[81] D. Carroll. 2008. *Evaluation of Aga Khan University Examination Board.* Karachi: United States Agency for International Development.

designs and administers grades 5 and 8 annual exams in all schools in the province. These examinations are now mandatory for students in all schools, whether public or private. Sindh began similar exams for grades 5 and 8 students in the form of a SAT in 2011 by outsourcing the design, administration, results analysis, and report formulation to an independent body selected through a competitive process of procurement known as the Sukkur Institute of Business Administration and has not set up an elementary-level examination commission as in Punjab. The SAT exams are coordinated by the RSU of the SELD in Sindh.

All the provinces and local areas also established provincial and area education assessment units under the NEAS, a federally led, donor-supported initiative. NEAS was set up with the support of DFID and the World Bank in 2003 at the federal level and was institutionalized by the government in 2008. The mandate of NEAS is to conduct national-level sample assessments on selected subjects for grades 4 and 8. NEAS conducted multiple rounds of sample assessments in 2005, 2006, and 2007. However, after development partner assistance was discontinued and the 18th Constitutional Amendment, NEAS activities remained dormant for many years. Since 2014, the Ministry of Federal Education and Professional Training has revitalized NEAS, and a sample-based NAT was carried out in 2014 for grades 4 and 8 in language (English and Urdu), science, and mathematics. Another round of learning assessment, NAT 2016, was implemented on a pilot basis. The provincial and area assessment centers continue to function at the provincial level to undertake sample assessments, but with unclear mandates and unpredictable funding.[82] The PEAS was merged with the PEC, after an institutional assessment of both the PEC and PEAS in Punjab.[83] Furthermore, a civil society organization has implemented the ASER since 2008. In addition to these summative assessments, formative assessments are occasionally held in schools, despite the absence of formal formative assessment policy or guidelines. Thus, the frequency, planning, and implementation of these formative assessments are quite ad hoc and vary from school to school. It has been reported to be particularly challenging in multigrade settings. Pakistan has, for the first time, expressed an interest in participating in the Trends in International Mathematics and Science Study 2019 where NEAS, as the lead assessment agency at the national level, will support the study teams to assist in the preliminary screening and preparation phase. At the elementary level, Punjab has also implemented simple monthly multiple-choice tests through the DTEs to track student-learning outcomes. Test items to assess student-learning outcomes have been prepared under the supervision and guidance of the DSD. However, there has been a lack of continuity in implementing these tests and using the results to inform interventions. At present, the Punjab SED uses monitoring and evaluation assistants to conduct monthly tests to ascertain children's progress in the grade-level competencies.

Education experts agree that the PEC and SAT exams follow modern, professional practices in test design, administration, and scoring, unlike the traditional methods used by the BISE at the secondary level (except by AKU–EB). Development partners have also provided considerable support for this. There are clear test specifications for the PEC and SAT exams, unlike for the BISE-designed exams. In addition, the staff at PEC, Sukkur Institute of Business Administration, and AKU–EB have training in administration, design, and test scoring unlike those that are often hired by the BISE. The PEC examinations have been continually reformed following a DFID evaluation in 2011 and an institutional review of the PEC by the Government of Punjab's project management and implementation unit (PMIU) in 2013. Cheating does occur but is less frequent in PEC exams than in those administered by the BISE, despite the former also being high-stakes examinations where student and teacher promotions are based on student performance. Cheating is not a serious issue in the SAT exams, likely

[82] Interviews with education officials in Sindh and Punjab.

[83] Institutional Review of Punjab Examination Commission (PEC) and Punjab Education Assessment System (PEAS), November 2013 by the Punjab project management and implementation unit under the technical assistance of Punjab Education Sector Project 2.

because these are low-stakes exams that do not affect promotions. In fact, the lack of participation is often a constraint faced by the SAT exams due to their nonmandatory nature (footnote 80). The PEC and SAT exam data are also better analyzed and disseminated than those conducted at the secondary level by the BISE. Nevertheless, these analyses are not, for the most part, used actively to improve teaching–learning practices and inform policy. There has been some recent improvement in the use of PEC results, for example, by the Government of Punjab to inform teacher professional development. However, much more can be done to use the assessment data and make them more accessible and available in a timely manner to professional development planners, DEOs, and head teachers, among others. In addition, there is an acute shortage of assessment experts with specific skills in developing test items and psychometricians for data analysis both at the elementary and secondary levels.

Political commitment for assessment reform is stronger in Punjab, since the PEC is a statutory body and has legislative cover, enabling it to have a core group of competent staff. However, more could be done to provide better career paths to incentivize staff to stay. Despite the high political commitment when they were initiated, the SAT exams in Sindh are not administered by an examination commission with legislative backing. This makes the future of SAT exams uncertain after donor funding is exhausted. The Government of Sindh is actively considering the creation of an examination commission for the SAT exams. At the secondary level, all the public sector BISE clearly need much stronger political will to undertake reforms. Finally, there are multiple assessments at the provincial and federal levels, including the sample-based assessments discussed earlier. This causes confusion and overlap in assessments. An assessment policy, which streamlines all assessments, should be a priority for the country (footnote 80).

Curriculum and Textbooks

Curriculum development has been a controversial topic in Pakistan. International and national experts have often criticized the curriculum for being biased toward the religious majority and weak in content. The 2002 curriculum and associated textbooks were described as "badly designed... and reported to be inaccurate and insensitive to religious diversity, minorities and women and contain material that incites militancy and violence."[84] In 2006–2007, the MOE made substantial attempts to review significant problems in the public education system. A white paper was produced that highlighted the weaknesses in the system, including in curriculum documents and textbook production. As a result, a revised National Curriculum 2006 was introduced and shared with all provinces for implementation. Additionally, a NEP 2009 and National Textbook and Learning Materials Policy and Plan of Action (2007) were developed and approved for implementation. The overemphasis on ideological and religious content in the old curriculum has largely been removed in the revised version, and non-Muslim students are not required to study *Islamiyat* (Muslim religious studies). The revised curriculum is based on clearly articulated student learning objectives and provides a comprehensive guide for textbook development, assessment, and teaching methodologies, integrating life skills across various topics.

After the 18th Constitutional Amendment, responsibility for developing curriculum and textbooks was devolved to the provinces. However, there was a lack of capacity at the provincial level to fully absorb this responsibility, as the provinces had mostly relied on the federal-level Curriculum Wing for review and approval of textbook manuscripts, as well as development of curriculum documents. Almost all provinces and areas adopted Curriculum 2006, some with minor changes. Sindh, for example, introduced regional content in the social studies curriculum. The provinces have subsequently developed their own legal and implementation frameworks addressing curriculum and

[84] Sustainable Development Policy Institute. 2003. *The Subtle Subversion: The State of Curricula and Textbooks in Pakistan.* Islamabad.

textbook development. Punjab passed a Punjab Curriculum and Text Board Act in 2015 that provides for the establishment of a PCTB, which reviewed the curriculum and developed revised textbooks for grades 1–5 in 2015 and for 15 subjects for grades 6–10 in 2016. Sindh passed a Sindh School Education Standards and Curriculum Act 2014, allowing the formulation of a Curriculum Wing. The Curriculum Wing has been mandated to look after all policy matters related to curriculum, textbooks and learning materials, and assessment. Sindh has recently established the Sindh Curriculum Authority, which is responsible for overseeing curriculum, textbook development, and teacher training, and ensuring that there is coordination between all these areas. However, the curriculum document has had limited distribution among head teachers and teachers. In fact, these key stakeholders do not have any role in curriculum planning and development.

Textbook development was a provincial subject even before devolution. Provinces prepared textbooks (through their respective textbook boards) which were then reviewed by the Curriculum Wing at the federal level for final approval. The development of accompanying textbooks—a responsibility of the provinces—has still not been fully accomplished by some provinces even almost a decade after the introduction of the new curriculum. Despite the 2007 textbook policy to use the private sector, the PCTB is developing its own books. The PCTB hired a third party and has already developed textbooks and teacher's guides for grades 1–5. The board has revised the student learning objectives in the curriculum and, once the entire process is complete, textbooks from grade 6 to grade 10 will be developed. In Sindh, the Curriculum Wing conducted a systemic review to align all textbooks with the curriculum and update content. An advisory committee notified by the Sindh SELD provided oversight for the review. The textbooks for *Katchi* to grade 8 in Sindh have been revised based on the new curriculum, and the Sindh Textbook Board is in the process of revising the textbooks for grades 9 and 10. Students in primary and middle schools have received new textbooks this school year.

An important issue in the development of textbooks and implementation of curriculum is the debate over language policy. Urdu is not widely used across the country and is cited as a native language of only 7.5% of the population.[85] English is often what the parents demand. The debate over what should be the appropriate medium of instruction in school continues. The language policy in the provinces has alternated between Urdu and English, and, at times, there has been a political push to introduce regional languages as the main medium of instruction. There have been notifications issued to declare all schools as English medium, as was done in Punjab. However, the implementation of this continues to be challenging. Sindh public sector schools have Sindhi (the regional language) as the medium of instruction, and all textbooks are in Sindhi. International research points to the importance of using the native language as the medium of instruction, especially in the early years. In Pakistan, the debate on language has often confused medium of instruction with learning of other languages such as English which can, of course, be taught as a second language. The disconnect between language policy, its implementation in schools, translation into textbooks, and capacity building of teachers to teach the assigned language are some of the major challenges that need to be resolved to improve the quality of teaching and learning in schools.

The provincial governments provide free textbooks to students in public sector schools, making textbooks available to approximately 23 million children (footnote 8). This is an important budget line item in all provincial education budgets. However, the system is riddled with inefficiencies. A review of the Sindh Textbook Board highlighted serious accountability issues in publishing and paper procurement, the quality of book production, the use of limited contractors, and inadequate budget

[85] Government of Pakistan. 1998. *Census of Pakistan.* Islamabad.

preparation and execution for textbook production and delivery.[86] Similar issues have also been cited in other provinces. The National Textbook Policy (2007) was an attempt to improve the quality of textbook production and publishing via competitive bidding as well as the use of external reviewers, but this is yet to be fully implemented. All the provincial governments are also making efforts to implement the new textbook policy by engaging the private sector. However, resistance from the textbook boards in engaging the private sector, corruption in the printing of textbooks, the dearth of good authors and writers, and the low capacity of the private sector are some of the challenges that need to be addressed. This area needs careful reform to get gains of efficiency, cost, and quality.

2. The Way Forward—Recommendations for Further Reform

Streamlining and Reforming the Examination Boards at the Secondary Level

The public sector BISE, which conduct the secondary-level examinations, need substantial reform and capacity building. An important first step in this direction would be for each province to reduce the number of examination boards, as recommended in the NEP 2009, and consider having only one apex public sector examination board per province. This would make it more efficient to build the capacity of the apex provincial boards to design and administer high-quality examinations which adhere to provincial standards. The remaining boards, if needed, could focus on administering the examinations designed by the apex boards. Khyber Pakhtunkhwa has embarked on this reform and is planning to make Peshawar the apex board while affiliating the other boards with it. Many other countries have had success with having either just one national exam board, as in Malaysia, or one exam board per state or province as in bigger countries such as India (footnote 80). Sindh and Punjab should also consider allowing public sector schools to choose to affiliate with private sector boards if they prefer to do so and treat the graduates of public and private sector boards at par. The only private sector secondary examination board is the AKU–EB. However, it is possible that the AKU–EB operations could be scaled up and/or other private sector boards that meet set government assessment standards could be established. This would have the added advantage of providing competition to the public sector BISE and incentivizing them to improve the quality of their examinations.

All the public sector BISE need substantial human resources and technical capacity building. It would be beneficial for them to include technical positions in their agencies, rather than using consultants for all technical work. It will be imperative to ensure that these technical staff are hired using transparent, merit-based procedures, like the merit-based recruitment policies that Punjab and Sindh have instituted for public school teachers. Contract staff and consultants used by the BISE for test development and scoring need to be selected via similarly rigorous procedures. BISE staff need to have regular professional development, whether for test development, scoring, or data analysis and research. The research cells in the BISE need to be established, made functional, and staffed with technical personnel. The ADE in Punjab and the newly established Curriculum Authority and the STEDA and the PITE in Sindh need to coordinate with the BISE to ensure they use the examination data to design and revamp professional development programs for teachers. However, this will only be possible if the BISE are able to produce usable assessment reports in formats that are helpful for the stakeholders. The BISE should also focus on improving test administration by using new software to score papers and reduce cheating and biases in grading. Credible examination results will help students to gain access to institutes of higher education and/or jobs. All these activities will require an increase and sustained funding for the BISE, which underscores the need to reduce the number of BISE and use financial and human resources more efficiently for maximum impact.

[86] Sindh Education Reform Technical Assistance. 2009. *Textbook Fiduciary Risk Assessment*. Karachi.

Strengthening Assessments and Use of Data at the Elementary Level

In Sindh and Punjab, there are multiple assessments, some of which are mandatory, some optional, and some censuswide and sample based. The provincial and federal governments should have an assessment policy which determines the optimal assessments that would help inform policy and improve student learning. Streamlining assessments for this purpose and discontinuing assessments which do not provide much value is important for the sake of efficiency but also to reduce the burden of overassessment on teachers and students. This policy should also begin to consider gradually introducing formative assessments, particularly at the elementary level, where they are very useful for teachers and students. This will, however, require extensive teacher training; and a cautious, gradual approach is recommended, perhaps with some pilot programs in select schools before scaling them up.

The PEC examinations in grades 5 and 8 in Punjab have political backing since the PEC is an examination commission and has legislative support. Sindh is now considering an examination commission for the SAT examinations to ensure continuity and better participation rates by students of all schools. However, this should be done only after assessing how and when the PEC has worked. While the PEC and SAT exams themselves are better designed and administered than those at the secondary level, there is still room for considerable improvement, particularly by hiring assessment experts who have specific skills to develop test items and psychometricians for data analysis. In addition, more thinking needs to be done on which subjects to test in grades 5 and 8 so as not to overload teachers and students. Furthermore, both the PEC and SAT should focus on better data analysis and on producing different assessment reports for different stakeholders. This will enable students, parents, teachers, head teachers, teacher training institutions, DEOs, and other policy makers to better use assessment data to inform policy and implement various teaching–learning activities.

Capacity Building of Curriculum and Textbook Boards

Curriculum and textbook development is identified as an important area in the sector plans of both the provinces. Sindh and Punjab have developed curriculum implementation framework (CIF) that lay out the general guidelines for implementation of the curriculum and the roles and responsibilities of various stakeholders in its development and implementation.[87] The CIFs have detailed plans with timelines. However, the implementation of these plans is very slow and requires extensive capacity building at the provincial level to fully understand curriculum development, textbook preparation based on the curriculum, and monitoring of the CIFs. A key area of support required both in Sindh and Punjab is to develop the capacity of staff linked with both curriculum and textbook development. The recently established Sindh Curriculum Authority needs support and capacity development. This also requires close collaboration with academia and research organizations within universities and private organizations to ensure the linkage of current research with content development. In addition, a review and analysis of student learning outcome data is required to guide content modification. The research and content development cells within the curriculum wings as well as in assessment and examination systems need to work together to ensure content is guided by research and data.

Both Punjab and Sindh need training for textbook authors and reviewers. Furthermore, both provincial governments should prioritize implementing the National Textbook Policy (2007), to establish more transparent procedures for publishing and allow greater competition and better-quality publishing of textbooks. The provincial governments also need to take a firm stand on which language to use as a medium of instruction for which grades to enable teachers to be well trained and textbooks to be

[87] Curriculum and Implementation Framework, Punjab, 2014 and Sindh Curriculum Implementation Framework 2014.

developed in that language. It is equally important to decide on when to introduce other languages, such as Urdu and English, as second languages. International research increasingly points to the use of the native language at the elementary level as the best practice. While each province needs to make its own decision on this issue, it is important that textbooks, teacher guides, and teacher training are adequate in the chosen medium of instruction. There is a white paper on this issue (2007) which could be used as a reference.

E. Education Governance and Financing

1. Issues and Current Strategies

Governance

The 18th Constitutional Amendment, which devolved the management of school education to the provincial governments, was a fundamental shift in education policy in Pakistan and a positive step in the direction of decentralization. The earlier section on the structure of school education in Pakistan discussed the role of the federal ministry in relation to the provincial departments of education who now have the main responsibility for education policy and management. The capacity of the provincial departments is being ramped up to fulfill this role. A key step has been the creation of the RSU in SELD and the PMIU in the Punjab SED. Nevertheless, challenges remain, and considerable further capacity building is necessary. Coordination between agencies within SELD has also begun to improve in recent years. Nevertheless, institutional capacity needs to be strengthened substantially, especially for institutions such as the BISE, the pre-service teacher training colleges, STEDA, and others.

There was some devolution of education management responsibilities down to the level of the district governments as far back as 2001. As the SESP 2014–2018 observes, however, the 2009 Education Management Reform policy noted that this has not been very successful.[88] The reform policy set out a road map for selecting district-level education managers from the civil service or teacher cadre and a merit-based career progression for education management and leadership. Nevertheless, these reforms still have not taken root either in Sindh or Punjab 8 years later. As the SESP 2014–2018 noted, "The constraints include lack of support to monitoring/travelling expenses by the government, low or no culture of ownership of the reforms and their measured impact through regular evidence-based reviews by district-based EMIS teams." The lack of support at the field level provides little motivation for DEOs to be proactive in their roles. The World Bank report on social sector expenditures in Punjab (2013) also underscores the fact that the governance structure is more centralized in reality than on paper.[89]

Currently, most DEO positions are filled by selecting from head teachers. Most selected headmasters have no expertise or experience for management positions and do not receive appropriate training to fulfill this role. In addition, there are no clear guidelines and procedures for selecting headmasters to become DEOs, resulting in a lack of transparency in the selection process. Furthermore, the DEO positions are also not sufficiently specialized. This is the situation in Sindh despite attempted district education management reforms under the Sindh Education Reform Program, which did not have the intended impact on improving governance.

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[88] Government of Sindh, SELD. 2014. *SESP 2014–2018*. Karachi.

[89] World Bank. 2013. *Punjab Social Sector Public Expenditure Review.* Islamabad.

The situation has historically been similar in Punjab. However, a critical component of the Punjab Education Reform Roadmap includes strengthening district administration by involving, incentivizing, and holding officials accountable for progress or failure, as well as acknowledging them publicly for their successes. This has begun to help improve governance and accountability in the education sector in Punjab. Punjab has also started recruiting many more AEOs at the subdistrict level called the *Markaz*, through a competitive process via the public service commission to double the number of AEOs so that each AEO has fewer schools to support. This will certainly help provide much-needed support and mentoring to schools in the future. Both Sindh and Punjab have proposed a separate cadre for education management.

The discussion thus far has centered on the higher levels of the education management structure. International research has increasingly highlighted the importance of strong local management structures for schools. SMCs were formally constituted in Sindh under the Sindh Education Sector Project, although parent–teacher associations have been in existence for several decades. The SMCs are community-based associations and receive small annual grants to be used primarily for minor repairs and maintenance, purchase of supplies, and transportation costs for girls and young children. The SMCs are also expected to help formulate and supervise the implementation of the school development plan and monitor teachers' attendance as well as distribution of textbooks and girls' stipends. There has been little investigation and research into how well the SMCs function and what impact they have on improving accountability of head teachers and teachers.

Punjab has recently increased the funds available to the equivalent bodies at the school level—the school councils—using a formula which is based on enrollment of the schools (and whether they are primary, middle, or high schools) to estimate funds required by individual schools. However, a World Bank report on the use of funds concluded that school council funds in Punjab were not based on a school development plan but rather on ad hoc needs, largely because SMC members need training on how to develop plans and the guidelines for using the funds (footnote 1). Anecdotal evidence indicates that the situation is similar in Sindh. Box 5 discusses the positive impacts of an information campaign for school committee members in three Indian states in 2006–2007.[90] Such examples reveal the critical role that information and awareness of roles play in making the SMCs effective tools to improve school performance (footnote 90).

[90] P. Pandey et al. 2009. Community Participation in Public Schools: Impact of Information Campaigns in Three Indian States. *Journal of Education Economics*. 17 (3).

Box 5: Impact of Information Campaigns on Community Participation in Schools in India

The World Bank evaluated the impact of a community-based information campaign on school performance from a cluster-randomized control trial in the three states of Karnataka, Madhya Pradesh (MP), and Uttar Pradesh (UP) in India in 2006–2007. The information campaign targeted school committee members in the 340 intervention villages, and the tools used were short films, posters, take-home calendars, and learning assessment booklets. The film, poster, and calendars focused on providing information regarding the role of the school committee members and rules regarding selection of committee members, as well as on how to conduct the meetings. In addition, they provided information on what benefits students are entitled to and where complaints against the school could be made. The learning assessment booklet had the grade-wise minimum learning standards set by the government and could be used by parents to test their children. Three rounds of this information campaign were conducted, each round separated by 2–3 weeks. Baseline and follow-up surveys, and focus groups were conducted.

The findings from the follow-up survey, which was conducted a year after the baseline survey and about 4–6 months after the campaign, show that providing information through a structured campaign to school committee members had a positive impact in all three states as compared to the control group. In two states, there was a significant positive impact on reading levels of students (14%–27%) in one of the three grades tested; in the third state there was a significant impact on writing in one grade (15%) and on mathematics in the other grade tested (27%). The analysis reveals that the intervention also had a significant positive impact on teacher effort or attendance in two states: there was a significant positive impact on teacher engagement in teaching in MP, and there was a significant improvement in teacher attendance in UP, while no such impact was observed in Karnataka (teacher attendance and engagement in teaching were much higher at baseline in Karnataka). Improvements were also seen in the delivery of benefits to students. Cash stipend and uniform delivery improved both in MP and UP, and the quality of midday meals improved in Karnataka.

The focus group discussions revealed that these impacts were possible due to more discussions among villagers as well as villagers raising issues with teachers and school oversight committees. Committee members also reported that they met more frequently and conducted school inspections more frequently than before the intervention. The findings show that providing key information to school committees can play an important role in significantly increasing the impact they have on schools.

Source: P. Pandey et al. 2009. Community Participation in Public Schools: Impact of Information Campaigns in Three Indian States. *Journal of Education Economics.* 17 (3).

There is little information and discussion about the role and capacity of head teachers as education managers and leaders in the Pakistan public school system. Even the NEP 2009 only mentions their role by stating that it needs to be strengthened and a management cadre for education needs to be developed. Research in developed and developing countries points to the key role played by effective education administrators in improving student learning. Head teachers in Pakistan are selected from the teacher cadre based on seniority rather than management ability or experience. In addition, they are not provided management training. School heads are also given no autonomy with limited authority to take decisions that affect their schools, limiting their capacity to effect change. A study on head teachers in Pakistan observes, "It has been acknowledged that in Pakistan neither the regular teachers' preparation programs nor the occasional professional development opportunities provided to head teachers help these head teachers to develop a sound understanding about the concepts, such as leadership and management, monitoring and evaluation, and school improvement programs."[91] Sindh has recently started appointing head teachers in consolidated schools who have greater autonomy including financial powers equivalent to drawing and disbursement officers.

[91] A. Khan. 2015. Head Teachers' Beliefs and Practices about Teaching and Learning in Pakistan Public Schools. *Creative Education.* 6 (22).

The SESP 2014–2018 has identified these as key constraints to effective management and has outlined a plan for recruiting head teachers and promoting them based on merit as well has providing them with induction training.[92] This process has now been initiated. SELD hired 1,017 head teachers in 2017 through a merit-based system, and they were given 2 weeks of leadership training before being deployed in schools. In Punjab, the selection of head teachers is based on their education rather than on seniority, and this is a positive move.[93] Nevertheless, head teachers are not selected based on their leadership ability, and no leadership or management training is provided.

Use of Data for Monitoring and Evaluation

An important aspect of good governance is the use of quality data to monitor, make decisions, and evaluate programs. The availability and reliability of data in the education sector in Pakistan has improved over the years. Household surveys, such as the PSLM, provide information on key indicators such as enrollment rates. In addition, independent surveys, such as the ASER, have been conducted annually; its results, particularly those on student learning, have been disseminated widely. The provincial departments of education also conduct an annual school census which feeds into the EMIS, and these are collated and published annually as the "Pakistan Education Statistics." Independent groups, such as the Alif Ailaan group, regularly update their education portals and use secondary data to highlight important gaps in the sector.

However, it is generally acknowledged that the quality and reliability of the EMIS statistics are variable across provinces and need to be strengthened. Furthermore, the annual school census does not include private schools, and statistics reported for private schools are based on estimates from 2005 for most of the provinces. In addition, key participation indicators, such as GERs and NERs, are based only on estimates since no population census has been carried out since 1998. Nevertheless, a population census was carried out from March until May 2017, the results of which will be very useful in updating these indicators to provide a more accurate picture of participation rates.

The use of data for planning and policy making has grown in the last few years. The Sindh and Punjab sector plans for school education draw extensively on these various data sources in situation analysis for the sector and to identify priorities. SELD has recently launched the human resource management information system, which collates detailed data on all teachers in public schools. These data are proving to be very useful in identifying teacher deployment and attendance issues and will be used in other purposes such as identifying teacher training needs. However, the capacity to analyze and use data at all levels of the education management system is weak and needs to be strengthened. In particular, the use of data to better target initiatives, and for monitoring and evaluation, is rare. For example, an understanding of school-level needs for teachers could help guide the creation of new teacher posts. More impact evaluations and assessments need to be used to inform implementation and, while academics have often done these, they are rarely used by the education departments. In Punjab, there has recently been far greater use of data for monitoring key indicators under the "Punjab roadmap." However, this has drawn some criticism from academics and the media who allege that there is a lot of pressure on district officials to show monthly progress, leading to fudging of figures. The World Bank report on service delivery in Punjab notes that the PMIU has helped make strides in data-based monitoring at the district level. Nevertheless, its monitoring reports and data generated need to be used more effectively in decision-making (footnote 1). The RSU is currently working on improving the validity and reliability of the EMIS data by hiring independent agents to collect the data for this school year. The plans are to improve data,

[92] Government of Sindh, SELD. 2014. *SESP 2014–2018.* Karachi.

[93] F. Bari. 2017. Nurturing School Leadership. *Dawn.* 27 January.

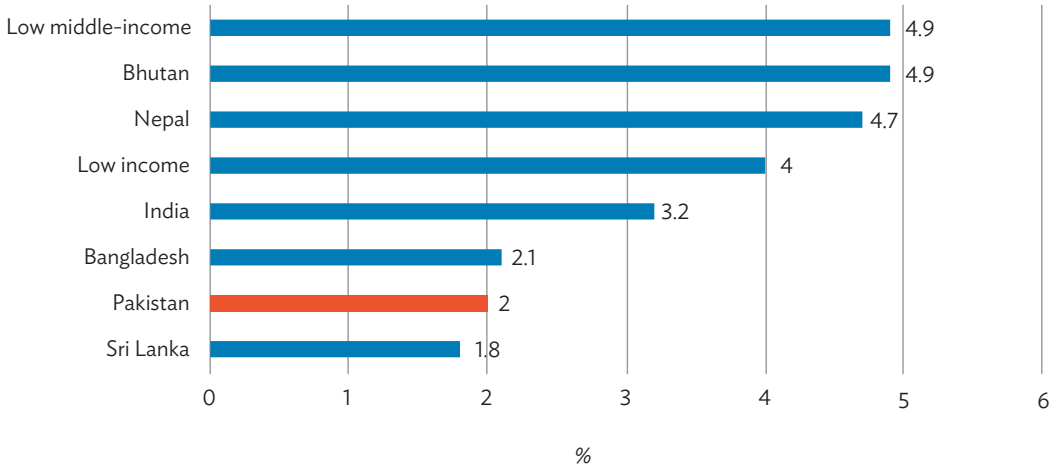
particularly by linking the various data sets such as the EMIS and the human resource management information system using information and communication technology-based solutions.

Trends in Public Financing of Education

While improvements in governance and management of the sector are essential, these will not have favorable outcomes unless accompanied by enough public financing and the use of efficient public financial management practices.

The Government of Pakistan set a target of spending 4% of its GDP on education in 1992 and has reiterated this commitment in various international forums since then. However, government spending on education has never reached this target: education spending has fluctuated between 2% and 2.5% of GDP over the last decade and was 2% in 2014–2015.[94] Pakistan spends a much lower proportion of its gross national product on education compared with all its neighbors (except Sri Lanka) and the average spending by other lower middle-income and even low-income countries (Figure 23). According to a 2013 report on social sector spending in Punjab, education spending in Sindh and Punjab was even lower, at less than 1.5% of their respective provincial GDP.[95]

Figure 23: Government Spending on Education as a Percentage of Gross National Product—International Comparison, 2012



Source: UNESCO. 2015. *EFA: Global Monitoring Report 2015.* Paris.

Pakistan spends about 10% of its total government spending on education (federal and provincial combined), which is much lower than education spending in comparable countries. In 2012, the average spending on education, as a percentage of government spending, was 14.9% in low-income countries and 15.6% in lower middle-income countries.[96]

[94] R. Malik and A. Naveed. 2015. Financing Education in Pakistan: The Impact of Public Expenditure and Aid on Educational Outcomes. *Recoup Working Paper.* No. 42. Lahore.

[95] World Bank. 2013. Pakistan *Punjab Social Sector Public Expenditure Review.* Islamabad.

[96] UNESCO. 2015. *EFA: Global Education Monitoring Report: Education for All: Achievements and Challenges: 2000-2015.* Paris.

Why is education spending in Pakistan so low? A study by Malik and Naveed highlights the issue of high levels of debt servicing and military spending, which together amounted to 7% of GDP in 2013–2014. The study also discusses the constraints on productive spending by the Government of Pakistan due to fiscal indiscipline and high levels of debt-servicing over several decades (footnote 94). These constraints are exacerbated by the low rates of economic growth in the country, which averaged 3.2% from 2007–2008 to 2012–2013, and the low tax–GDP ratio of the federal government, which has remained at 8.7% over the last decade and is among the lowest in the world (footnote 94). The provinces have even lower capacity to raise resources from taxes with only about 10% of their revenues coming from tax revenues retained at the provincial level. All these revenue constraints limit the amount of government spending on the education sector. Some provinces, such as Punjab, have increased provincial expenditures on education significantly over the past decade, in part due to bigger NFC awards. However, these increases were severely eroded by high inflation, resulting in much lower "real" increases in allocation to the sector (footnote 95).

Recently, all provinces have increased the allocation to education from their provincial budgets. The The Institute of Social and Policy Sciences report, 2014–2015, details that Khyber Pakhtunkhwa earmarked 26% of its budget for education, followed by Punjab (24%), Sindh (22%), and Balochistan (19%). These allocations represent a significant increase of 10% or more from the previous year in all four provinces, showing that provincial governments are stepping up their commitments to the sector. Increased allocations in the past few years were made possible by increased revenues to the provinces from the federal government following the 7th NFC award in 2009 and higher growth rates for the Pakistan economy. Nevertheless, the World Bank tracking study for education expenditures in Punjab notes that these increases have been lower than the increases in the salary budgets for the sector, thus further squeezing allocations for operations and development expenditures (footnote 1).

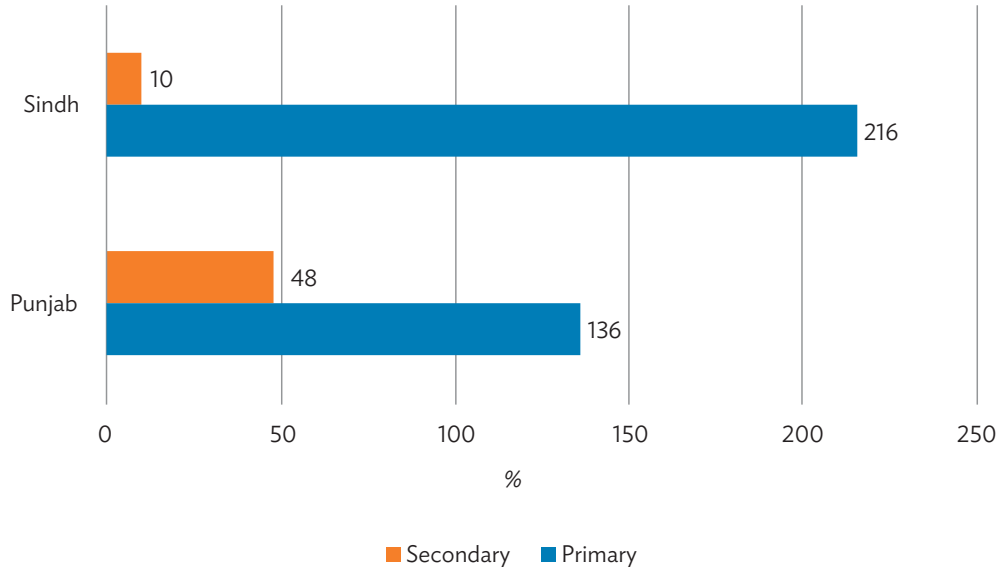
Budget Execution

Despite increases in allocations, budget execution continues to be low in all provinces. Budget execution is defined as the ratio of actual expenditure to funds allocated. It is actual expenditure (rather than mere allocations) that is, of course, key to improving quantity and quality of inputs in education. Budget execution rates for overall expenditures on primary and secondary education were 84% in Punjab and 94% in Sindh. However, these include salary expenditures which are usually disbursed in full or almost in full.

Even more telling are the budget execution rates for development expenditures which are spent on infrastructure development, furniture, repairs, and maintenance. Actual spending of development expenditure falls far short of allocations in all provinces at the secondary level while surpassing allocations at the primary level (Figure 24). In Sindh, only 10% of development expenditure allocated at the secondary level was spent in 2015–2016. The budget execution rates were better in Punjab at the secondary level with almost half of the development expenditure allocated being spent in 2015–2016.

There has not been enough systematic investigation into the reasons for the low budget execution rates. Malik and Naveed suggest several reasons that may contribute to low expenditure levels (footnote 94). One is the capacity constraints faced by provinces in spending allocated funds, especially given demands post-devolution for planning and spending. In addition, a major share of the allocated development expenditure is earmarked for infrastructure development, which requires the education departments in the provinces to coordinate with the public works department, often leading to delays and planning and coordination problems. SELD has its own works department, and this is likely to reduce delays in construction. In disadvantaged areas, it is often difficult to find capable contractors, which makes meeting construction deadlines even less likely. The social sector spending report in Punjab reveals that time overruns for infrastructure projects in the education sector are, on average, 51% because of excessive oversight and paperwork needed to receive funds and pay contractors and suppliers (footnote 95).

Figure 24: Budget Execution Rates for Development Expenditure, 2015–2016



Source: I-SAPS Education Financing: 2017.

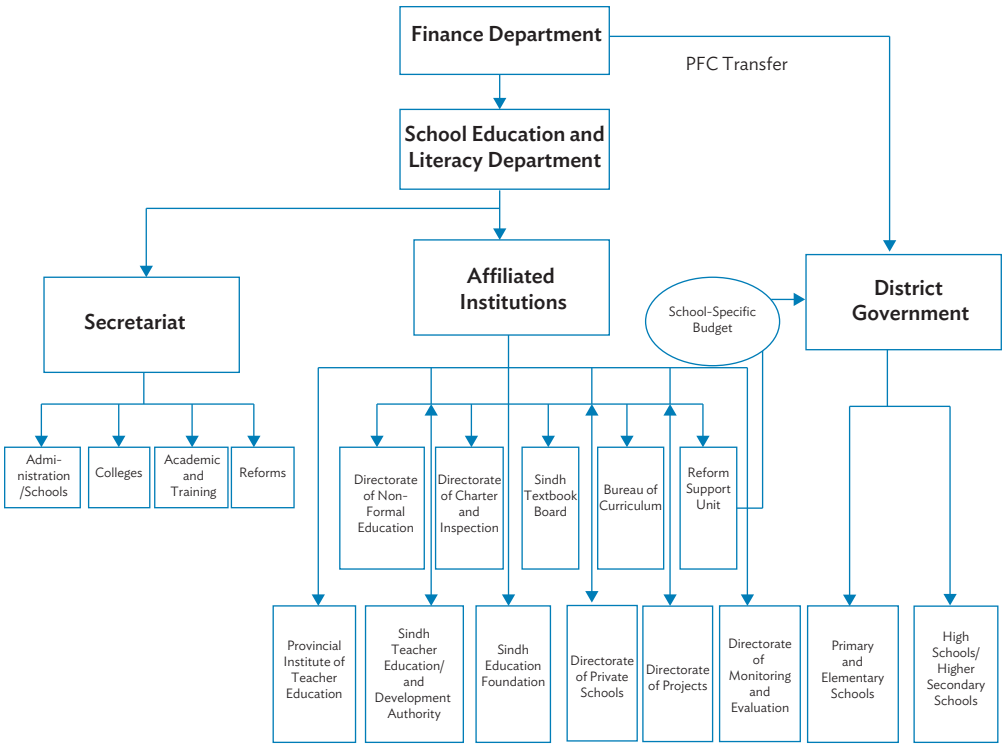
Discussions with SELD in Sindh and SED in Punjab reveal that fund releases are often delayed for some funds, such as those for school-specific budgets and SMC funds in Sindh, leading to difficulties in spending them. Similarly, underspending of the development budget is also attributed to the very short financial planning and spending cycles. Each year, the annual development program funds are released by the provincial government in June, detailing all development programs that departments will undertake during the financial year. However, the release of funds from the Finance Department to district authorities usually begins only in September. These delays leave the district authorities only 8 months or less to execute the development schemes. In Sindh, there are too few drawing and disbursement officers at the district level, which is a major cause for the underspending and an issue that needs to be addressed urgently. Another constraint to spending is the trust deficit between some vendors and the Auditor General's office, leading to a fear of spending, especially at the school level, due to fear of being audited. The World Bank report on funds tracking confirms this is the case, for SMC funds in Punjab (footnote 1).

Public procurement issues are often obstacles to efficient spending in the sector. Due to a lack of understanding of key procurement issues, such as required specifications and advertising, about one out of every four procurements done by SELD is declared a misprocurement by the Sindh Public Procurement Regulatory Authority (SPPRA), wasting, on average, 4 months of the department's time. Similarly, the advertising of the request for proposals is another step that costs the department 2–3 months on average. Each advertisement developed by the department must be approved by the SPPRA. However, in almost all cases, the advertisements are not approved the first time and are sent back to the department with a lack of clear indications on what was missing or what needs to be changed. With procurement personnel at the SED lacking in-depth understanding of the SPPRA rules, this costs the department about 2 months before the advertisement is finalized.

The fund flowcharts clarify the nature of fund flows from the Finance Department to SELD (Figure 25) and from SELD to the various divisions and district authorities and schools (Figure 26). Further detailed investigations into the specific causes of underspending for different categories of

expenditure in Sindh and Punjab will be key to improving budget execution rates and ensuring that the funds allocated are spent within the specified time frame. An expenditure tracking study is an excellent method for uncovering the specific obstacles and bottlenecks in fund flows and spending through the system.

Figure 25: Flow of Funds from Finance Department to School Education and Literacy Department and Districts in Sindh



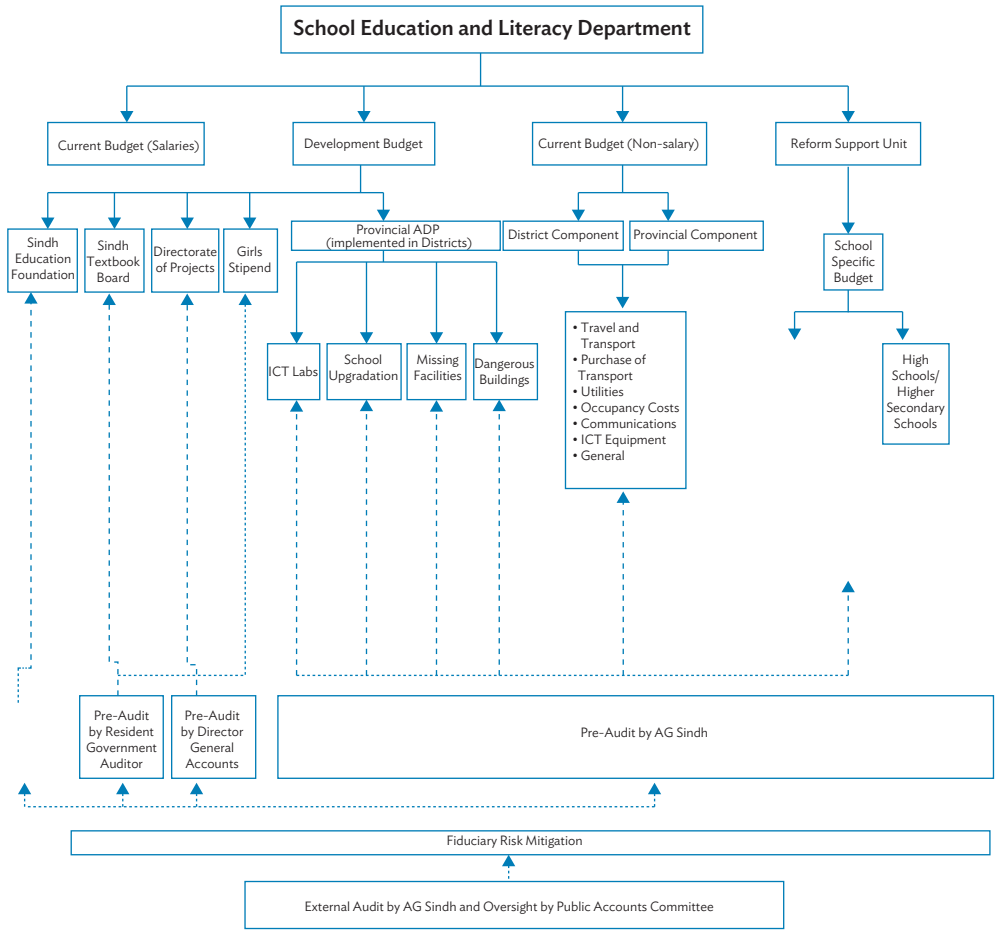
PFC = Public Finance Commission.
Source: Discussion with the Government of Sindh.

Salary versus Non-Salary Spending

It is important to understand the total amount of spending in education and the composition of this spending. Salaries dominate financial allocations to the primary education sector (Figures 27A and 27B). While this is true in most countries, the very limited allocation to development expenditure in Punjab and Sindh is a cause for concern. Development expenditure finances infrastructure development, repairs, maintenance, and furniture. Based on the earlier analysis, Sindh needs to upgrade and expand infrastructure to be able to increase participation and reduce dropout rates, both of which are an urgent priority.

Another concern is non-salary current expenditure, which continues to form a very small proportion of total primary education allocations in Punjab as in previous years. These are used for operational expenses for the schools, including teacher training, supplies, learning materials, etc. that are vital to

Figure 26: Flow of Funds from School Education and Literacy Department to Divisions and Districts in Sindh

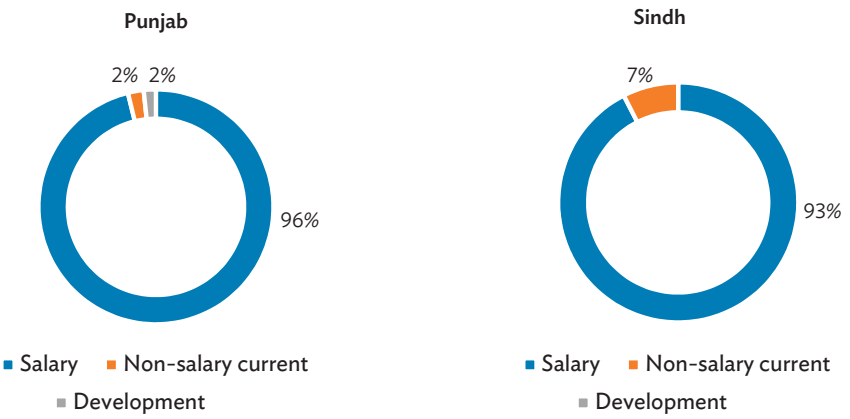


ADP = annual development plan, AG = Auditor General, ICT = information and communication technology.
Source: Discussion with the Government of Sindh.

improving learning outcomes. In Punjab, the proportion allocated to non-salary and development expenses has remained the same at 2% (each) since 2011–2012. Although Sindh has a slightly higher proportion allocated to non-salary current expenditure, it should be noted that the overall pie allocated to primary education is only about 60% of that in Punjab.

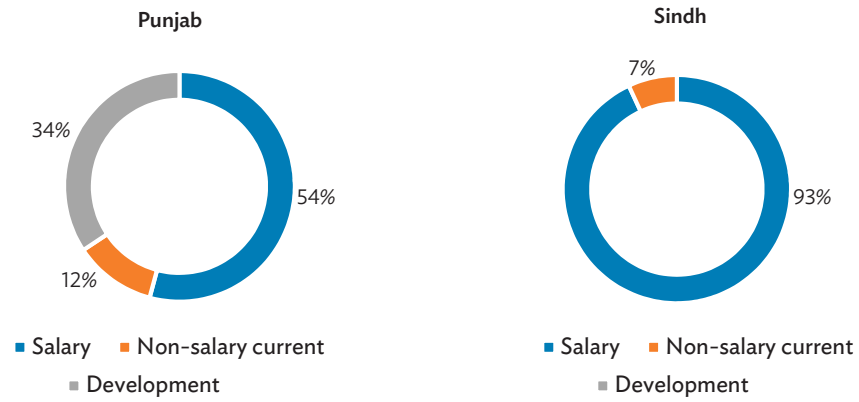
The composition of financial allocations is more balanced at the secondary level compared with that at the primary level in Punjab. Development expenditures received no allocations at all for secondary education in Sindh in 2016–2017, down from 10% in 2011–2012. Furthermore, non-salary current expenditures for secondary education saw a lower allocation at 7% in 2016–2017 in Sindh compared with 9% in 2011–2012 (Figures 28A and 28B). This is a worrying trend that is likely due to increasing wages of teachers in recent years, without sufficient increases in total allocation for the sector.

Figures 27A and 27B: Composition of Primary Education Allocations in Punjab and Sindh, 2016–2017



Source: I-SAPS report, 2017.

Figures 28A and 28B: Composition of Secondary Education Allocations in Punjab and Sindh, 2016–2017



Source: I-SAPS report, 2017.

The Sindh and Punjab governments both have recently made attempts to increase the non-salary current funds available to primary and middle schools. In Sindh, there is an SMC fund that is meant to be used for minor repairs, cleaning, and transportation for girls and young children. The school-specific budget is primarily for procurement of stationery and other supplies, including library and laboratory supplies. However, these funds have largely not been utilized due to the difficulties discussed earlier. In Punjab, there are funds allocated to school councils as well, and recent changes have been made to the formula, making it more needs-based. However, the fear of audits and excessive monitoring of these funds makes utilization rates very low in Punjab as well (footnote 1).

Interdistrict Disparities

The provinces receive about 90% of budgetary allocation for all their expenditures in all sectors from the federal government via the NFC awards and raise only about 10% from their own taxes. Thus, the bulk of the funding for school education comes from the national government, even after the devolution of the responsibility for planning and budgeting to the provinces. The provincial share is determined by a formula based on population, population density, revenue collection and/or generation, and poverty or backwardness. This formula, introduced in 2010, has benefited the more backward provinces such as Balochistan. Post-devolution, since 2010, the responsibility for budget allocations among the sectors and subsectors has been with the provinces.[97] How do the provinces distribute the resources to districts? This is done via a Provincial Finance Commission Award and is supposed to be done in a manner similar to that which the NFC makes awards to the provinces, i.e., based on population and development needs. However, an analysis of the education allocations to districts in Sindh and Punjab reveals wide disparities.[98]

Further analysis of interdistrict disparities in allocation of provincial expenditure for education concludes that the poorest performing districts in Punjab and Khyber Pakhtunkhwa received the least funding while the best performing districts received the highest level of per-student funding in education (footnote 97). This is corroborated by the DFID–World Bank report on social sector spending in Punjab, which found that high interdistrict variation in education expenditure allocations had no correlation with enrollment and need. According to the report, there is quite a lot of arbitrariness in allocating the operations and management budget to schools, since the resource needs of each school are determined not at the school level but by the assistant district education officer based at the *Tehsil* or subdistrict level (footnote 95). Similarly, development expenditure, which is determined by the district-level officers, is usually allocated among schools in a nontransparent manner that is prone to political meddling. The World Bank tracking study in Punjab concludes that no clear planning processes are in place in the province for allocation of funds to districts and schools based on identified needs, and a high proportion of non-salary funds are allocated at the discretion of provincial and district authorities.

The Government of Punjab has recently approved a revised formula for distributing operations and management funds to schools which is based on school needs. Further reforms will be needed by Sindh and Punjab to ensure that non-salary and development funds flow to districts and schools in proportion to needs.

2. The Way Forward—Recommendations for Further Reform

Building Capacity and Incentivizing Good Governance

The responsibility for policy and planning for the school education sector has been devolved to the provincial governments. However, provincial governments are still in the process of strengthening their capacity to fully take on this role. While progress has been made, further capacity development initiatives need to be taken, especially for curriculum and assessment reform; teacher management; and the regular production, use, and analysis of quality data at the provincial departments of school education.

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[97] R. Malik and P. Rose. 2015. *Financing Education in Pakistan: Opportunities for Action.* Lahore.

[98] I-SAPS. 2015. *Public Financing of Education in Pakistan: Analysis of Federal, Provincial and District Budgets 2010–2011 to 2014–2015.* Islamabad.

Equally, if not more important, is the need to strengthen and reduce political interference at the district and subdistrict levels of the education management system. As explained earlier, the district-level education officials are not a professional cadre who have management and leadership training but are rather appointed, for the most part, based on seniority, and in a nontransparent manner, from existing head teachers of schools. The Governments of Sindh and Punjab are considering the creation of a separate professional cadre for education management. This has been supported by the World Bank-financed Sindh Education Sector Project II as well as the Punjab Education Roadmap project. This is also mentioned in the sector plans of both SELD in Sindh and SED in Punjab. However, there has been limited progress in making systemic changes on this front.[99] The SELD in Sindh and SED in Punjab will need to summon the political will for these reforms which could go a long way to improve education management and strengthen decentralization. Many developing countries have devolved the responsibility for education to local governments. While this is not the case in Pakistan, district education officials in Pakistan are responsible for implementing the provincial plans and policies. Professionalizing district education management, hiring enough officers at the district and subdistrict level via a merit-based process, and building their management and leadership capabilities would enable them to provide support and supervision to schools much more effectively.

At the school level, the SMCs, or variants thereof in countries such as Indonesia, the Philippines, and Uganda, have proved effective in improving the accountability of teachers, reducing teacher absenteeism, improving the effective use of school-level funds based on school needs, and mobilizing funds from other sources such as local NGOs and alumni. The SMCs in Sindh and the school councils in Punjab are not particularly effective and often are not aware of their roles and responsibilities. In fact, members of the SMCs and school councils are often not aware of the size and the intended purpose of the school grant. The selection of these members is often not done in a transparent manner. While there has been scant research on their functioning, the World Bank conducted an impact evaluation of a pilot initiative to improve their functioning in Sindh in 2015. The initiative aimed at reinvigorating SMCs to get them directly engaged with schools by providing a community dialogue platform, among other interventions. The evaluation found that active community mobilization and the use of virtual communication tools, such as text messages, helped to increase knowledge of SMC members about their roles and thus improved SMC functioning. Head teachers reported an increase in SMC participation in school affairs. The RSU has already taken on board the results of the impact evaluation and has begun to scale up these initiatives. Punjab could consider similar methods to revitalize the school councils. Mobilizing SMCs and school councils and making them more effective and empowered will be an important reform component to improve school functioning and hold school heads and teachers more accountable to local communities.

Equally, if not more important, is the leadership role that the head teacher should play. As discussed earlier, head teachers in Pakistan are typically selected based on seniority rather than leadership or management skills. Furthermore, they usually do not receive any leadership training. The study by Khan on the role of head teachers in Pakistan recommends the recruitment of head teachers who take programs in school leadership and management, such as those at the Aga Khan University Institute for Educational Development. In Sindh, SELD has begun to strengthen the role of head teachers in schools, as outlined in the SESP 2014–2018. In Punjab, head teachers are now selected based on their level of education rather than on seniority. Both Sindh and Punjab should consider further changes in the selection methods as well as invest in leadership and management training for head teachers.

[99] Government of Punjab. SED. 2013. *Punjab Sector Plan.* 2013–2017. Lahore; and Government of Sindh. SELD. 2014. *SESP 2014–18.* Karachi.

All the reforms that have been discussed will have a substantial impact on improved governance of the education sector only if undertaken in tandem with reforms to improve the quality and use of data. SELD has already embarked on reforms in Sindh, such as third-party validation of EMIS data. The Punjab SED has a monitoring unit (the PMIU) which, as discussed earlier, intensively tracks the progress of districts. Such initiatives need to be deepened and institutionalized in both provinces.

In addition, strengthening the capacity to effectively use data for regular monitoring and evaluation at all levels of the education management system will be beneficial. Increased transparency in sharing data at all levels, including school boards, for example, can make education managers and teachers more accountable to the communities they serve.

Increased Allocations of Public Funds

The level of government spending on education is too low for Pakistan to achieve its goals for the sector, which are aligned with the SDGs. Pakistan spends substantially less than its neighbors as well as other low-middle-income countries. While all provinces have increased allocations to the education sector considerably in the past 5 years, this is unlikely to be significant enough to meet post-2015 education goals by 2030 in line with the SDGs, according to calculations for the 2015 Education for All Global Monitoring Report. This report estimates that Pakistan would need to increase per-pupil expenditure 10 times at the preprimary level, 6 times at the primary level, and 4 times at the lower secondary level to meet these goals. This would result in an increase in proportion to GDP allocations by almost three times and would need the government to raise 20% of its GDP in taxes (about double of what it raises now) (footnote 94). Thus, major tax reforms and increased allocations to the sector are needed in the future.

The Sindh SELD and Punjab SED have costed education sector plans. These, and the cost estimates for future sector plans, need to be considered when allocations are made, and when NFC awards are given to the provinces. The provincial governments need to take these subsector plans into account when deciding on the allocations between higher and other levels of education. The provincial governments have instituted medium-term budget frameworks. Sindh has a medium-term budget framework for 2016–2020 and has begun to do medium-term financial planning. It would be beneficial for SELD in Sindh and SED in Punjab to do education-specific medium-term expenditure frameworks that link with the medium-term budget frameworks for the province and with the education sector plans. It would help SELD and SED have a stronger voice in the amount of resources they could expect from the provincial governments to fund their plans in a predictable manner. This would require significant cooperation with the provincial finance departments. This has been successfully used in several states in India, in Sri Lanka, and in the Philippines, where medium-term sector planning has also helped make budget allocations more predictable. The SESP 2014–2018 notes that this process has already begun in Sindh.[100]

Improving Allocation to, and Better Execution of, Non-Salary Budgets

The allocation of public funds to non-salary expenses for the school education sector should also be examined. The proportion of the current budget that is allocated for non-salary expenses, such as operating expenses and supplies at the school level, is low. In Punjab and Sindh, the proportion of the overall budget allocated to developmental expenditures for the school education sector remains persistently low. There is an urgent need for expansion and rehabilitation of infrastructure in the sector, particularly in Sindh. Non-salary operating expenses are critically important for key inputs and

[100] Government of Sindh, SELD. 2014. *SESP 2014–2018.* Karachi.

quality initiatives such as teacher training in Sindh and Punjab. Thus, non-salary budget allocations for school education in Sindh and Punjab need to be increased substantially.

Furthermore, in Punjab and Sindh, while salary budgets are usually spent in full, budget execution rates are very low for non-salary budgets, especially for the development budgets in education at the secondary level. Thus, increasing allocations will be meaningless unless they are accompanied by significantly stepped-up execution rates or actual spending. Since the bulk of the development budget is spent on infrastructure, it is important to investigate the reasons for the low level of spending compared to allocation. Very little analysis has been done of the reasons for the low budget execution rates in Sindh and Punjab. Observation points to a low number of drawing and disbursement officers, low capacity to spend, difficulty in finding contractors in remote areas, delays and difficulties in coordination with the planning and development department, and fear of audit as possible reasons for the underspending. It will be essential to understand the constraints and challenges so that action can be taken to address them. For example, if delayed fund releases are a key reason for low budget execution, better coordination with the finance departments would be necessary.

Alternatively, if procurement capacity is the key constraint, capacity-building exercises will need to be undertaken. A public expenditure tracking study would be a useful tool to better understand the reasons for chronic underspending of funds in the sector. Public expenditure tracking surveys have also been proven to be excellent at increasing transparency in the use of funds, thus helping reduce leakages, which could be another factor for low budget execution. In fact, this has been done by the World Bank for the primary education subsector in Punjab. It would be useful to replicate a public expenditure tracking survey for the middle, high, and higher secondary school subsectors in both provinces. The key bottlenecks that have been identified in the fund flow and procurement processes—such as delayed release of funds for school-specific budget funds, SMC funds, and school consolidation funds, among others, and the challenges dealing with the fear of audits of even small funds at the school level—need to be addressed as a priority by the SELD in Sindh in coordination with the finance and planning departments.

Reducing Interschool and Interdistrict Disparities via Needs-Based Budgeting

Provincial governments are responsible for allocating funds among sectors in their provinces and for distributing funds among districts. As the analysis indicates, there are substantial inequities in per-student education spending across districts in both Sindh and Punjab. While some differences would be expected based on differing needs of schools, these large disparities reveal that allocations to districts are not based on actual needs of the schools. The Government of Punjab has already approved a revised and needs-based formula for distributing operations and management funds to schools. In Sindh and Punjab, further reforms will be needed to ensure that non-salary and development funds flow to districts and schools in proportion to needs. Education outcome indicators should also be factored in when making resource allocation decisions to districts and schools to target funds more effectively. The World Bank tracking report in Punjab recommends instituting a rule-based approach to transfers from the province to the districts to make district-level funding needs-based, transparent, and predictable (footnote 1). This, along with a more rationalized teacher allocation based on school needs, will go a long way to reduce inequities in per-student expenditures across schools.

The Government of the Philippines, for example, has such a formula to disburse operational expenses to schools. A recently published public expenditure and tracking survey by the World Bank for the basic education sector in the Philippines has recommended further improvements to this formula to enable the government to introduce an equity component and reduce inequities across schools. As the World Bank report on social sector expenditures in Punjab comments, it will be important to

formulate school-based budgets to strengthen school-based management and reflect school needs. This will require capacity building of head teachers, the SMCs, and the education advisors at the subdistrict *Markaz* level so that the latter can scrutinize the school-based budgets. This bottom–up budgeting would help make school and district financial allocations transparent and responsive to school needs.

V Support from Development Partners for Education

Development partners play an important role in the education portfolio of Pakistan. Although the financial contribution is minor compared with spending by the government on the sector, development partner funding has had an impact on several policies and has improved the quality of education over the past 2 decades. Many development partners have been supporting education in Pakistan, although the subsectors they support vary depending on changing donor and government priorities. A snapshot of the key development partners' financial support to education is provided in Table 13.

Table 13: Development Partner Support to the Education Sector in Pakistan

Donor	Geographical Focus	Thematic Focus	Funding ($ million)
World Bank (2012–2020)	National, Punjab, Sindh, and Balochistan	• Early childhood education • Elementary and secondary education • Higher education	910.1
DFID/UK Aid Direct (2011–2019)	National, Punjab, Khyber Pakhtunkhwa, and Sindh	• Primary and secondary education • Education advocacy	1,386.3
European Union (2011–2019)	National, Khyber Pakhtunkhwa, and Sindh	• Primary and secondary education • TVET	222.5
USAID (2004–2020)	National and Sindh	• Primary and secondary education • Higher education	1,004.9
GIZ	National and provincial	• TVET	Unknown
UNICEF (2013–2017)	National and provincial	• Early childhood education • Primary education	63.7
UNESCO (2014–2018)	National and provincial	• Primary education • Teacher education	Unknown
Global Affairs Canada (2004–2017)	National	• Teacher education	133.8
DFAT, Australia (2010–2020)	Khyber Pakhtunkhwa	• Primary and secondary education	93.5
JICA (2014–2018)	Sindh	• Primary and secondary education	16.1

DFAT = Department of Foreign Affairs and Trade; DFID = Department for International Development of the United Kingdom; GIZ = Deutsche Gesellschaft für Internationale Zusammenarbeit; JICA = Japan International Cooperation Agency; TVET = technical and vocational education and training; UK = United Kingdom; UNESCO = United Nations Educational, Scientific and Cultural Organization; UNICEF = United Nations Children's Fund; USAID = United States Agency for International Development.

Source: Data compiled from the National Education Development Partners Group (https://www.nedpg-secretariat.pk/pages/configuration/projects.aspx) and the Asian Development Bank.

In the last decade, most of these programs have supported the education reforms being carried out by federal and respective provincial governments based on their respective sector plans, rather than as individual separate projects as in earlier years. Development partners with large financial envelopes, such as DFID, the European Union, German development cooperation through Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and the World Bank, provide support through either general budget support or sector budget support. Donors with smaller amounts of financial support usually work through local and international NGOs. Since devolution in 2010, most development partners work directly with provincial governments. However, some initiatives focus on the national level, including the federal and provincial governments. Development partners have developed coordination mechanisms at the provincial and national levels to ensure that duplication is avoided in program support. Some of these forums also share best practices from their respective programs and discuss the key policy reform areas under different education reforms being carried out in the respective provinces. This coordination has provided a common platform for the development partners to influence policy reforms. Despite remaining challenges, coordination between the development partners has improved considerably.

In Punjab, DFID and the World Bank are the largest donors supporting the education reform programs of the provincial government (Table 14). These programs support the sector plan of SED and cover issues related to access, quality of teacher education, textbooks, assessment and examination systems, governance and management, and public financial management. USAID supports the education program in Punjab under the Pakistan Reading Project, a national project across different provinces and areas of Pakistan. The program supports reading competencies in the early grades and pre-service teacher education. UNESCO supports an education program with a focus on girls' education, and the United Nations Children's Fund (UNICEF) provides support in improving ECE. GIZ, under their national technical and vocational education and training (TVET) program, supports TVET activities in Punjab, and the World Bank supports a skill development project.

In Sindh, the major contributors to the education sector are the World Bank, European Union, and USAID. These programs support the sector plan of SELD and cover issues related to access, governance, and public partnership programs. A snapshot of the major development partners' support with thematic focus is provided in Table 15.

Table 14: Development Partner Support to the Education Sector in Punjab

Development Partner	Project Name	Duration	Amount ($ million)
Preprimary, Primary, and Secondary Education			
DFID	Punjab Education Sector Program 2 (Primary and secondary education)	2013–2019	642.1
World Bank	Third Punjab Education Sector Project (ECE, Primary & Secondary Education)	2016–2021	300.0
USAID	Pakistan Reading Project (Primary education, in-service teacher education)	2013–2018	165.0
UNESCO	Support to National Capacity Building to Realize Girls' Right to Education in Pakistan (Primary and secondary girl's education)	2014–2018	7.0
UNICEF	Education Program (ECE, primary education, literacy and nonformal basic education)	2013-2017	15.3
TVET			
GIZ	Supporting TVET Reform in Pakistan (TVET-III) – (Technical and vocational education)	2017–2021	63.3
World Bank	Punjab Skill Development	2013–2020	50.0
Adult Literacy			
JICA	Advancing Quality Alternative Learning Project (AQAL) – (Adult Literacy)	2015–2019	4.9

DFID = Department for International Development of the United Kingdom; ECE = early childhood education; GIZ = Deutsche Gesellschaft für Internationale Zusammenarbeit; JICA = Japan International Cooperation Agency; TVET = technical and vocational education and training; UNESCO = United Nations Educational, Scientific and Cultural Organization; UNICEF = United Nations Children's Fund; USAID = United States Agency for International Development.

Source: Asian Development Bank.

Table 15: Development Partner Support to the Education Sector in Sindh

Development Partner	Project Name	Duration	Amount ($ million)
Preprimary, Primary, and Secondary Education			
Asian Development Bank	Education Sector Assessment	2016–2018	0.225
World Bank	Second Sindh Education Sector Project	2013–2018	400.0
World Bank	Global Partnership for Education Project	2015–2017	66.0
European Union	Sindh Education Sector Support Program	2012–2017	42.0
European Union	Sindh Education Sector Support Program	2019-2023	58.3
USAID	Sindh Basic Education Program	2011–2018	155.0
JICA	Upgrading Primary Girls' Schools to Elementary Schools in Southern Rural Sindh Project	2014–2016	7.5
JICA	Upgrading Primary Girls' Schools to Elementary Schools in Northern Rural Sindh Project	2016–2018	8.6
TVET			
World Bank	Sindh Skills Development Project	2011–2018	21.0

JICA = Japan International Cooperation Agency, TVET = technical and vocational education and training, USAID = United States Agency for International Development.

Source: Asian Development Bank.

Conclusion

This assessment has examined the school education sector in Pakistan, with a focus on Sindh and Punjab. It has provided a brief description of the school education sector in the country, discussed some of the key challenges the sector faces in Sindh and Punjab, and identified a number of possible reform directions. While some reforms have been undertaken in school education in Sindh and Punjab in the last decade, education outcomes remain poor in both provinces, particularly in Sindh, and in the country as a whole. There is much to be done to expand and deepen reforms to reach the millions of out-of-school children and improve participation rates in school education at all levels, particularly in the post-primary grades in middle and high and/or higher secondary schools. Targeted investments and programs will be needed to improve completion rates and learning levels.

These include reforms to improve post-primary access, teacher quality and management, assessment and curriculum, and governance and financing of the sector. Expanding and enhancing PPPs will play a key role, as well as strengthening mainstream government systems. A focus on reducing inequities in education outcomes across gender, socioeconomic strata, geographies, and districts will be critical if reforms are to have a substantial impact.

The ADB Strategy 2030 has education as one of its key five pillars of support to developing member countries. ADB provides loans and technical assistance in the education sector, with an emphasis on secondary education, post-secondary education, and TVET. While ADB has supported education and skills development in Pakistan in the past, it has not been involved in these sectors in the country in the last decade. Although several other development partners support the sector currently, the analysis in this assessment has demonstrated the need for further technical and financial assistance, given the many remaining challenges in the school education sector, particularly in Sindh.

Understanding further the lack of improvement in education outcomes in Sindh despite government reforms and donor support in the past will be important when undertaking future reforms. No systematic evaluation is available to investigate the lack of substantial impact, especially on outcomes, of past reforms; and such an analysis should be undertaken in the future. Nevertheless, stakeholder and government consultations reveal that there are several factors that have contributed to the lack of impact. The first is the focus of the international donor community and the Government of Sindh on primary education, to the detriment of the higher levels of education. This has led to high dropout rates after primary school, particularly for girls. The second factor that may have contributed to the lack of impact of past reforms is the sequencing of access-related issues before quality and governance issues were tackled. It is likely that the excessive emphasis on addressing impediments to access to school as the priority has not been successful in improving participation in schooling because the poor quality of schools and other governance-related issues, such as teacher absenteeism and poor teacher motivation, were not addressed. Households likely do not see the benefit of schooling if quality is poor and children are not learning. In addition, it is widely believed that many successful initiatives in individual donor-supported projects, such as those on in-service teacher training and CPD, have not been sufficiently scaled up and the sustainability of many project initiatives has been poor.

Future development partner support to the school education sector in Sindh, including by ADB, will need to consider the factors that have hindered past reforms. Focusing on secondary education (grades 6–12) is now imperative in Sindh where it has been neglected. In addition, an integrated approach to improving schools will need to be used where access, quality, assessment, and governance issues are addressed in a comprehensive manner.

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School Education in Pakistan

A Sector Assessment

This publication describes the key issues facing the school education system in Pakistan, highlights the challenges, and suggests some possible directions for reform—with a focus on two provinces: Sindh and Punjab. While average years of schooling in Pakistan have increased along with life expectancy and per capita income, inequality remains high and, by other education measures, the record remains dismal. Illiteracy is widespread, and almost 23 million children aged 5–16 years are not in school—a worrying statistic for a country whose current workforce is young, mostly unskilled, and poorly prepared for productive employment.

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ASIAN DEVELOPMENT BANK
6 ADB Avenue, Mandaluyong City
1550 Metro Manila. Philippines
www.adb.org