Islamic Republic of Pakistan

Data Collection Survey on Education Sector in Pakistan

Final Report

May 2020

**Japan International Cooperation Agency
(JICA)**

Koei Research & Consulting Inc.

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EXECUTIVE SUMMARY

1. Education Policy and Plans in Pakistan

1.1 National Development Policy

Pakistan Vision 2025 published by the Government of Pakistan in 2014 aims that Pakistan will join the league of upper-middle-income countries by 2025 and ultimately see itself among the ten largest economies of the world by 2047 – the centennial year of its independence. One of the seven pillars set as priority areas for action includes "People First: Developing social and human capital and empowering women." Thus, one of the most important issues for the national development policy is promotion of education and training sector.

1.2 National Education Policy and Plans

The most recently published federal government's policy on education is the National Education Policy Framework 2018-2025. The framework was made to provide guidelines for provincial governments so that the latter can develop their respective education policies according to their priority issues and available resources. The four priority issues are: 1) Out of School Children, 2) Uniform Education System, 3) Quality, and 4) Skills and Higher Education. Out of these, the issue of more than 22.5 million out-of-school children (OOSC) is considered to be "the first and foremost education challenge."[1]

As for technical and vocational education and training (TVET) is concerned, National "Skills for All" Strategy – A Roadmap for Skill Development in Pakistan provides eight key areas requiring urgent intervention: namely governance, multi-source funding, capacity enhancement, quality assurance, access and equity, industry engagement, international labour market, and viable communication plan.

1.3 Provincial Education Policy and Plans

In line with the devolution policy formulated by the 18th constitutional amendment, every province developed and is developing its policy and plans related to education and training. In this section, policies and plans for school education, non-formal education (NFE), and TVET are summarized with regard to Islamabad Capital Territory (ICT), Punjab Province, Sindh Province, Balochistan Province, and Khyber Pakhtunkhwa (KP) Province.

In the domain of the formal basic education, (School) Education Sector Plan of each province is the principal guide for its improvement of access to, quality of, and management of education during 5 succeeding years. However, as far as the Education Sector Plans of Sindh and Balochistan supported in 2013-2018 by GPE are concerned, a GPE's evaluation report explicitly pointed out that the implementation was low in both provinces[2].

As for NFE subsector, JICA's Advancing Quality Alternative Learning (AQAL) Project played significant roles for provincial policies' formulation. Before its assistance, except for Punjab where JICA has a long history of assistance, virtually no substantial mechanism to promote NFE existed in the provincial departments. Presently, Punjab, Sindh and Balochistan have their respective NFE policies, and KP Province is also in the final stage of approval.

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[1] MoFEPT. (2018). *National Education Policy* Framework 2018.
[2] UNIVERSALIA. (2018). *Summative Evaluation of GPE's Country-level Support to Education, Batch 2, Country 5: Pakistan (Balochistan and Sindh Provinces), Final Report (V5).*

Regarding the TVET sector, most provinces develop their strategy based on the National Skills Strategy (NSS) elaborated in 2009 at the federal level and give emphasis on provision of training according to the needs of industry. In this regard, depending on the industrial specificities of the respective provinces, some documents mention priority domains such as textile manufacturing in Punjab, port skilled worker in Balochistan, pharmaceuticals and marble industries in KP.

2. System of Education in Pakistan

2.1 Education system

In Pakistani education system, after preprimary education (Kachi), 5-year primary education, 3-year middle education, 2-year secondary education, and 2-year higher secondary education are provided and followed by higher education. The Constitution ensures free and compulsory education for children aged 5 to 16 years and assign the government its duty to provide it. There exists NFE in parallel with the formal education system to complement the latter. In general, with some exceptional courses, admission from general education to TVET requires secondary or high secondary education completion.

2.2 Educational Administration and Finance

The Ministry of Federal Education and Professional Training (MoFEPT) is structured as six wings: 1) Administration/Finance/Coordination Wing; 2) International Coordination Wing; 3) Professional Training & Skill Development Wing; 4) Education Policy & Commission Wing; 5) Formal Education Wing; and 6) Non-Formal & Special Education/Social Welfare Wing. It is mainly mandated to ensure coordination among provincial and area education offices. Affiliated to the MoFEPT, there are several institutions/systems, such as Inter Provincial Education Ministers' Conference (IPEMC), National Curriculum Council (NCC), and so on.

At the provincial level, the education and training sector is administered by School Education Department and Literacy & Non-formal Basic Education Department in Punjab; School Education & Literacy Department in Sindh; Secondary Education Department and Social Welfare, Special Education, Literacy & Non-Formal Education, and Human Rights Department in Balochistan; and Elementary & Secondary Education Department in KP.

For TVET sector, the federal government has the National Vocational and Technical Training Committee (NAVTTC) which develop a framework and standards for the entire nation as a part of the TVET reform. Each province has established Technical Education and Vocational Training Authority (TEVTA), but its actual status differs from one province to another. Many provinces have an important issue of better arrangement of administrative bodies for TVET.

Table below indicates the actual expenditure of the federal and provincial education sectors. Much smaller size of the development expenditure than the current one is remarkable. In addition, low execution rate of the development budget due to limited capacity of the administrative bodies is a big issue.

Province	Distribution of Actual Education Expenditure (in million PKR)			Proportion of Actual Education Expenditure	
	Current	Development	Total Amount	Current	Development
Punjab	186,763	9,323	196,086	95%	5%
Sindh	92,697	5,728	98,425	94%	6%
KP	65,856	18,602	84,458	78%	22%
Balochistan	26,601	2,570	29,171	91%	9%
Federal	57,027	14,686	71,713	80%	20%
Total	428,944	50,909	479,853	89%	11%

Source: Office of the Controller General, Accounts, 2013, Government of Pakistan cited in National Education Policy 2017

2.3   School Education (Basic Education)

National Education Policy Framework 2018 describes the existence of three types of schools: namely public sector schools, private sector schools, and madrassah schools. According to education statistics, there is a total number of 150,129 primary schools across Pakistan, out of which 88% are public and 12% are private. There are 49,090 middle schools, of which 34% are public and 66% are private. Recently, the number of low-cost private schools increased rapidly, and under the framework of public-private partnership (PPP), an increasing number of government schools have been adopted by private sector to improve quality of schools.

From 2006 to 2007, the Ministry of Education developed National Curriculum 2006 for Grades 1 through 12. In 2010, as a result of the 18th amendment to the Constitution, "education, including curriculum, textbooks and all other related matters concerning learning in the schools, are now the sole responsibility of the provinces and areas." Then, by reviewing the National Curriculum 2006, each province has been developing its curriculum according to which textbooks are elaborated and published. At the time of the present survey, National Curriculum Council (NCC) established under the MoFEPT is developing the "Single National Curriculum". According to the devolution, educational assessment and examination systems are also under reform at the provincial level including abolishment of primary completion examination.

The total number of teachers in Pakistan is 453 thousand in primary education and 455 thousand in middle education. Except for Punjab province and ICT, the number of female teachers of public schools in rural areas is considerably fewer than that of the male counterpart. Lack of female teachers becomes often an obstacle to girls' schooling. In order to improve quality of teaching, the federal and provincial governments is promoting a continuous professional development (CPD) model for teacher education.

2.4   Technical and Vocational Education and Training

Model types of institutions and their providing TVET options in Pakistan includes 1) general secondary schools providing Matric-Tech, Technical School Certificate and Agro-Tech Courses (G9-10); 2) Vocational Training Centres providing Vocational Certificate Courses (after G8); 3) Vocational Training Institutes providing Vocational Certificate Courses (Basic/Intermediate/ Advance); 4) Mono-technics, Polytechnics and Colleges of Technology providing Diploma of Associate Engineers (DAE) (after G10); and 5) customized training for in-service workers of industry (After G10 / DAE). Total number of TVET institutions in Pakistan is 3,581 (2017).

As to contents of TVET courses, ongoing TVET reform promotes to shift to Competency-based Training (CBT) which is global trend today and develops National Vocational Qualification Framework (NVQF). Introduction of NVQF enables TVET institutions accredited by NAVTTC to implement training courses accredited by NAVTTC within one framework. The training graduates are certified according to the corresponding NVQF level, which grants them a wider range of further education and training options.

3.   Current Status of Education and Training Sector in Pakistan

3.1   Current status of basic education

The total population of Pakistan is estimated to be about 206 million in 2018 according to the projection. The population growth rate is high, and younger generation under 15 years old occupies one third of the total population and school-aged children (5-16 years) occupies one forth.

Approximately 19.35 million students are enrolled in primary school (Grade1 to 5), out of which 61% are in public schools and 39% are in private schools. Out of the total enrollment at the primary level, 55% are boys and 45% are girls. In middle education (Grade 6 to 8) and secondary education (Grade 9 to 12), around 6.53 million and 3.58 million are enrolled respectively. The enrollments have been slightly increasing and the gender disparity remains almost the same level. Gross Enrollment Ratio (GER) for primary education is 97% and Gender Parity Index (GPI) is 0.87. GER for middle and secondary education is only 55% and 34%, GPI are 0.86 and 0.76. respectively. Adjusted Net Enrolment Ratio (ANER) of the primary school aged children is 77% and that for the secondary-school level is only 39%.

Out of 51.53 million children in that age bracket, only 28.68 million are attending schools (public or private from primary to higher secondary), and remaining 22.84 million children, who represent 44% of all this age group of children, are out of school. OOSC in Pakistan accounts for 18.8% of OOSC in the world. Among the school aged children, 49% of girls and 40% of boys are out of school.

Survival ratio to Grade 5 is 66.8%, thus one student out of three cannot reach the Grade 5. Effective transition rate from primary to middle is 84% and that from middle to secondary is 91%. A child can get a good opportunity to be enrolled in the next stage of education if he or she can successfully complete one stage of education. However, many students have to drop out of schools for a reason or another before completion, which leads to the existence of a large number of OOSC. Completion rate at primary is 68% in urban area, 42% in rural area, and 52% in the entire country, and its gender disparity is larger in rural area. In addition, lack of classrooms and teachers often imposes multi-grade teaching, which is a hindering factor for quality of education.

The Annual Status of Education Report (ASER) 2018 reports, "Around half of the children of Grade 5 age have not reached Grade 2 levels of learning." The National Achievement Test (NAT) 2016 carried out with Grade 4 and Grade 8 students by National Education Assessment System (NEAS) revealed several factors affecting to student learning achievement, including urban-rural differences, student absenteeism, experience of school leader, student involvement in co-curricular, availability of books at home, checking homework by the teacher, and education level of parents.

Concerning school management, experience of head teacher, teachers' capacity development, participation of parents in school activities are influential factors. Though further examination and improvement are required for their fully effective function, community participation through school management committee or school council is seen as a good measure. Meanwhile, poor physical facilities are considered to be an important problem.

3.2 Current status of TVET

Number of participants in vocational TVET institutions is 232,310, and that of technical TVET institutions is 81,836. They are much fewer than students in primary schools or middle schools. However, in some provinces, number of participants exceeds the capacity of programmes, which may imply the shortage of number of institutes and/or offered courses. In contrast, in case the rates of enrolment against capacity are around or less than 50%, it indicates that there are training opportunities provided but not efficiently utilized. Total number of TVET institutes is only 3,581, which implies limited physical and geographical accessibility to TVET institutes. In addition, availability of hostel facilities and transportation which may overcome the long distance is also limited. Entry requirement for most of TVET courses are completion of middle education or matric (secondary education), so many people can hardly access to any of existing TVET courses in Pakistan where enrollment rate in secondary education is very low.

At the time of the present survey, 187 CBT curricula are developed. As development of CBT curricula under the reform progresses, quality is not assured by authority without accredited curriculum, then qualification issued have less value. Implementation of CBT curricula in full scale is expected with provision of competency standards from industry where industry will admit value of TVET and pass-outs. Meanwhile, for quality assurance, shortage of training facilities and equipment is a typical problem of TVET. Furthermore, quality and capacity of instructors must be ensured. But there is no national TVET instructor development system. Instructors for skills in trades usually take customary trainings for less than a year after appointment.

National "Skills for All" Strategy estimates PKR 2,897 million in total as the cost for quality enhancement of TVET sector, including 500 million for curricula development and PKR 1,080 million for capacity building of teachers/instructors as well as PKR 77 billion for facilities and equipment. Quality assurance requires funding. And, it should be reminded funding itself does not lead to success but management of fund with monitoring and evaluation mechanism is the key to success. For quality assurance, Board of Technical Education of each province is responsible for assessment. Through introduction of CBT curricula and NVQF, it is expected improve employment of graduates. According to tracer studies, employment rates of females (15%-57%) are much lower than those of males (58%-73%). To improve the employment of graduates meeting the demands of skilled workers, in addition to provision of TVET courses, employment facilitation guidance and enhancement of access to labour market information are needed.

As to institute governance, standardized management system with increased involvement of industry is promoted. National "Skills for All" Strategy states "Increasing and systemizing employer/private sector led TVET Institute Management Committees (IMCs) and District Boards of Management (DBoM)" as one of recommendations.

In Pakistan, GDP growth rate has been increasing steadily. Although growth rate of manufacturing sector was negative in FY2018/2019, textile industry in general show considerable increase except for raw cotton. Shift of labour force, especially that of females, from agriculture sector to industry and service sectors would be the key to GDP growth. To do so, skills development for women through TVET and investment to expand those sectors are necessary. The potential capacity to absorb employees in stitching is typically high. In order that TVET sector accesses to the information about such needs of the industry, linkage with industry organizations is important.

4. Priority Issues and Solutions in Education and Training Sector in Pakistan

4.1 Issues and solutions for basic education

The most urgent and critical challenge faced by basic education in Pakistan should be to enroll a total number of 22.8 million out-of-school children, representing 44% of the total population at the ages 5 to 16 years, in any system of education. To address the issue, it is important not only to encourage OOSC to go to school, but also to prevent the enrolled students from dropping out. Dropout rate is relatively high in the earliest grade (Grade 1 in Sindh and Balochistan, and Kachi in Punjab and KP) except for ICT, so that effective intervention in the earliest stage of schooling is critically important to improve the retention of students at school. High dropout rate for the Grade 5 in Sindh and Balochistan might be at least partially explained by the physically limited availability of middle schools in those provinces.

According to a simulation made by the survey team, if Pakistan keeps the same pace of OOSC reduction as realized from 2012-13 to 2016-17, there will remain about 15.6 million OOSC in 2030. More than 20,000 new classes must be opened every year to realize it only by increase of

capacity. But if the number of dropouts is reduced, it can be realized more easily. Furthermore, in order to eliminate the OOSC by 2030, annual increase of capacity and/or reduction of dropouts by 2 million is required. Nevertheless, 2 million is still less than 10% of enrolled children, so that prevention of dropout is effective.

The Academy of Educational Planning and Management (AEPAM) carried out a study about the causes of dropout at the primary level. The study revealed multidimensional and complex phenomena of student dropout. Though the reasons for dropout differ from one student to another, education managers and teachers tend to attribute importance to the factors related to economy, teacher's availability, and students' family. Meanwhile, it is notable that students' parents and community members pointed out teachers' inability to teach by using textbooks as a factor causing children's dropout. PSLM Survey 2013-14 identified that the most common reason for dropout was children's unwillingness to go to school, and the most predominant girl-specific reason for drop-out was "Parents did not allow" them to go.

Solutions to the main factors causing dropout and non-schooling are proposed in the table below.

Category	Key Factor	Proposed Solution
Socio-economic	• Poverty of community	• Implementation of projects for industrial development incorporating a perspective of human development
Physical and geographical	• Lack of schools • Long distance from home to school • Security risk on the way to school	• Establishment of new schools, reopen of non-functional schools, upgradation to higher-level schools • Enhancement of NFE
Teacher related	• Nepotism • Absenteeism • Poor teaching capacity • Shortage of number of teachers	• Merit-based recruitment including outsourcing to a third-party • Biometric recognition, rigorous monitoring • Capacity enhancement mainly through cluster-based CPD (in-service training) and pre-service training • Strengthening of pre-service training (especially female teachers in rural areas)
Teaching and learning material related	• Textbooks difficult to teach and learn	• Revision of curriculum and textbooks • Development and introduction of supplementary learning materials and teaching aids based on the results of diagnostic evaluation
Administrative and related to facilities in school	• Poor relationship between educational administration bodies and schools • Lack of flexible school management to address complex issues • Lack of basic facilities in schools • Poor capacity of educational administration for planning and implementation	• Introduction of rigorous monitoring system • Well-designed improvement of school through school-based management • Improvement of school facilities through community participation • Capacity enhancement of educational administration
Family and child related	• Poverty of student's family • Lack of measures to meet student's special learning needs	• Stipends, vouchers, conditional cash transfer • Promotion of inclusive education (Reasonable accommodation in terms of facilities and learning contents and methods)

4.2 Issues and solutions for TVET

Comprehensive reform is being implemented at a rapid pace to improve organizations, institutions, contents, methods, and employment at exit of training. It aims at training based on the needs of enterprises wishing to use trained workforce rather than the preference of training providers.

Therefore, today's most important issue of TVET would be effective implementation of the ongoing reform. Taking the identified priorities of the reform into consideration, with regard to 6 areas, issues to be addressed, factors causing them, and proposed solutions to them are discussed.

As for governance, there are multiple TVET sector players at the same level but with different backgrounds and lines, which creates overlapping of roles. As TVET attracts innately concerns of multiple sectors, legal and administrative coordination should take place properly.

It is not easy to obtain funds enough to ensure the quality of training, so that diversifying the sources is needed. Five sources, namely government, donors, industry, trainees' fee, and welfare schemes, are proposed and their constraints are examined.

In order that Pakistan can fully exploit the demographic dividend, it is estimated that 4.4 million youth need to be trained anywhere out of school, but the capacity of TVET institutions is limited. It is also important that TVET sector contributes to the solution for the issue of over 22 million OOSC. But due to the issue of too high qualifications as entry requirement of TVET, it cannot play the role of safety net. Furthermore, issues related to gender disparity and less participation due to demand-supply gap are also pointed out.

For quality assurance, transition from conventional curricula with "overemphasis on academic knowledge" to CBT curricula to be developed on the basis of the competencies endorsed by industry. Meanwhile, there are issues requiring due coordination such as programmes of Diploma of Associate Engineers (DAE) provided in Government College of Technologies, which are supposed to be NVQF Level 5 but are not presently accredited as CBT curriculum.

Other issues including the necessity to consider the needs of international labour market, and to improve TVET negative images in society.

Solutions to the main issues related to TVET are proposed in the table below.

Category	Key Issue	Proposed Solution
Governance	• TVET is a multiple sectors' concern, and overlapping occurs due to lack of coordination • Unstable relationship between federal and provincial governments after the 18th governments.	• Organizational restructuring of the entire TVET sector around NAVTT as responsible body of the federal government • Coordination of the relationship between federal and provincial governments according to the Constitution
Funding	• Lack of financial resources for enhancing TVET sector • Expected constraints of each funding source	• Proposition with due consideration of donor's cooperation policy and indicators to be achieved • Results-oriented management taking account of benefit to industry and directly related to employment • Appropriate selection of beneficiaries to utilize social welfare funds • Cost reduction through linkage with in-house training
Capacity, Access and Equity	• Too small capacity to accept new entrants in the labour market • No function of safety net for OOSC with lower qualifications than admission requirements • Gender disparity (cultural aspects, transportation, etc.) • Courses with less participants than capacity	• Optimization of existing facilities and schemes • Establishment of new institutions • Development and implementation of TVET programmes for OOSC and people with low qualifications • Awareness raising on gender equality • Arrangement of transportation, preparation of gender-sensitive environment

Quality Assurance	• Gap between training contents and needs of the industry • Limited number of programmes at NVQF Level 5; No recognition of DAE as CBT programme • Immaturity of industry while promoting industry engagement	• Selection of courses for capacity enlargement according to the labour market trends • Transition to CBT curricula • Coordination between existing DAE programmes and NVQF Level 5 programmes • Establishment of CoE • Enhancement of linkage with industry trough skills development of technical workers • Construction of licensing system • Strengthening of industry organizations
International Market	• Limited competitiveness in foreign labour market	• Development of TVET programmes with due consideration for foreign labour market
TVET Image	• Unfavorable image of TVET	• Public information • Improvement of economic and social status of TVET graduates

5. Development Partners' Cooperation for Education in Pakistan

Contributions by development partners are compiled in the following table.

Name of Partners	Area		Educational Stage			
	Federal	Province/Area	Primary Education	Secondary Education	NFE	TVET
World Bank	-	Balochistan, Sindh, Punjab	✓	✓		✓
ADB	-	Sindh, Punjab		✓		✓
EU	✓	Sindh, Balochistan	✓	✓		✓
UNICEF	-	Balochistan, KP, Punjab, Sindh	✓		✓	
UNESCO	✓	KP, EX-FATA, GB, Punjab, Sindh, Balochistan, and ICT	✓	✓	✓	
UNHCR	-	KP, Balochistan, Punjab	✓	✓		✓
ILO	✓	-				
WFP	-	KP, Sindh, Balochistan	✓	✓		
USAID	-	Sindh, KP	✓	✓	✓	✓
DFID	-	Punjab, KP	✓	✓		✓
GIZ	✓	-				✓
NORAD	✓	-				✓
CIDA	-	AJK, GB, Sindh, Balochistan	✓	✓		✓
AusAID	-	KP, Balochistan	✓	✓		✓

All partners except ILO, GIZ, and NORAD support Basic Education. The features include the improvement of education through utilizing PPP and innovative technologies as seen in the support by World Bank, ADB and USAID, and the support through the promotion of non-formal education as seen in the support by UNICEF and USAID. While Sindh and Punjab are supported by multiple development partners, support for AJK and GB is limited. Support for ICT is also limited. Regarding TVET, the introduction of competency-based training and assessment (CBTA), vocational training according to the needs of industry, and strengthening cooperation with the private sector are being carried out. In addition to support for provincial governments like the World Bank and ADB, there are contributions to institution building through interventions at the federal level like ILO and GIZ.

6.   Japan's Cooperation for Education and Training in Pakistan

Japan's policy in Official Development Assistance (ODA) for Pakistan prepared in February 2018 aims at building stabilized and sustainable society through expansion of middle class.
Three areas are focused on with priorities in assistance intervention.
1) Improvement of economic infrastructure
2) Ensuring human security and improvement of social infrastructure
3) Building peace and stability

Among the three priority areas, the second priority concerning human security is particularly related to the educational development. In the Rolling Plan for the Islamic Republic of Pakistan annexed to the Country Development Cooperation Policy, the Development Issue 2-5 is determined to be "Improvement of quality and access of education." The strategy for addressing the issue says, "In line with Japan's policy in promoting women participation in society, promoting education for peace and growth, and the SDG 4, GOJ will support girls' education and non-formal education in order to improve the access to and quality of education."

7.   Japan's Future Cooperation for Basic Education and TVET in Pakistan (Proposal)

7.1   Strategy and priority areas for Japan's cooperation for basic education and TVET in Pakistan

[Basic Education]

In the domain of basic education, the following strategy is recommended for the cooperation:

> Japan assists Pakistan so that all the children can complete quality elementary education by means of increasing the students' retention rate and reducing the number of out-of-school children through multiple approaches.

The multiple approaches suggested in the above-mentioned strategy include:

- Assistance in developing a viable plan with clearly demarcated responsibilities

- Support for the enrolled children in their completion of education up to elementary level

- Reduction of children not attending school because of lack of educational institutions

- Provision of alternative educational opportunities for OOSC and illiterates

[TVET]

In the domain of TVET, the following strategy is recommended for the cooperation:

> Based on the ongoing TVET reform, Japanese ODA will establish practical good examples focused on women, employment, and collaboration with industry and offer important suggestions on direction for the reform by sharing experiences with many stakeholders.

Based on the above strategy, actions to be taken by Japanese ODA are sorted out.

(1) Support improving TVET system

(2) Out-of-school youth and people with low education

(3) Support establishing CoE

(4) Collaboration with industry through in-house training

(5) Enhancing employment support

7.2   Proposed programmes and projects for basic education and TVET in Pakistan

[Basic Education]

- Dispatch of Education Policy Advisor to MoFEPT (Technical Assistance: TA)

- Project for Promoting Equitable Quality Elementary Education through Continuous Professional Development (TA)

- Advancing Quality Alternative Learning Project Phase 2 (TA)

- Project for Providing Equitable Quality Elementary Education for Rural Girls in Sindh Province (Grant)

- Grants in Association with an International Organization for NFE subsector

[TVET]

- Dispatch of Policy Advisor to the Punjab Skills Development Authority (TA)

- Garment Sector Employment Support Project in Punjab (TA)

- Expansion of GCT RR and GCT Faisalabad Mechanical (TA)

- Strengthening Institutional Capacity for Placement at CTTI (TA)

- In-service Training Programme for Technicians (TA)

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Abbreviations

ADB	Asian Development Bank
ADE	Associate Degree Education
ADPs	Annual Development Programmes
AEPAM	Academy of Educational Planning and Management
AJ&K/AJK	Azad Jammu and Kashmir
ALP	Accelerated Learning Programme
AQAL Project	JICA's Advancing Quality Alternative Learning Project
ASER	Annual Status of Education Report
AusAID	Australian Agency for International Development
BAEC	Balochistan Assessment and Examination Commission
BEF	Balochistan Education Foundation
BESP	Balochistan Education Sector Plan
BISE	Boards of Intermediate and Secondary Education
BISP	Benazir Income Support Programme
B-TEVTA	Balochistan Technical Education and Vocational Training Authority
C/P	Counterpart
C4D	Communication for Development
CBO	Community-based Organization
CBT	Competency Based Training
CBT&A/CBTA	Competency Based Training and Assessment
CEFM	Child, Early and Forced Marriage
CIDA	Canadian International Development Agency
CoE	Centre of Excellence
COL	Commonwealth of Learning
CPD	Continuing Professional Development
CPS	Country Partnership Strategy
CSP	Community Support Process
CTTI	Construction Technology Training Institute
DBoM	District Boards of Management
DCARS	Directorate of Curriculum, Assessment & Research, Sindh
DFID	Department for International Development for the United Kingdom
DL&NFBE	Directorate of Literacy and Non-formal and Basic Education
Draft NEP 2017	National Education Policy 2017-2025
DTTIs	Directorate of Teacher Training Institutes
E&LD	Education and Literacy Department
ECE	Early Childhood Education
EDB	Engineering Development Board
EFA	Education for All
EMIS	Education Management Information System
ESD	Education for Sustainable Development
ESP	Education Sector Plan
ESPDG	Education Sector Plan Development Grants
ESPIG	Education Sector Plan Development Grants
EU	European Union
FATA	The Federally Administered Tribal Areas
FDE	Federal Directorate of Education
GB	Gilgit-Baltistan
GCT	Government College of Technology
GCT RR	Government College of Technology Railway Road
GDP	Gross Domestic Product
GER	Gross Enrollment Rate
GIZ	German Society for International Cooperation
GPE	Global Partnership for Education
GPI	Gender Parity Index
GREP	Girl's Right Education Programme
GRP	Gross Rating Point
ICT	Islamabad Capital Territory
IFC	International Finance Corporation
ILO	International Labour Organization
ILS	Integrated literacy and Skills

IPEMC	Inter-Provincial Education Ministers Conference
IPEMC	Inter Provincial Education Ministers' Conference
JESRs	Joint Education Sector Reviews
JICA	Japan International Cooperation Agency
KP	Khyber Pakhtunkhwa
L&NFBE	Literacy & Non-formal Basic Education
LEG	Local Education Group
LitMIS	Literacy Management Information System
LSI	Literacy for Social Impact
MDGs	Millennium Development Goals
MIP	Multi-Annual Indicative Programme
MoFEPT	Ministry of Federal Education and Professional Training
NAT	National Achievement Test
NAVTEC	National Vocational and Technical Education Commission
NAVTTC	National Vocational and Technical Training Commission
NCC	National Curriculum Council
NCF	National Curriculum Framework
NEAS	National Education Assessment System
NEF	National Education Foundation
NEP 2009	National Education Policy 2009-2015
NEP 2017	National Education Policy 2017-2025
NER	Net Enrolment Ratio
NFBE	Non-Formal Basic Education
NFE	Non-Formal Education
NFEMIS	NFE management information system
NORAD	Norwegian Agency for Development Cooperation
NSIS	National Skills Information System
NSS	National Skills Strategy
NTB	National Training Board
NVQF	National Vocational Qualifications Framework
ODA	Official Development Assistance
ODL	Open, Distance and Technology-based Learning
OOSC	Out-of- School Children
PAAPAM	Pakistan Association of Automotive Parts & Accessories Manufacturers
PBS	Pakistan Bureau of Statistics
PEAS	Provincial Education Assessment System
PEC	Punjab Examination Commission
PESP	Punjab Education Sector Plan 2019/20-2023/24
PITE	Provincial Institute for Teacher Education
PKR	Pakistani Rupee
PLPP	Punjab Literacy Promotion Project Phase-II
PPP	Public Private Partnership
PSDP	Public Sector Development Programme
PSESP	Punjab School Education Sector Plan (2013-2017)
PSLM	Pakistan Social and Living Standards Measurement
QAED	Quaid-e-Azam Academy for Educational Development
SBCC	Social and Behaviour Change Communication
SCDP	Sindh Capacity Development Project
SDGs	Sustainable Development Goals
SED	School Education Department
SEF	Sindh Education Foundation
SESP	Sindh Education Sector Plan
SESP&R	School Education Sector Plan and Roadmap for Sindh
SMC	School Management Committee
SMEDA	Small and Medium Enterprises Development Authority
SSP	School Sector Plan
STEM	Science, Technology, Engineering and Mathematics
S-TEVTA	Sindh Technical Education and Vocational Training Authority
TIMSS	Trends in International Mathematics Science Study
ToT	Training of Trainers
TVET	Technical and Vocational Education and Training
TVET IMC	TVET Institute Management Committee

UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WFP	World Food Programme
WTO	World Trade Organization

Outline of the Survey

Background

Human Development Indicator value of Islamic Republic of Pakistan (hereinafter referred to as Pakistan) for 2018 is 0.56 positioning it at 152 out of 189 countries and territories[3], the second lowest in South Asia, following Islamic Republic of Afghanistan. Literacy rate of people aged 15 and above still remains 59.13% (Male 71.12%, Female 46.47%)[4] and it is estimated that 22.8 million children aged 5-16 not attending school, represent 44% of the total population in this age group[5]. In order to tackle these challenges, the Federal Government of Pakistan placed priority on 1) Decrease OOSC and Increase School Completion, 2) Uniformity in Education Standards, 3) Improve the Quality of Education, and 4) Enhance Access to and Relevance of Skills Training in its "National Education Policy Framework 2018" and examines a range of measures for each area.

The Government of Japan has supported Non-Formal Education (NFE) in Pakistan through distich of individual exerts since 1997 and through technical cooperation projects since 2004. However, only 2% of the total population in this age group is absorbed by NFE. Strengthening NFE and further support for formal education are necessary to improve the situation.

In addition, while further growth of manufacture, especially textile and automobile industries, is expected, transition from basic education to technical and vocational education and training (TVET), human resource development for industry, and TVET graduates' access to job opportunities remain as challenges.

Given the above background, the Government of Japan has thus far afforded considerable assistance for the improvement of education and training in Pakistan while there still remains tremendous issues to address for providing the entire nation with opportunities to acquire knowledge and skills relevant to their life and career. With a view to exploring the possibility of future technical and financial cooperation between Pakistan and Japan in the field of basic education and TVET, the Japan International Cooperation Agency (JICA) commissioned the international consultant team to carry out the Data Collection Survey on Education Sector in Pakistan. Prior to the present survey, JICA Pakistan Office commissioned to a Pakistani national consulting firm[6] to carry out a survey with a view to collecting exhaustive information on education and training sectors. The international consultants are suggested optimizing the survey results of the national consultants while both teams have compiled respective reports.

Outline

The objective of this survey is to collect necessary data and information on basic education and TVET sector in Pakistan for JICA to fully provide details on the need for technical cooperation that could effectively utilize relevant experiences in Japan. The Survey area covered Islamabad Capital Territory (ICT) as well as the four provinces of Punjab, Sindh, Balochistan and Khyber Pakhtunkhwa (KP).

The Survey was carried out by a consultant team contracted by JICA (the Survey Team). Document research both in Japan and Pakistan was carried out to collect relevant reports, statistics,

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[3] UNDP. (2019). *Human Development Rep*ort.
[4] UNESCO Pakistan http://uis.unesco.org/en/country/pk
[5] UNICEF Pakistan https://www.unicef.org/pakistan/education
[6] Semiotic Consultants (Pvt.) Limited

legislations, and other documents. Interviews were conducted during the field survey.
The following table shows Survey Team members.

Survey Team Members

Name	Position
Mr. Hiroshi OKUKAWA	Team Leader/Education Planning 1
Ms. Atsuko NONOGUCHI	Education Planning 2
Mr. Sugashi NAGAI	TVET Planning 1
Ms. Shoko UEHARA	TVET Planning 2

Source: Constructed by Survey Team

The Survey Team carried out field surveys in Pakistan as follows:

• First Field Survey: from February 1 to 9, 2020

• Second Field Survey: from March 2 to 14, 2020

The details of first and second field survey are shown in the tables below.

Itinerary of First Field Trip

Date	Day	Itinerary	
		Team Leader/Education Planning	TVET Planning
Feb.1	Sat	-	Narita to Islamabad
Feb.2	Sun	Haneda to Islamabad	Documentation
Feb.3	Mon	➢ Meeting with JICA Pakistan Office ➢ Embassy of Japan ➢ Ministry of Federal Education and Professional Training ➢ National Education Assessment System ➢ Pakistan Institute of Trade and Development ➢ Meeting with national consultants	
Feb.4	Tue	➢ Internal meeting with JICA's Advancing Quality Alternative Learning (AQAL) Project experts ➢ Ministry of Federal Education and Professional Training (Discussion on AQAL) ➢ Academy of Education Planning and Management ➢ Pakistan Institute of Development Economics ➢ National Curriculum Council	➢ TVET Reform Support Programme by German Society for International Cooperation (GIZ) ➢ Ministry of Industries and Production ➢ National Vocational and Technical Training Commission (NAVTTC)
Feb.5	Wed	➢ Skype Meeting with JICA Headquarters ➢ Move to Karachi	➢ Move to Lahore ➢ Meeting with Ms. Amna, Education Expert ➢ Japanese experts of JICA's Garment Industry Project
Feb.6	Thu	➢ School Visit in Karachi (Class Observation & brief interaction with Teachers) ➢ Sindh Teachers Education Development Authority in Education Department Karachi/ Bureau of Curriculum ➢ Sindh School Education Department	➢ Government College of Technology Railway Road Lahore (Meeting with teachers, Institute Management Committee members & students) ➢ Punjab Technical Education & Vocational Training Authority ➢ National Incubation Centre Lahore
Feb.7	Fri	➢ Discussion with stakeholders on Non-Formal Education of Sindh ➢ Back to Islamabad	➢ Pakistan Knitwear Training Institute ➢ Punjab Vocational Training Institute ➢ Back to Islamabad
Feb.8	Sat	➢ Report to JICA Pakistan Office ➢ Meeting with the national consultants	
Feb.9	Sun	Documentation	Islamabad to Narita

Source: Constructed by Survey Team

Itinerary of Second Field Trip

Date	Day	Itinerary	
		Team Leader/Education Planning	TVET Planning
Mar.2	Mon	Academy of Education Planning and Management	Narita to Islamabad
Mar.3	Tue	➢ Meeting with JICA Pakistan Office	
		➢ United States Agency for International Development	➢ Construction Technology Training Institute ➢ Engineering Development Board
Mar.4	Wed	➢ Ministry of Federal Education and Professional Training ➢ Federal Directorate of Education ➢ Maraf ul Quran Wal Sunnah (Madrassa school)	➢ GIZ ➢ National Training Bureau and NAVTTC
Mar.5	Thu	Move to Karachi	➢ Ministry of Communication ➢ ADB ➢ Federal Directorate of Education, ICT ➢ Move to Lahore
Mar.6	Fri	➢ Education and Literacy Department (Curriculum Wing; Directorate of Planning, Development & Research; Directorate of Curriculum, Assessment & Research; Directorate of Teacher Training Institutes; Sindh Teacher Education Authority; Provincial Institute of Teacher Education; Reform Support Unit)	➢ Lahore Chamber of Commerce and Industry ➢ Pakistan Hosiery Manufacturers and Exporters Association ➢ Pakistan Readymade Garments and Manufacturers & Exporters Association ➢ All Pakistan Textile Mills Association
Mar.7	Sat	Documentation	
Mar.8	Sun	Documentation	
Mar.9	Mon	➢ Government Boys Secondary School, Bhirro Village, Karachi	➢ Vocational Training Institute Walton
Mar.10	Tue	➢ Sindh Teacher Education Authority	➢ Professional skills Development Academy ➢ Interloop Limited (Garment Manufacturer) ➢ Zakat and Ushar Department
Mar.11	Wed	➢ School Education and Literacy Department ➢ Back to Islamabad	➢ Punjab Board of Technical Education ➢ Punjab Trade Testing Board ➢ Punjab Technical Education & Vocational Training Authority
Mar.12	Thu	➢ Allama Iqbal Open University	Back to Islamabad
Mar.13	Fri	➢ Report to JICA Pakistan Office ➢ Courtesy Call to Embassy of Japan	➢ Report to JICA Pakistan Office ➢ Courtesy Call to Embassy of Japan
Mar.14	Sat	Islamabad to Narita	Islamabad to Narita

Source: Constructed by Survey Team

1. Education Policy and Plans in Pakistan

1.1 National Development Policy

Pakistan Vision 2025 published by the Government of Pakistan in 2014 aims that Pakistan will join the league of upper-middle-income countries by 2025 and ultimately see itself among the ten largest economies of the world by 2047 – the centennial year of its independence. The vision was built through consultation with a wide range of stakeholders, including political parties, federal and provincial governments, private sector, development partners, academia, and civil society. Taking account of the impact of the remarkable population growth as opportunities and threat for the economic development, the vision urges measures to improve productivity of the economically active population saying "whether or not this demographic dividend is realized depends on the investments being made in human development, especially education, training, and health[7]."

By setting the goal of becoming the next Asian Tiger as a shared vision, five enablers and seven pillars were identified to realized it. The five enablers are 1) Shared National Vision, 2) Political Stability and Continuity of Policies, 3) Peace and Security, 4) Rule of Law, and 5) Social Justice. And the seven pillars as priority areas for action involve:

1) People First: Developing social and human capital and empowering women

2) Growth: Sustained, indigenous, and inclusive growth

3) Governance: Democratic governance; institutional reform and modernization of the public sector

4) Security: Energy, water, and food security

5) Entrepreneurship: Private sector and entrepreneurship-led growth

6) Knowledge Economy: Developing a competitive knowledge economy through value addition

7) Connectivity: Modernizing transport infrastructure and regional connectivity

Education and training sector which is subject of this survey is mainly concerned with the Pilar 1 and 6. The related goals to be achieved through materializing the priorities include:

[Pillar 1]

• Increase primary school enrolment and completion rate to 100% and literacy rate to 90%

• Increase higher education coverage from 7% to 12%, and increase number of PhD's from 7,000 to 15,000

• Improve primary and secondary gender parity index to 1, and increase female workforce participation rate from 24% to 45%

[Pillar 6]

• Triple labour and capital productivity

• Improve Pakistan's score on the World Bank Institute's Knowledge Economy Index from 2.2 to 4.0, and increase internet penetration to over 50%

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[7] Planning Commission, Ministry of Planning, Development and Reform. (2014) *Pakistan Vision 2025,* p.7.

1.2 National Education Policy and Plans

1.2.1 School education (basic education)

(1) National Education Policy 2009

The Ministry of Education at the federal level formulated National Education Policy 2009 (NEP 2009) which is the most recently approved national education policy in Pakistan. The NEP 2009 focuses on two overarching objectives: 1) expanding access to education and 2) improving the quality of education. It identifies the following key policy actions in pursuit of these two objectives:

- Achieving universal and free primary education by 2015 and up to class 10 by 2025

- Promoting access and quality of Early Childhood Education

- Achieving 86% adult literacy by 2015

- Enhancing education budget up to 7% of GDP by 2015

- Promoting equity in education with the aim to eliminate social exclusion and provision of increased opportunities to marginalized groups, particularly girls

- Improving quality of education

- Determining national standards for educational inputs, processes, and outputs

- Introducing a common curriculum framework for public and private sectors

Based on the NEP 2009, the Ministry of Education at the federal level, in cooperation with provincial education departments, addressed the relevant goals of Education for All (EFA) and Millennium Development Goals (MDGs).

(2) National Education Policy 2017-2025 (Draft)

1) **Background**

In Pakistan, the 18th Constitutional Amendment in 2010 brought about drastic reforms in the education sector, as well as 16 other sectors. One of the reforms in the education sector was that free and compulsory education of all the children at the age of 5 to 16 years becomes a fundamental right to those children and the State's responsibility, in the light of Article 25A, newly added in the Constitution under the 18th amendment. The other was that the policy, planning, curriculum, standards, and financing for teachers' salary and other development budget which used to be the federal government's responsibilities before the 18th amendment were fully devolved to provincial governments[8].

Due to a lack of capacity, provincial governments were not able to formulate a new education policy by themselves while they adopted the NEP 2009 with slight amendments, based on the requirement of the devolution[9]. In order to move forward, an Inter-Provincial Education Ministers Conference (IPEMC), a forum created under the NEP 2009, was held in Muzaffarabad in 2015 where participants decided to revise NEP 2009. Due to this decision, Ministry of Education which was once dissolved after the devolution was reestablished and renamed as Ministry of Federal

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[8] ADB. (2019). *School Education in Pakistan: A Sector Assessment*.
[9] ibid.
After the respective education department of each provincial government adopted the NEP 2009 with some amendments, it has developed education sector plans, which will be described in "1.2 Provincial Education Policy and Plans" of this report.

Education and Professional Training (MoFEPT). The MoFEPT was given the role and responsibility of a coordinator and facilitator for the revision of the NEP 2009[10].

With the coordination by the MoFEPT, the draft of National Education Policy 2017-2025 (draft NEP 2017) was developed in 2017. This draft has not obtained approval as of March 2020. During the present survey, the MoFEPT expressed its intention not to pursue the final approval of the draft NEP 2017 by the federal government because it has determined its role vis-à-vis provincial education departments to provide them with guidelines for policy development rather than develop a uniform policy for the entire country, due to the devolution after the 18th constitutional amendment[11]. Therefore, there remains little chance for the draft NEP 2017 to be officially approved and notified by the Government of Pakistan. Nevertheless, the survey team decided to brief the contents of the draft NEP 2017 in this report without disregarding it because the policy direction of the federal ministry for educational development is thoroughly described in this document in comparison with the officially approved National Education Policy Framework 2018 providing solely a skeleton.

2) **Contents of the Draft NEP 2017**

The draft NEP 2017 consists of 19 Chapters as shown in the table below.

Table 1-1 Draft National Education Policy 2017-2025

Chapter	Contents
Chapter 1	Introduction
Chapter 2	Goals, Objectives and Key Areas of Education Policy
Chapter 3	Islamic Education
Chapter 4	Early Childhood Care and Education
Chapter 5	Literacy and Non-Formal Basic Education
Chapter 6	Primary Education
Chapter 7	Secondary Education
Chapter 8	Teachers Education
Chapter 9	Technical Vocational Education and Training
Chapter 10	Higher Education
Chapter 11	Information Technology
Chapter 12	Library and Documentation Services
Chapter 13	Physical Education, Health and Sports in Education
Chapter 14	Private Sector Education
Chapter 15	Special Education and Inclusive Education
Chapter 16	Deeni Madaris
Chapter 17	Assessment and Examination Systems
Chapter 18	a. Guidance, Counselling and Character Building b. Boy Scouts, Girls Guides, National Cadet Corps
Chapter 19	Financing of Education

Source: Draft National Education Policy 2017

3) **Primary Education (Grade 1 to Grade 5) in Draft NEP 2017**

The draft NEP 2017 sets up the universalization of primary education (Grade 1 to 5) as the goal for primary education. It also sets up the firm deadline for the universalization in terms of access/enrollment and completion by 2020 in the case of boys and 2025 in the case of girls which is consistent with Article 25A of the Constitution. As the next priority of primary education, the draft NEP 2017 aims to enhance the quality of education. For addressing both goals, this draft

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[10] ibid.

[11] Federal Secretary gave the explanation in the meeting with the survey team on 3 February 2020.

policy sets up major targets for the allocation of education budget. Out of total education budget, 45 to 50% should be allocated for promoting primary education and 30% of the total primary education budget should be allocated for improving the quality of primary education by 2025.

In order to achieve the goal of universalization of primary education, the draft policy raises as necessary policy provisions/actions to improve Early Childhood Education (ECE), make primary education free and compulsory, provide financial incentives to deserving and disadvantaged children and their families, make school environment attractive and inclusive, and improve the governance and management structure of primary education. For addressing the next priority to enhance the quality of education, several policy actions are raised, including those to meet the learning needs of children in terms of learning tools and learning contents, reform teacher training system, and reform in the quality of education in relation to inputs and interventions, such as curriculum, textbooks, monitoring, and assessment.

4) Secondary Education (Middle, High, Higher Secondary) in Draft NEP 2017

The draft NEP 2017 aims to prepare students to become responsible and productive citizens who can be competitive in the job market and pursue higher education of their interests through secondary education. In order to achieve this goal, the draft policy focuses on the improvement of access and quality in secondary education by providing sufficient number of schools, globally compatible curriculum, teaching-learning materials, qualified teachers, and assessment system. There are four targets for secondary education, specifically for middle and high schools. The first two targets are to upgrade 50% of existing public primary schools (125,573 in 2016/2017) to middle schools by 2025 and upgrade 40% of existing public middle schools (16,862 in 2016/2017) to secondary or high schools by 2025. The other two are to increase the gross participation rate at the middle-school level (Grade 6 to 8) from 62% to 85% and net participation rate from 27% to 50% by 2025, and increase the gross participation rate at high-school and higher-secondary level (Grade 9 to 12) from 58% to 70% and net participation rate from 27% to 40% by 2025.

Necessary policy provisions/actions to achieve these targets cover a lot of aspects, including upgradation of middle/high schools to high/higher secondary schools, utilization of NFE for the middle level, capacity building for science and mathematics teachers, curriculum developers, textbook writers, textbook reviewers, and publishers, installation of laboratories and utilization of information and communication technology, revision of curriculum, formation of assessment system, and so on.

(3) National Education Policy Framework 2018

The MoFEPT developed National Education Policy Framework in November 2018 which has already been approved. This framework has been developed as a guideline so that each provincial government can formulate its education policy in accordance with its priorities and resources available. It consists of three parts: 1) education challenges; 2) education priorities; and 3) the way forward, which are all thoroughly and well outlined. The framework states that education is significant for social and economic development of any country, including Pakistan. Based on this basic recognition, the framework points out three major challenges to be addressed in primary and secondary education (Grade 1 to 10) in Pakistan.

According to the framework, the first and foremost education challenge faced by Pakistan is to address out-of-school children (OOSC) [12] and ensure that enrolled children complete their

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[12]. AEPAM. (2017). *Pakistan Education Statistics 2016-17*.
According to the Pakistan Education Statistics, the number of OOSC is calculated by the projected number of school-

education. There are over 22.5 million OOSC, with more girls than boys out of school[13]. Furthermore, most of the OOSC are concentrated in rural areas, with Balochistan and the former Federally Administered Tribal Areas (FATA) having the highest percentage of OOSC[14]. Out of total 22.5 million OOSC, OOSC at the primary level (Grade 1 to 5), middle-school level (Grade 6 to 8), and high-school and higher secondary level (Grade 9 to 12) are around 5 million, 6.5 million, and 11 million, respectively[15].

The second education challenge stated in the framework is to address uniform education for all children. The framework describes that there are huge differences in the standard and quality of education in Pakistan that enrolled children receive in various education systems across the country. Pakistan's schooling system consists of three school types: 1) public sector schools; 2) private sector schools; and 3) madrassa schools. Curriculum, textbooks, and exam/assessment system and the language of instruction used in these schools are different, not unified. Private sector schools predominantly use English as the medium of instruction, while public sector schools mostly use Urdu and a regional mother tongue as the medium of instruction. The framework explains that due to the quality of education, including teachers' capacity, differentiated by school type, students in private sector schools tend to be more advantaged than those in public sector and madrassa schools[16]. In this light, it states that to give equitable access to economic and social opportunities for all children, Pakistan needs to provide standardized education services across the various school systems.

The third education challenge stated in the framework is to provide quality education to all children regardless a difference of the schooling systems. Among necessary countermeasures to improve the quality of education, the framework focuses on the improvement of 1.9 million teachers' capacity and skills. According to the framework, the education outcomes of Pakistani children as measured through a sample-based National Assessment Test (NAT) 2014 show that children perform far below the required national standards in all provinces and do not achieve minimum mastery of mathematics, reading, and language[17]. According to the framework, there are differences in learning outcomes among children of three types of schools with students in private schools getting higher scores. Based on this result, the framework maintains that differences in learning outcomes among children are closely related to the differences in teaching skills of teachers in the respective types of schools, which results in disparities in the quality of the instruction in the classroom[18].

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aged children (5-16 years) based on the 1998 census minus number of children of that age bracket who are enrolled in a school regardless of school level and system (public, private or madrassa). However, according to the present survey, a lot of educational administrators and others, including even staff of AEPAM in charge of education statistics, question the accuracy of the calculated number of OOSC because it depends on the results of census conducted over 20 years ago and the number of students of private schools and madrassa is estimated on the basis of past trends (i.e. a large number of private schools and madrassa are not officially registered.)

[13] Pakistan Education Statistics (2016/17), cited in National Education Policy 2018.

[14] Alif Ailaan calculation based on NEMIS 2012-13 and Population Projection by NIPS, cited in National Education Policy Framework 2018.

[15] National Education Policy Framework 2018. P.3.

[16] Alif Ailaan and SAHE. 2016. *Who gets the good jobs? Educational experiences that result in economic and social mobility*. Cited in National Education Policy Framework 2018.

[17] As an example of the results of the 2014/2015 National Achievement Test (NAT), Grade 8 students in Pakistan who achieved the levels of "Below basic" and "Basic" in "Urdu writing" account for 65% and 33%, respectively. In the same test of "Mathematics", Grade 8 students in Pakistan achieved the level of "Below basic" with 32% and "Basic" with 52%.

[18] As to this suggestion, National Education Framework 2018 does not provide any specific data on the learning outcomes of children by school type.

**Table 1-2 Summary of Education Challenge in Primary and Secondary Education
(Grade 1 to 10) in National Education Policy Framework**

Out of School Children	Uniform Education System	Quality
· Low and inequitable access and participation · High levels of poverty in certain disadvantaged areas resulting in high OOSC · Limited investments in early childhood education resulting in high dropout in early grades · Low quality of non-formal and accelerated learning programmes	· Lack of coordination in policy formulation and implementation across the country · Lack of coherence and coordination in curriculum framework, textbooks and exam systems · Discrepancies in systems of schools, that is across public, private, and madrassa education systems · Variation in management of school systems	· Low student learning outcomes · Poor teacher quality and accountability · Lack of school leadership-school principals/head and teachers · Poor school environment: multi-grade teaching, limited facilities in schools and poor infrastructure · Inadequate use of student learning outcome data to inform policy making

Source: National Education Framework 2018

Based on the education challenges identified above, the MoFEPT has selected four major policy priorities in the National Education Policy Framework 2018 as shown below. These four follow the priorities set out in NEP 2009.

> Priority 1: Decrease OOSC and Increase School Completion
> Priority 2: Uniformity in Education Standards
> Priority 3: Improve the Quality of Education
> Priority 4: Enhance Access to and Relevance of Skills Training

In each of the priorities, the framework describes: 1) why and 2) how. The summary of the Priority 1, which focuses on access to school education, is shown in the table below.

Table 1-3 Summary of Priority 1 in National Education Policy Framework 2018

	Priority 1
Why	· OOSC concentrate more in rural areas and at the middle/secondary level due to a lack of schools/distance to a school. · Poor families cannot afford to send their children, specifically girls, to middle/high schools which are located far. · Lack of quality public schools and low teacher presence in schools in rural areas also results in a low utilization of existing school facilities.

How	· Identify the disadvantaged districts with the highest number of OOSC through existing data/survey results.
	· Undertake possible interventions:
	  - Infrastructure
	  - Removing financial barriers
	  - Innovative Solutions
	  - Non-formal Programmes
	  - Use of Technology

Source: National Education Policy Framework 2018

(4) Sustainable Development Goal 4

The Government of Pakistan intends to meet Sustainable Development Goals (SDGs). With regard to Goal 4 particularly, it aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all citizens through tangible improvements in education. In order to achieve SDGs, Ministry of Planning, Development, and Reform, was appointed as the focal ministry at the federal level[19]. Based on the national priority targets and

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[19] Pakistan Economic Survey 2018-19.

indicators determined for Goal 4 of SDGs, the government has set up targets by 2030, based on the result of the national baseline survey conducted in 2014/2015, as shown in the table below.

Table 1-4 SDGs National Framework for Goal 4

National Priority targets	National Primary SDG Indicators	National Baseline 2014-15	Targets by 2030
By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes	Proportion of children and young people: (a) in grades 2/3;(b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex	Total=57% Girls=53% Boys=60%	Total=100% Girls=100% Boys=100%
By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with dis abilities, indigenous people and children in vulnerable situations	Parity indices (F/M, rural/urban, bottom/top wealth quintile, and others such as disability status, indigenous people, and conflict affected, as data become available) for all education indicators on this list that can be disaggregated	Gender Parity Index (GPI) in primary=0.87	GPI in primary=1.0
By 2030 ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy	Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex	Total=60.0% Female=49.0% Male=70.0%	Total=80.0% Female=69.0% Male=90.0%
Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	Proportion of schools with access to: (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e)basic drinking water; (f) single sex basic sanitation facilities; and (g) basic hand washing facilities	Primary School Infrastructure: Electricity: 53.0% Drinking Water: 67.0% Sanitation=67.0%	Primary School Infrastructure: Electricity: 53.0% [20] Drinking Water: 67.0% [21] Sanitation=67.0% [22]
By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states	Proportion of teachers in: (a) pre-primary; (b) primary; (c) lower secondary (middle); (d) upper secondary (high/higher secondary) education who have received at least the minimum organized teacher training (e.g. pedagogical training) pre-service or in-service required for teaching at the relevant level	-	-

Source: Pakistan Economic Survey 2018-19

1.2.2 Non-formal education

At the time of this survey, a national policy dedicated to NFE has not been established yet. According to the policy documents elaborated in the past decades, the Government of Pakistan

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[20] This figure seems wrong as it is the same as the figure of National Base-line 2014/2015.
[21] This figure seems wrong as it is the same as the figure of National Base-line 2014/2015.
[22] This figure seems wrong as it is the same as the figure of National Base-line 2014/2015.

has had different perspectives of NFE subsector in different periods. National Education Policy 1998-2010 expected NFE's brilliant future, claiming, "The non-formal education is now receiving a growing awareness and acceptance as a dominant approach to education in the future [23]" and advocated non-formal basic education (NFBE) to accelerate universal access to primary education. Afterwards, National Education Policy 2009 gave the principal focus to adult literacy without mentioning much about NFBE. More recently, Draft NEP 2017, while its status is still a draft, gives NFE approach a crucial role to provide basic education for millions of OOSC and youth because formal education alone cannot reach out to them.

The followings present the recent and current national policies with regard to NFE subsector.

(1) Constitution of the Islamic Republic of Pakistan

Article 37-(b) of the Constitution stipulates that the state of Pakistan shall "remove illiteracy and provide free and compulsory secondary education within minimum possible period". This is the fundamental legal grounds for the Government of Pakistan to provide the entire nation with literacy education.

As for NFBE for children, considering the existence of more than 20 million of OOSC in the country, Article 25A recognizing access to free and compulsory education as a fundamental right of all children of age 5 to 16 years requires the State to provide NFE in parallel with a formal one.

(2) Literacy Act 1985

Although the Literacy Act was passed by the Parliament in 1985, the Government has not notified its date of enforcement since then. The Act was supposed to make literacy mandatory for certain privileges including, employment, driving and arms licenses, passports, etc., what was expected to serve as an incentive for acquiring literacy skill.

(3) National Education Policy 2009

The NEP 2009 gives a section "5.4 Literacy and Non-Formal Learning" in its "Chapter 5 Broadening the Base and Achieving Access". This policy document, while considering that literacy programmes generally cover adults and young people being out of school, describes that non-formal learning (not *non-formal education*) includes on-the-job learning that "may not have raising literacy levels as its principal objective [24]". In this manner, though there are few mentions on NFBE, basically NEP 2009 does not consider NFE as an essential means to deliver basic education for OOSC. Pointing out four main difficulties in the subsector, namely poor quality of programmes, lack of certification and accreditation regime, limited linkage with employment, and question to its effectiveness, NEP 2009 sets the following 15 policy actions to resolve them:

- Increase literacy rate up to 86% by 2015

- Strengthen organizational structure and coordination, and enhance budget allocation

- Develop a national literacy curriculum, instructional materials and teacher training modules

- Develop minimum quality standards and a certification and accreditation regime

- Develop a system of equivalency to mainstream students into regular education system

- Allocate a minimum of 4% of education budget

- Develop linkages non-formal education to industry and internship programmes

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[23] National Education Policy 1988-2010, Ministry of Education, p.19.
[24] National Education Policy 2009, p.30

- Establish linkages between schools and vocational/skills training centres

- Bring child labourers within the ambit of non-formal education system

- Expand National Education Foundation (NEF) programmes up to grade 10

- Introduce special skills programmes and educational stipends targeting older child labourers

- Enable to use school buildings for adult literacy

- Develop guidelines for post-programme initiatives

- Ensure appropriate training for teachers for adult learners and non-formal education

- Mobilize international development partners, community and private sector

(4) Draft National Education Plan 2017-2025

Though NEP 2017 has not been officially approved, its draft is uploaded on the MoFEPT's Website. Unlike the previous national policy, Draft NEP 2017 devotes one chapter to Literacy and Non-Formal Basic Education. Citing the definition of a literate person approved by the Policy and Planning Wing of the Ministry of Education in 2008 among others, that is "A person who can read and write a paragraph in any language with understanding and can make simple calculations", Draft NEP 2017 emphasizes the importance of literacy as economic, occupational, social and political exigencies of individuals. As an explicit difference from NEP 2009, non-formal education approach is taken to be a viable strategy for enabling Pakistan to offer basic education opportunities to its 22.5 million OOSC. It argues,

> Inability of the formal education system to reach out to all segments of population has necessitated alternate learning models for those children and youth who were excluded, missed, or dropped out for various reasons[25].

The targets set by Draft NEP 2017 are as follows:

- To achieve 90% literacy by 2025 in accordance with Pakistan Vision 2025, enabling Pakistan to achieve SDG 4 Target of 100% literacy rate by 2030

- To contribute for provision of non-formal learning opportunities to 22.64 million out of school and dropped out children of age 5 to 16 years.

In order to bridge the gaps related to commitment, organization, coordination, finance, technical capacity and consistency, Draft NEP 2017 sets 42 policy actions concerning access; quality; organization, management, and governance; resource mobilization; and monitoring and evaluation (including database).

(5) National Education Policy Framework 2018

In the National Education Policy Framework 2018, the top strategic priority is to "decrease out-of-school children (OOSC) and increase school participation." Among the key actions proposed as interventions based on the research findings, the following three are particularly related to non-formal education sub-sector:

- Integration of basic skills programmes with non-formal programmes (as an innovative solution)

- Restructure and improve existing programmes to deliver Non-Formal Education and Accelerated Learning Programmes in target areas

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[25] Draft NEP 2017, p. 35

- Community mobilization for bringing OOSC in schools, increased school enrolment and retention

1.2.3 Technical and vocational education and training

First of all, it should be commonly understood that TVET sector is going through a major reform started in 2011 through TVET Reform Support Programme (2011-2016) with assistance from EU、 Government of Germany, Government of Netherland and Government of Norway and TVET Sector Support Programme (2017-2021)[26] with continued assistance from EU, the Government of Germany and the Government of Norway but without the Government of Netherland. In this situation, various documents related to TVET policies have been prepared, outlines of which are summarized below.

(1) National Skills Strategy 2009-2013 (NAVTEC)

The National Skills Strategy 2009-2013 was developed by the National Vocational and Technical Education Commission (NAVTEC) that was established in 2006 (became NAVTTC in 2011). This document summarizes upcoming TVET sector reform at that time. Accordingly, projects titled TVET Reform Support Programme (TRSP) and TVET Sector Support Programme (TSSP) were initiated in 2011 with partnership with development partners stated above. German Society for International Cooperation (GIZ), Germany Government Aid Agency, is the main partner in the implementation.

The document states the following issues:

- Pakistan has fallen behind in the area of TVET internationally and regionally,

- There is a large gap between expected number to be trained and current enrollment in TVET,

- There are mismatches between skills needs from local industry and available training,

- There is emerging demographic trends of increasing youth population who will enter labour market

- Oversees remittances represents a significant source of foreign exchange earnings, but most of them are semi-skilled or unskilled workers

- International competitiveness of Pakistan industry is not very high.

To address these issues, it emphasizes overall needs to be competitive globally, to increase the efficiency of the domestic industry, to support enhancement of foreign remittances, to provide employable skills to people in the context of a growing population and to ensure access to new career opportunities.

Accordingly, it proposes three objectives and strategic activities as follows:

Objective 1: Providing Relevant Skills for Industrial & Economic Development

- Introducing competency-based training

- Establishing industry specific Centres of Excellence

- Increasing the role of the private sector

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[26] https://tvetreform.org.pk/tvet-reform-support-programme/

- Reforming the apprenticeship system
- Encouraging entrepreneurship

Objective 2: Improving Access, Equity and Employability

- Expanding geographical provision
- Making training delivery flexible
- Focusing on skills for women
- Training for disadvantaged groups
- Integrating informal economy workers
- Enhancing the mobility of skilled workers
- Providing career guidance and placement services
- Offering vocational education in schools
- Improving the status of skills development

Objective 3: Assuring Quality

- Streamlining policymaking
- Establishing a National Qualifications Framework
- Registering and accrediting institutes
- Reforming the management of training institutes
- Training of Trainers
- Undertaking research

(2) Skills for Growth & Development – A Technical and Vocational Education and Training (TVET) Policy for Pakistan, 2015 (MoFEPT)

Skills for Growth & Development – A Technical and Vocational Education and Training (TVET) Policy for Pakistan is published by the Ministry of Federal Education and Professional Training (MoFEPT) and NAVTEC in 2015. This document was prepared after TVET Reform Support Programme started off. It refers to the reform and National Skills Strategy 2009. This policy document is based on the following eight objectives:

- To secure a national commitment to the importance of skills development for achieving sustained economic growth, to increase productivity and provide people with opportunities for contributing to the economy, particularly under privileged segments of society focusing on the youth employment;

- To increase the number and quality of training opportunities so that, at least one million are trained each year. Such expansion will not be achieved by the public sector alone, active engagement of private sector and development partners will be required;

- To introduce a national standards-based qualification, assessment and certification system;

- To design and deliver competence-based education and training programmes for concentrating on the skills required to secure jobs;

- To forge new partnerships between the public and private sectors and encourage employers

towards providing direct training and contributing to the reform of public TVET provision;

- To maintain and expand the export of labour by encouraging people towards obtaining internationally recognized qualifications;

- To encourage linkages with informal sector of the economy by providing people with opportunities to gain formal qualifications for the skills acquired through informal means;

- To continue the reform and revitalization of the public TVET sector.

And demarcation between Federal and Provincial roles are shown in four areas, namely, policy, regulation, funding and delivery as shown in a table below. The issue of demarcation in line with the devolution policy under 18th constitutional amendment is mentioned in some reports and this may be trying to clarify that.

Table 1-5 Demarcation of Responsibilities and Functions between Federal and Provincial Government, TVET Policy (2015)

	Provincial Role	Federal Role	Comment and implications
Policy	• Identification of issues and inputs to national policy • Responsible for jurisdiction-based policy, plus application of national policy within provincial economic contexts and priorities	• National leadership and primary location for policy determination • Identify national priorities • Ensure policy agreed with and applicable to provinces	• Essential that both levels of government are involved and agree national policy
Regulation	• Provide input into national standards and share authorisation of those standards • Apply standards to their own jurisdiction using institutions with delegated national regulatory authority • Collaborate with national body to audit compliance and performance of bodies with delegated regulatory responsibility	• Development of national standards with input from all stakeholders • Application of standards nationally overseen • Delegation of most regulatory activity to provinces under agreed conditions • Responsible for maintaining quality and national consistency through audits in collaboration with provinces	• Federal and provincial governments share responsibility for national standards and cooperate in regulation • Audit role critical and has to be shared with provinces so problems are recognized and fixed
Funding	• Determine budget and fund regulatory bodies and publicly owned TVET organizations (e.g. Institutes) within their jurisdiction • Fund agreed national priorities with support from federal government, plus province specific funding of local priority area	• Determine budget and fund national and federal organizations. Advocacy for increased budget allocations. • Identify and agree national priori- ties in conjunction with stakeholders, plus determine budget and fund national priorities	• Both levels of government fund and support training • Primary support is within own jurisdiction • Federal government supports national priorities by providing targeted funding to provinces
Delivery	• Responsible for application of TVET standards both under national delegation and through owned institutes • Contract third-party private training organizations to provide training	• Responsible for direct application of standards for TVET in federal juris- diction. Delivery of training through federally-owned institutes • Operation of some services to support development of national TVET system	• There is scope for the development of cost-effective national services to support TVET throughout the country. These might include training of trainers, training of assessors and recognition of prior learning assessments

Source: Skills for Growth & Development – A Technical and Vocational Education and Training (TVET) Policy for Pakistan

(3) National "Skills for All" Strategy – A Roadmap for Skill Development in Pakistan (MoFEPT)

National "Skills for All" Strategy – A Roadmap for Skill Development in Pakistan was published by MoFEPT in 2018. In an interview session of this survey on 3 February 2020, Secretary of MoFEPT confirmed that this should be the policy document to be referred to by stakeholders. In the policy documents, the following eight key areas are identified as required urgent intervention to deal with the confronted challenges:

1. Governance-Roles clearly defined

   - Delineating Roles for Federal and Provincial Governments

   - Defining Functional Roles of Federal Government

2. Multi-Source Funding

   - Exploring broader financial space for TVET funding

3. Capacity Enhancement

   - Optimum Utilization of Existing Resources

   - TVET Sector Capacity Enhancement

4. Improving Quality Assurance

   - High quality TVET output for increased youth employability, industrial productivity and economic growth

5. Greater Access and Equity

   - Maximizing female participation in TVET sector

6. Increased Industry engagement

   - Increase industry ownership for capacity enhancement, quality assurance and greater employability

7. Focused Skill Development for International Market

   - Enhancing labour force for increased remittances

   - Shifting to export of high-skilled workforce

8. Viable Communication Plan for TVET Image Building

   - Enhance TVET Image/awareness for greater youth attraction

Mandate between Federal and Provincial governments are described in the table below based on the one shown in the TVET Policy 2015 outlined in the previous section.

Table 1-6 Mandate between Federal and Provincial Government, National "Skills for All" Strategy (2018)

Areas	Provincial Role	Federal Role
Regulatory	• National curricula standards with input from all stakeholders. • Quality Assurance Standards for delivery • Licensing & Accreditation Standards • Testing & Certification Standards	• Provide input into national standards and share authorization of those standards. • Apply standards in jurisdictions using institutions with delegated national regulatory authority. • Collaborate with national body to audit compliance and performance in line with Quality Assurance standards
Policy	• Identify national priorities supporting the economic and social landscape of the	• Responsible for jurisdiction-based policy, plus application of national policy within the economic

	country • Policy determination, guidance and coordination with provinces to achieve national and provincial goals.	context and priorities of provinces
Funding	• Determine budget and fund national and federal organizations. • Advocacy for increased budgetary allocations • Develop ways to raise non-public funding for skills	• Determine budgets and allocate finds to meet national and provincial skills goals • Determine budget and fund regulatory bodies and publicly owned TVET organizations (e.g. institutes) within provinces • Develop ways to raise non-public funding for skills

Source: MoFEPT. (2015). *National "Skills for All" Strategy: A Roadmap for Skill Development in Pakistan*

(4) Other related policies and plans

1) Human Resource Development in Technical & Vocational Education & Training – Policy Paper, 2012

Human Resource Development in Technical & Vocational Education & Training, Policy Paper, 2012 was developed under TVET Reform Support Programme with assistance of GIZ.

Based on the observation that there is not pre-service teacher/instructor human resource development in real term and they mainly rely on pre-service type of development, four policy recommendations are made as follows:

1. Strengthening in-service training

2. Development of postgraduate study for bachelor of technical education

3. Development of master in technical education

4. Utilization of apprenticeship training

Policies in the areas where JICA has made interventions in human resources development recently are briefed below.

2) Textile Policy, 2014-2019

Ministry of Textile, currently merged with Ministry of Commerce, formulated the Textile Policy, 2014-2019. The Policy addresses enhancement of export of value-added textile products. To realized that, it covers all areas for policy intervention that includes vocational training. The term of the Policy is over now, and currently succeeding policy has been drafted and is going through approval procedure. According to local media dated 14 March[27], Prime Minister approved the draft policy in principle, and it will be processed to the Federal Cabinet for approval. It also describes that the new policy targets to achieve USD 28 billion textile export in five years by 2025. The reason for prioritization of textile industry is that Pakistan is one of the few countries having complete textile value chain from cotton plantation to final products and the textile sector is also the biggest employment generator in the country especially garment sub-sector. The draft new policy states that TVET as human resources development programme for employment generation, private institutes will be incentivized. Restriction on female employees for 3rd shift (night shift) will be removed. A new TVET programme will be launched to train 120,000 men and women with monthly stipends during the training, trainers' salary costs over five years for skills required in the textile sector, especially in value-added skills.

3) Automotive Development Policy, 2016-2021

Engineering Development Board under Ministry of Industry developed Automotive Development

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[27] https://www.thenews.com.pk/print/628909-textile-policy-2020-25-pm-approves-textile-export-target-of-28-bn-in-five-years-in-principle

Policy, 2016 – 2021. It points out the issue of absence of regulation in safety and environmental protection. It affects required skills standard for both manufacturing and auto services and maintenance. Although it does not directly address human resources development for auto industry, once Pakistan adopts international technical standards as proposed in the Policy, competencies in relevant curriculum of TVET courses automatically become much clearer.

4) **National Transport Policy of Pakistan**

National Transport Policy of Pakistan was developed by Ministry of Planning, Development and Reform with assistance from World Bank and ADB. It covers road transport regulation of which is mandate of the Ministry of Communications. Construction Technology Training Institute was established under the Ministry to produce technical human resources for road construction and is still operating as a TVET institute. However, the latest policy document does not refer to human resources development for construction and maintenance of transport infrastructure of the nation.

1.3 Provincial Education Policy and Plans

1.3.1 Islamabad Capital Territory (ICT)

(1) **School Education (Basic Education)**

School and college education from preprimary to higher level in ICT accommodating 423 public educational institutions is under the jurisdiction of the Federal Directorate of Education (FDE) which are an attached department of the MoFEPT. In accordance with the devolution policy after the 18th constitutional amendment, the then Ministry of Education was once demolished and reestablished as Ministry of Education and Training in 2012 (now it is named Ministry of Federal Education and Professional Training). Though FDE continued its function by being attached to the capital administration even during the absence of the federal ministry in charge of education, the fact that the principal actors of educational provision have shifted to the "provincial" departments affected adversely the FDE's capacity to provide quality education for children and youth in ICT. As a consequence, for about a decade since the devolution, FDE has been always occupied with immediate problems and unable to elaborate proper policy for educational development, according to the Director General of FDE[28].

At the time of the present survey, FDE was in the process of restructuring and thus improvement. Though a Joint Secretary of MoFEPT serves concurrently as Director General of FDE, a new dedicated DG will be appointed shortly according to him. They have a plan to reestablish, during the coming summer holidays from June to August, a "formalized teacher training institution" which was virtually missing during the last decade as the Federal College of Education was totally dependent on University of the Punjab. The FDE recognizes the negative influence of the lack of teacher training on the quality of teaching and thus students' learning achievement. They will also establish 50 more schools, which did not happen in the past ten years.

(2) **NFE**

ICT and Federal Areas do not have a policy for non-formal education at the time of this survey. It is in the process of formulation with the assistance of JICA's Advancing Quality Alternative Learning Project (AQAL Project).

Even though NFE is not mandatory for FDE in a proper sense, the Directorate is providing Accelerated Learning Programme (ALP) for OOSC in 62 formal schools, which is one of the NFE

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[28] According to the interview with the Director General of FDE on 4 March 2020.

programmes using a curriculum equivalent to formal primary education, developed in AQAL Project. It is carried out under the framework of FDE's schooling campaign. Thus, the learners are supposed to be mainstreamed to the formal education path after completion of ALP. In this campaign, with technical assistance of AQAL Project regarding the survey method, FDE conducted a door-to-door data collection throughout ICT in cooperation with volunteers in January 2019. 11 thousand OOSC out of the estimated 30 thousand were identified, and about 7 of them were successfully enrolled in schools[29]. The programme is currently provided on a pilot basis and there is a plan for further expansion to be carried out if it bears good results in the assessment.

(3) TVET

Skills for Growth & Development – A Technical and Vocational Education and Training (TVET) Policy for Pakistan (MoFEPT) states that NAVTTC directly administers TVET in ICT. Therefore, federal policies should be applied in ICT.

1.3.2 Punjab Province

(1) School Education (Basic Education)

1) Outline of Punjab School Education Sector Plan (2013-2017)

After the devolution in 2010, the Punjab Government developed Punjab School Education Sector Plan (PSESP) 2013-2017. The plan was developed to implement the school education reforms which aimed at improving access, quality, and governance of education in Punjab. It is designed within the framework of the Chief Minister's Roadmap and initiatives, such as Punjab Education Sector Reform Project. In 2018, The New Deal 2018-2023 Transforming School Education in The Punjab was launched, outlining goals to improve students' enrollment and completion, learning, and governance of the sector.

The strategic framework of the PSESP addresses challenges of the education sector with a three-pronged multi-faceted approach. The first challenge is to achieve Article 25A that is free and compulsory education for all children aged 5 to 16 years. The second one is to develop strategies to bring improvement in cross-cutting areas of quality in terms of inputs, processes, and outcomes; relevance; access; equity; and governance. The third one is to explore the potential roles and capacity of the public sector, private sector, and Public Private Partnership (PPP) and develop the minimum uniform standards applicable to public and private sector schools.

2) Specific strategies / initiatives focused on girls in PSESP[30]:

Stipends for female students from Grade 6 to 10
Provision of stipends (PKR200 per month) for girls in middle and high schools in the poorest 16 districts
- Figures for 2013-14 show that stipends were distributed to 411,000 girls
- In 2014-15, piloting of differing stipend amounts took place based on treatment and control groups; results are not publicly available.

Recruitment of female teachers
To promote access of girls to school, additional female teachers are recruited, based on demand for female teachers.

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[29] According to Facebook site of FDE (https://www.facebook.com/pg/FDE.gov.pk/)
[30] This section titled "Specific strategies/initiatives girls in PSESP" is referred to Semiotics Survey Results.

- The plan outlines the requirement of teachers (male and female) during 2013 and 2018: 30,000 teachers for new schools are to be recruited; 98,144 additional teachers for existing schools; and 5,000 new head teachers.
- A merit-based recruitment[31] policy (2013) was implemented, through which 29,822 new teachers (male and female) were to be hired. The Recruitment Policy 2016 indicates that Chief Minister has approved the recruitment of 31,444 posts.

Provision of secondary education for girls
- Through construction of new schools

3) Implementation of the PSESP (2013-2017)

Since no monitoring and evaluation report on the implementation of the PSEP is available, it is not certain whether or not each of the strategies mentioned above was properly implemented. Due to a lack of relevant data indicating changes/improvements in gender-wise enrollment rates in middle and high schools, it is also difficult to assess the impact or usefulness of the stipend for girl students enrolled in middle and high schools, female teachers' recruitment, and school construction on the enrollment of girls in middle and high schools.

However, the Punjab Education Sector Plan (PESP) 2019/20-2023/24, a subsequent plan of the PSESP states that gender disparity in enrollment rates still exist in Punjab, especially after middle-level education and in the southern part of the Province. According to this new plan, basic infrastructure of public schools in Punjab has improved as 95% of public schools have toilets, boundary walls, electricity, and running water. It also shows that Net Enrollment Rate (NER) in middle school (Grade 6 to 8) remains stagnant, compared between 37% in 2012 and 38% in 2018, and that of high school (Grade 9 to 10) improved slightly from 25% in 2012 to 29% in 2018. Gender Parity Index (GPI) in the enrollment of boys and girls for middle school-level and that for high school-level is 0.90 and 0.84, respectively. As a result, gender disparities in access to middle and high school-level education is still one of the challenges faced by Punjab.

4) Outline of Punjab Education Sector Plan 2019/20–2023/24

As a subsequent plan of the PSESP 2013-2017, PESP 2019/20–2023/24 has just been released. Based on the education sector analysis, this new plan identifies the three strategic areas and priority programmes, as shown in the table below:

Table 1-7 PESP 2019/20–2023/24 Strategic Area and Priority Programmes

	Strategic Area	Priority Programmes	Focus of the Programmes
1	Quality and learning outcomes	Improve teaching and learning practices for better learning outcomes	Teacher training, quality teaching and learning materials, learning assessments, critical thinking, etc.
2	Access, retention, and equity	Provide adequate and sufficient access to education for children from pre-primary to secondary, including marginalized and children with special needs	Increase access and retention from ECE to post-secondary education, increase provision of functional and adequate basic school facilities, including disability-friendly infrastructure in all schools, etc.
		Promote quality education in a safe, inclusive and conducive learning environment for children	Promotion of safe, clean, green, healthy and hygienic physical environment, safe and protective behavioral practices, and an enabling environment for children with special needs

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[31] A merit-based recruitment means recruitment of teachers based on the performance/result of recruitment exams, not based on political influence or connections with local politicians, bureaucrats, and so on.

| 3 | Governance and management | Strengthen good governance of the education sector for equitable access and high-quality education | Strengthened governance and coordination frameworks within the public education system, other line departments and with private providers, enhanced planning, monitoring & evaluation across all levels for evidence-based decision-making, improved financial planning and management |
| | | Promote effective leadership and management of the education sector for better service delivery | Empowering and enabling local bodies, district officials, and school communities to improve schooling inputs, outputs, and outcomes |

Source: Punjab Education Sector Plan 2019/20-2023/24.

(2) NFE

Punjab Literacy & Non-Formal Education Policy, 2019 has been formulated as "the first ever policy for the province of Punjab, since establishment of the Literacy & Non-formal Basic Education (L&NFBE) Department in 2020.[32]" Its purpose is "to chart out a provincial strategy for guiding NFE development in Punjab with the aim to promote and enhance long-lasting qualitative literacy practices among children, youth, adults and persons with learning difficulties.[33]" Setting increasing access through and nurturing quality of NFE as overarching priorities, it determines the following policy actions:

[Pertaining to Access]

• Affirmation of the Government of Punjab through the School Education Department (SED) about achievement of the universal primary education by 2020 and zero drop-out till completion of Grade 5 by 2025

• Development of plans to achieve these targets including estimation of required resources by L&NFBE Department and SED in coordination with Planning and Development Department

• Social mobilization campaign through various media and evolution of Village Education Committees

• Each-one-teach-one programme by universities approached through Higher Education Commission

[Pertaining to Quality]

• Special measures to ensure inclusion of OOSC, youth and adults in mainstream education and literacy, and customized TVET programmes

• Determination of standards for NFE inputs, process and outputs

• Establishment of monitoring and inspection system

• Development of centres for lifelong education and offer of degree programme in NFE in universities

Apart from those policy actions for overarching priorities, the Literacy & NFE Policy determines a wide range of policy actions related to institutional development and strengthening of L&NFBE Department, Resource mobilization, good governance, promotion of public-private partnership (PPP), human resource development, expansion of literacy and basic education, use of information and communication technology, matching with the labour market, teachers quality improvement, curriculum and assessment, etc.

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[32] Government of the Punjab. (2019). *Punjab Literacy & Non-Formal Education Policy*, Forward.
[33] ibid, p.1

(3) TVET

1）Punjab Growth Strategy 2018

Punjab Provincial Government published the Punjab Growth Strategy 2018 in 2015 to complement Pakistan Vision 2025 that shares the supreme direction of the national development with the following target indicators:

1. Achieving 8% economic growth (real Gross Rating Point (GRP) growth rate) in Punjab by 2018

2. Increasing annual private sector investment in Punjab to USD 17.5 billion by 2018

3. Creating 1 million quality jobs every year in Punjab

4. Training 2 million skills graduates in Punjab by 2018

5. Increasing Punjab's exports by 15% every year till 2018

6. Achieving all Millennium Development Goals and targeted Sustainable Development Goals in Punjab by 2018

7. Narrowing security gap with regional neighbours such as India and Bangladesh by reducing crime and improving law and order in Punjab

Emphasis is on economic development through quality jobs provided by skilled workers. In a section with the title "Special Focus on Garments Industry", the garment sub-sector is stressed as has been given the highest priority in industrial development. The main reason for that is that Pakistan is among the top five cotton producers in the global market accounting for about 10% of the total world production of cotton, that puts Pakistan in much better place than many other countries. It also highlights that garments manufacturing is highly labour-intensive and least capital-intensive, hence having great potential for creating employments. As other potential export-oriented sub-sectors, sports goods, surgical goods and light engineering are mentioned in the last paragraph of the same section of the document. In addition, the document refers to productivity improvement of agriculture sector in Chapter 6 and focusing on livestock and dairy product in Chapter 7 as well.

'Chapter 4: Skills, Human Capital and Job Creation: Punjab's Skills Strategy' states the following three strands of strategies:

4.1 Strand I: Expanding the Supply of Demand-Relevant, High Quality Skills Training Opportunities

4.2 Strand II: Improving Access to Skills Training Opportunities

4.3 Strand III: Strengthening Linkages of Training with Jobs and Markets

The Growth Strategy refers to proposed institutional reforms. There is a sentence stating, "We will seek to unbundle TEVTA's regulatory role. [TEVTA stands for Technical Education and Vocational Training Authority]" which coincides with current activities to establish of Punjab Skills Development Authority (PSDA). This is initiative based on analysis that "a fragmented institutional framework at the Provincial level for policymaking, implementation and financing of skills development reduces the effectiveness of skills as a path to" achieving high human capital. All public sector skills initiatives will report to a newly created PSDA, which is mandated:

- To create medium-term strategic and implementation plans for skills development in Punjab;

- To put in place results and monitoring and evaluation frameworks for outcome-based delivery;

- To create an institutional basis for performance and outcome-based financing and competitive tendering; and

- To introduce mechanisms that achieve critical coordination for implementation that involves the private and public sectors and external stakeholders.

2) Punjab Skills Development Sector Plan 2018

Punjab Skills Development Sector Plan 2018 is developed to elaborate more detailed and concrete strategic actions.

As first of three proposed programmatic interventions, there are initiatives described including the following in "4.1 Strand I: Expanding the Supply of Demand-Relevant, High Quality Skills Training Opportunities":

- Development of Industry Sector Skills Council that directly involve employers in designing competency standards and training programmes;

- Development of capacity of public sector institutions (TEVTA and PVTC) to manage performance-based grants and track outcomes;

- Leverage of PSDF financing to private institutions to streamline performance-based grant funding mechanisms.

In "4.2 Strand II: Improving Access to Skills Training Opportunities", it states that priority target group for the Skills Development Sector Plan is set for young adults (15-29 years), and within these group individuals with: (a) poor education will be the priority group for vocational training; and (b) high school education will be the priority group for technical education. The Sector Plan should be inclusive of young women, low income individuals and high poverty districts in proportion to their share in Punjab's population. Because the educational qualifications required by formal training institutes under the departments are barriers to entry by excluding majority of potential trainees, the rules and regulations shall be relaxed to attract a larger pool of trainees. There will be initiative to broaden skills training menu to include trades relevant to the less educated population with cognitive skills (functional numeracy and literacy) and non-cognitive skills (teamwork, professionalism).

In "4.3 Strand III: Strengthening Linkages of Training with Jobs and Markets", it states to the following models of job linkages:

(i) Skills training based at employers;

(ii) Dedicated cluster-based training;

(iii) Complementing in-class training with on-the-job training;

(iv) Establishing a dedicated employment registry with an effective mechanism for transmitting information on job openings and worker characteristics between employers and jobseekers.

Training and labour force participation for women is also emphasized by stating that the shortage of local employment opportunities for women and an employer bias against employing them are two important factors reducing their labour force participation. It points out the need of a strong case for complementing investment in skills training with active labour market programmes that create local jobs for women.

Institutional reform is also proposed based on analysis that the current administrative departments which control their respective training institutions with little or even no

coordination among themselves results in efficiency losses. The following figure shows the figure presented in the Plan. *"Agency"* in the figure positioned in the very top seems to be the new organizations now given the name of "Punjab Skills Development Authority" which was promulgated by Punjab Skills Development Authority Act 2019 described later. In the Act, it stipulates that the Minister for Industry, Commerce and Investment Department (ICID), Punjab shall be the Chairperson of the PSDA indicating that PSDA comes under the Department. The act does not explicitly refer to the Department of Zakat and Ushar. It may indicate PVTC is fully transferred to the ICID. Organizations in TVET sector in Punjab Province is elaborated in Chapter 2.
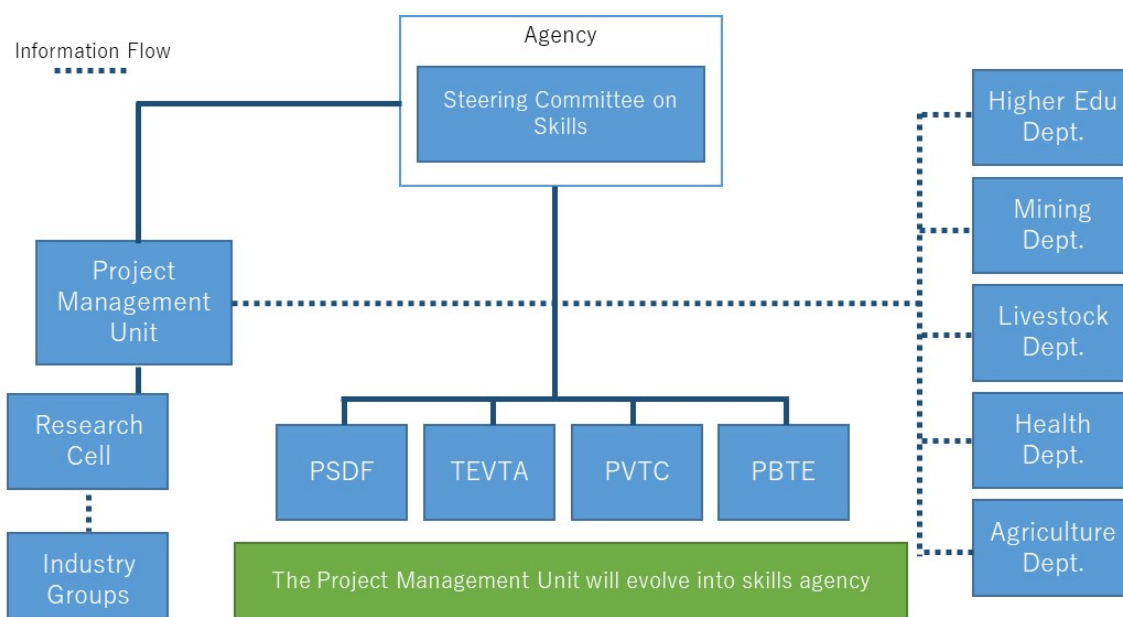
Source: Punjab Skills Development Sector Plan 2018, Government of Punjab
Figure 1-1 Proposed Institutional Structure for Implementation

1.3.3 Sindh Province

(1) School Education (Basic Education)

1) Outline of Sindh Education Sector Plan 2014-2018

Sindh Education Sector Plan (SESP) 2014-2018 was developed on a basis of four major pillars of Sindh Education Reform Plan. These pillars include: 1) access; 2) quality; 3) governance; and 4) public finance management. The Plan focuses on measures to improve access and learning for both girls and boys. As a subsequent plan of the SESP, School Education Sector Plan and Roadmap for Sindh (SESP&R) 2019-2024 has currently been released. Details of the new plan will be described after specific strategies for promoting girls' access to education in the SESP 2014-2018.

2) Specific strategies / initiatives focused on girls in SESP[34]:

Stipends to female students from Grade 6 to 10
Provision of stipends for girls in middle and high schools

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[34] This section titled "Specific strategies / initiatives focused on girls in SESP" is referred to Semiotics Survey Results.

- The purpose is to Increase Transition from Primary to Middle by 4-6% each year

- Target: stipends to all female students in public sector middle schools (Grades 6-8) with priority to under-served district

Recruitment of female teachers
To increase the number of female teachers at middle school level

Increase access at primary level – priority given to girls' schools
Countermeasures, such as the construction of additional classrooms and basic facilities and re-opening of viable closed schools, are to be taken in order to improve girls' NER for primary education:

- Targets: to increase primary NER to 77% by 2018 (from 61% in 2014); to build 45,475 additional classrooms; to provide 9,678 schools with electricity (40%), 6,920 schools with toilet facilities (40%), 20,346 with drinking water (100%), and 6,525 with boundary walls

Vouchers
To promote access of girls and boys, specifically from poor households.

- Target: to provide subsidy/vouchers to 280,204 students

To expand the provision of secondary and higher secondary education – priority to be given to girls' schools
To upgrade from middle to high schools; to construct basic facilities; to reopen viable closed schools; to develop a policy for opening higher-level schools; to identify underserved areas; to upgrade lab facilities in higher secondary schools; to construct boarding facilities for girls

- Target: to increase NER in secondary and higher secondary to 50% by 2018 (from 25% in 2014); to build an additional 20,445 classrooms; and to consolidate/upgrade 4,000 middle schools to high schools.

3) Implementation of the SESP (2014-2018)

Since no monitoring and evaluation report on the implementation of the SESP 2014-2018 was made by Sindh Education and Literacy Department of the Sindh Government, it is not certain whether or not each of the strategies mentioned above was properly implemented. As to the implementation of a part of the strategies, however, is described in an evaluation report for Global Partnership for Education (GPE). Through GPE, Sindh and Balochistan Provinces were supported in terms of policy making and some interventions to promote girls' education. Based on the evaluation report titled "Summative Evaluation of GPE's Country-level Support to Education", 108 one-room schools were merged with other schools and an additional 1,076 out of 4,123 schools previously identified as non-functional have been reopened. The report also states that stipends and free textbooks were received by 300 thousand girls enrolled in Grade 6 to 10 between 2013 and 2017.

Those efforts made through GPE, however, did not necessarily contribute to an improvement in the enrollment of girls in Sindh. The evaluation report states that girls enrolled in pre-primary to higher secondary public schools accounted for 40% of the total children enrolled and remain stagnant in 2017. According to the report, the SESP targeted 0.74 for GPI in primary enrollment, but actual measure for 2016/2017 was 0.62. In this light, gender disparities in terms of access to education is still prevalent in Sindh as stated in the SESP&R 2019-2024, a subsequent plan of the SESP 2014-2018.

4) **Outline of School Education Sector Plan and Roadmap for Sindh (2019-2024)**

As mentioned earlier, the Sindh Education and Literacy Department, in collaboration with UNICEF through GPE, has just released the School Education Sector Plan and Roadmap for Sindh (SESP&R) 2019-2024. This new plan identifies the following three key challenges, which is consistent with Goal 4 of SDGs that is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all:

- Equitable Access

- Quality and learning

- Governance and management

Based on these three topics, the new plan set up goals and objectives, as shown in the table below:

Table 1-8 Goals and Objectives of School Education Sector Plan and Roadmap for Sindh (2019-2024)

	Goals	Objectives
1	Equitable Access: Increase equitable enrollment and ensure retention for children and adolescents at all levels	Increase equitable access to formal education for OOSCs
		Increase equitable access to NFE programmes & create linkages with TVET for illiterate youths
		Expand provision of school infrastructure to meet evidence-based needs and ensure learning friendly environment
		Increase equitable enrollment and retention at all levels, especially for girls and marginalized children
2	Quality and learning: Improve capacity of quality delivery systems including: 1) merit-based teacher recruitment, teacher training, and professional development; 2) curriculum, textbook, and learning materials; and 3) student learning outcomes and quality assurance	Ensure merit-based recruitment of qualified teachers and support within well-resourced, efficient, and effectively governed systems
		Implement policy on cluster-based Continuous Professional Development (CPD) for teachers, head-teachers, and administrators [35]
		Improve formal and non-formal students curriculums with focus on local needs and global trends, inclusive education and life skills, gender equality, cultural diversity, and citizenship
		Improve provision of textbooks and learning materials based on the revised curriculum in appropriate languages
		Establish school specific student assessment and reporting system, and conduct quality assessment of class V & VIII students, and strengthen relevant departments/organizations' capacity for quality assessment of education in classrooms
3	Governance and management: More effective and accountable use of resources at all levels	Establish management mechanisms to strengthen performance and accountability
		Improve transparent and sustainable allocation and utilization of non-salary budget
		Improve organizational capacity and resources for integrated sector planning, including district planning, implementation and quality assurance through relevant departments/organizations

Source: School Education Sector Plan and Roadmap (2019-2024)

(2) **Non-Formal Education**

Education and Literacy Department (E&LD) of the provincial government of Sindh elaborated SESP 2014-18 which includes a chapter dedicated to Literacy and Non-Formal Basic Education

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[35] The policy documents related to the cluster-based CPD include School Clustering Policy/2016 (notified on July 14, 2016) and Guidelines of School Clustering Policy (notified on May 23, 2017). Moreover, the document entitled *Continuous Professional Development (CPD) Model* which Sindh Teacher Education Development Authority (STEDA) developed with USAID's assistance was often referred to as CPD Policy. The cluster-based CPD is a mechanism to improve capacity of teachers through regular peer-coaching among teachers under the guidance of experienced teachers called "guide teachers" within a group of neighboring schools (cluster).

(Chapter 8). Throughout this plan, the issue of low participation of rural girls in schooling (22% of primary school age girls ever attended school) and women's low literacy rate (68% of women aged 10 and over in urban area and 22% in rural area) are highlighted and therefore it commits to tackle "this inequity in the provision and participation in education as the most important cross-cutting theme in the sector.[36]" While setting the general target of net enrolment rate in primary education from 59% in 2014 to 77% in 2018 and that of literacy rate from 59% to 70% in the same time period, the sector plan provides the following objectives particularly related to NFBE and adult literacy programmes:

- Develop a comprehensive policy for NFBE and adult literacy programmes and explore innovative methods and strategies to reach the wider public, in particular women in rural Sindh, followed by the allocation of mainstreamed budget on a regular basis.

- Improve access to literacy and non-formal education especially for girls in rural areas.

- Improve the quality and relevance of learning through curriculum and learning materials development.

- Build the capacity of literacy and NFE teachers to contribute to improved learning outcomes on a continuous basis.

- Use innovative, technology based approaches for NFE, in partnership with the private sector.

- Develop an accreditation and certification mechanism for mainstreaming students from adult literacy programmes and NFBE programmes into the formal education system.

- Strengthen the management capacity of Directorate of Literacy and Non-formal and Basic Education (DL&NFBE) in developing, implementing, monitoring, and evaluating standards for processes and outcomes[37].

With AQAL Project's assistance, Sindh NFE policy & its implementation framework was developed and approved, jointly with United States Agency for International Development (USAID)'s Sindh Capacity Development Project (SCDP). Furthermore, NFE Act was drafted and sent to Law Department for weighting[38]. Sindh NFE Policy emphasizes that NFE does not replace but complements formal education for the common goal, having a feature of being flexible to respond the needs of beneficiaries in terms of educational contents and methods, which it not easy for the latter. The policy gives the following 15 objectives that NFE subsector should achieve:

[Objectives linked to overall education goals]

- Support in meeting the targets of Article 25A and 37 (b) of the Constitution, Sindh Education Sector Plan, and SDG 4.

- Institutional linkage between NFBE, adult literacy and formal schooling organizations through preparation of curricula and textbooks, and so forth

[Cross-cutting objective]

- Institutionalization of NFBE and adult literacy to ensure sustainability of on-going efforts and strengthen the capacity of NFE sector

- Development of a standard-based implementation process and an accreditation mechanism for quality improvement

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[36] Sindh Education Sector Plan 2014-18, p.15
[37] ibid., p.163
[38] The contents of the NFE Act could not be obtained through the present survey.

- Establishment of an equivalence and certification regime

- Strengthened institutional mechanism to create flexible delivery options for diverse beneficiaries through partnership

- Progressive increase of resources and budgets with robust tracking of outcomes

[Non-formal basic education]

- No out-of-school children in conjunction with regular schools and through community engagement

- Provision of opportunities to complete primary and post-primary education through NFBE or mainstreaming to regular schools

- Technical and vocational skills transfer to improve employability of participants

- Institutionalization of curriculum and learning materials development, formal assessments and teacher quality enhancement

[Adult literacy and continued education]

- Provision of opportunities of lifelong learning relevant to needs in local and regional markets

- Participation of adult learners through development of packages linked to local needs and enhanced quality

- Institutionalization of curriculum and learning materials development, formal assessments and teacher quality enhancement

- Linkage with other social development programmes

School Education Sector Plan and Roadmap for Sindh (SESP&R) 2019-2024 approved in March 2020 includes one objective, among the 12 in total, with regard to NFE: Increase equitable access to NFE programmes & create linkages with TVET for illiterate youths. To achieve the objective, it will carry out the following three actions:

- Institutional assessment and capacity strengthening of Directorate of Literacy and NFE

- Develop and implement NFE and skills development programmes for youth (age 9-16 years)

- Expand provision of literacy and skills development programmes for youth, especially females (above 16 years old)

SESP&R states the major outcome expected from NFE is to mainstream OOSC to regular/formal schools. Meanwhile, one of its features involves the emphasis given to the linkage between NFE and TVET, especially in the post-primary stage. In that way, it aims to provide the young generation over formal school age with another option of TVET leading to the labour market besides the path of getting back to general education.

(3) TVET

Sindh Province established Sindh Technical Education and Vocational Training Authority (S-TEVTA) in 2010 by S-TEVTA Act, 2009. The Sindh Skills Development Plan was developed in 2012 based on the National Skills Strategy (NSS), 2009. Objectives are identical to those in NSS (2009) as follows:

Objective 1: Relevant Skills for Industrial and Economic Development
Objective 2: Improving Access, Equity and Employability
Objective 3: Assuring Quality

In the plan, activities with priorities to be implemented for the FY 2012/13 were specified. However, documents related to this plan such as monitoring and evaluation reports or subsequent year plan were not obtained.

The Sindh Skills Strategy (2012-2017) was prepared in 2012 with assistance of International Labour Organization (ILO), according to the Budget Analysis 2013/14. However, this document was not obtained in this survey either.

1.3.4 Balochistan Province

(1) School Education (Basic Education)

1) Outline of Balochistan Education Sector Plan (2013-2018)

Balochistan Education Sector Plan (BESP) 2013-2018 was developed on a basis of a situation analysis undertaken in 2011/2012. The plan was developed by Local Education Group with assistance of United Nations Children's Fund (UNICEF) under GPE. The BESP focuses to improve access and quality of education. Main strategic points raised in the plan include:

1. Quality and relevance as fundamental elements of sustainable education reform.

2. Equity as a critical cross cutting factor.

3. Inclusion of communities and children left out of the education process.

4. Multiple approaches within the province based on:

> a. Level of functionality of the education system in various parts of the province.
> b. Development
> c. Demography
> d. A process to diffuse the provincial plan into district plans.

5. A multi-tiered monitoring process to oversee implementation of the Sector Plan.

Other initiatives have also been undertaken. Community School Development Programme was expanded by the Balochistan Education Foundation (BEF) and private schools was included as partners in the Programme. Community Support Process (CSP) was successfully used in the opening of new girls' schools upon the demand of communities. In CSP, NGO staff mobilize community members through their home visits while assessing needs of girls' education and recruiting female teacher candidates. Community works with local teachers to support the girls' enrollment and retention at school and operate the Education Committee. The provincial government takes the responsibility for budget allocation, teacher training, salary payment for teachers, provision of teaching-learning materials and school construction (for 3 years after the programme begins)[39].   As school education is already free, the Government provides textbooks to all the students free of cost. 633 schools have been established under the BEF, enrolling more than 26,000 children. (gender disaggregated data are not available).

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[39] Website of the Society for Community Strengthening and Promotion of Education, Balochistan (http://www.scspeb.org/qual.html)

2) **Specific strategies for improving access of girls to school**[40]

Horizontal Expansion to locations without schools
The Plan recommends taking a 'community school approach' for improving access of girls to school because it is the best 'low cost' model implemented in the Province. The approach has the following characteristics:

a. A school building is provided by the community
b. Local teachers are hired and, if required, by using lower qualification criteria.
c. Training of teachers
d. Monitoring is done by community people

In the middle or final phase of the Plan, more innovative approaches may be introduced. For the initial phase of the Plan, local knowledge may be used for the prioritization of target communities. Prioritization itself will be done, based on a locally agreed criterion. As wide gaps continue to exist between girls' and boys' schools in terms of enrolment, so girls' schools will be prioritized.

- Target: to construct 4,000 new primary schools, based on community school model (*tehsils*[41] without a girls' school to be prioritized).

- Under the Promoting Girls' Education Project in Balochistan funded by World Bank (USD 1.6 million), a total of 143 (target 150) community schools were established (co-ed primary schools).

Upgrading of Schools
Based on the school-aged population of Balochistan, the Plan recommends making a ratio middle to primary schools as 1 to 3 and secondary to middle schools as 1 to 2. Upgrading of girls' schools is a priority.

- Target: to upgrade 800 primary schools to middle level; 100 middle schools to secondary level

Minimization of economic barrier
Stipends are to be given to middle-level girls in the 10 poorest districts.
One school meal is to be provided at the primary level and eventually expanded to middle and higher levels.

Awareness raising on the importance of removing social barriers
As preparation of an awareness-raising programme on girls' education, a study on people's attitudes toward girls' education is to be conducted.

3) **Implementation of the BESP 2013-2018**

Since no monitoring and evaluation report on the implementation of the BESP 2013-2018 is made by the Balochistan Government, it is not certain whether or not each of the strategies mentioned above was properly implemented. As to the implementation of a part of the strategies, however, is described in an evaluation report on the implementation of Global Partnership for Education (GPE). As mentioned earlier, GPE has targeted Balochistan and Sindh Provinces in terms for policy making and some activities. According to the evaluation report titled "Summative Evaluation of GPE's Country-level Support to Education", 1,033 schools were upgraded to additionally offer higher level education. The report also mentions that boundary walls in 281

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[40] This section titled "Specific strategies for improving access of girls to school" is referred to Semiotics Survey Results.
[41] An administrative unit between district and Union Council.

schools, additional classrooms in 578 schools, and toilet facilities in 372 schools were constructed, based on the BESP. The report also states that girls enrolled in pre-primary to higher secondary public schools accounted for 40% in 2012, but the ratio of girls enrolled declined to 34% in 2017. Accordingly, GPI for enrollment in Balochistan was 0.51 in 2016/2017, while the target stated in the BESP is 0.78.

(2) NFE

Chapter 11 of Balochistan Education Sector Plan 2013-18 deals with Adult Literacy and Alternate Learning Paths. However, it remains recognizing the absence of provincial policy or budget allocation thus far and declaring the objective of "Institutionalization of Youth/Adult literacy and NFBE Programme in the Province to the mainstream of education system of the province[42]". Taking into account the insufficient capacity of the provincial government to undertake literacy and non-formal basic education programmes by their initiative and resources without external assistance, it aims to create adequate conditions to address the problem of the lowest literacy rate in the country.

With AQAL Project's help, Balochistan became the first province where Non-Formal Education Policy was developed and approved by the Cabinet - after the 18th Amendment. In addition, action plans against Balochistan Non-Formal Education Policy have been developed as well as the yearly and five-yearly plan. Moreover, strategic plan of Development has also been drafted.

Strategic Priorities:

- Expansion of NFBE Programme in the whole province to accommodate 70% of the out of school children (10-16 years)

- Development of additional skill-based area/trade specific adult literacy primers/textbooks

- Establishment of skill based Adult Literacy centres in all districts

- Strengthening of NFE Teacher Training Cell at Provincial Institute for Teacher Education (PITE) and strengthening of Balochistan Assessment and Examination Commission (BAEC) regarding NFE Examination and Assessment.

- Development and expansion of NFE Middle Vocational Programme and later on upgrade at Secondary level.

(3) TVET

Balochistan Province established Balochistan Technical Education and Vocational Training Authority (B-TEVTA) in 2006 by B-TEVTA Ordinance[43]. It is placed under the Labour and Manpower Department.

According to the Semiotics survey results, the Annual Plan for 2019-20 for BTEVTA has been materialized to bring reform in the TVET system of the Province. The Steering Committee in its meeting held on 28 August 2019 approved the Plan. Managing Director was appointed in charge of BTEVTA and SDP in July 2019. It conducted Training Needs Assessment, impact studies and developed Strategic Goals of the organization. The studies include:

- Expo Dubai 2020 & 2022 FIFA World Cup Qatar skilled labour demand

- Gulf and European countries skilled labour demand

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[42] Balochistan Education Sector Plan 2013-18, p.71
[43] https://balochistan.gov.pk/departments/labour-and-manpower/#1560770323654-ad894995-7002

- Gwadar port skilled labour demand

- Trade demand for China Pakistan Economic Corridor (CPEC) and its outcome

- Creating linkages with other TVET stakeholders

Although B-TEVTA is supposed to be the apex body in TVET sector including policy development in Balochistan, four government departments are involved in provision of TVET in the province and they are working still in isolation without any coordination. Rationalization of Government organization seems to be urgent agenda before development and implementation of TVET policies in the Province.

1.3.5   Khyber Pakhtunkhwa (KP) Province

(1)   School Education (Basic Education)

1)   Outline of School Sector Plan (2015-2020)

The KP Government developed School Sector Plan (SSP) 2015-2020 based upon the previous Education Sector Plan (ESP) 2010-2015. The SSP aims to increase the stock of human capital and promote progress, peace, and prosperity across the province through the delivery of appropriate school education. The SSP identifies five strategic reform areas, associated with 10 policy areas, as follows:

1. More qualified teachers through new recruitment and training for teachers

2. Better schools and facilities

3. Improved access of children to education, especially vulnerable children, through partnership with the private sector

4. Good governance and management (the development of data-collection and update system, training on management for district officers, and management of education budget)

5. Preparation for a subsequent education plan 2020-2025

The plan raises some countermeasures to improve access and learning of boys and girls, as stated below.

2)   Specific strategies / initiatives targeting girls[44]

Stipends to female students from Grade 6 to 10

Education Sector Reform Programme, funded by Department for International Development for the United Kingdom (DFID), is to provide the stipend of PKR200/month to girls enrolled in Grade 6 to 10.

- The ESP 2010-2015 aimed to provide stipends to 636,853 girls across the province by 2015-16; stipends will continuously be provided under the SSP (target not provided), while at the same time, conditional cash transfer is to be provided for improving effectiveness

Voucher scheme

The Iqra Farogh-e-Talim Voucher Scheme is a special initiative with the objective of sending OOSC at the age of 5 to 16 years from poor families/areas of the province to school. Government-

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[44] This section titled "Specific strategies / initiatives targeted girls" is referred to Semiotics Survey Results.

issued vouchers are tuition redemption vouchers that their families can redeem the voucher at a partner private school of their choice in return for free education services.

- Implemented by Elementary Education Foundation

- Vouchers have currently been distributed in four pilot districts; further expansion to other districts is planned year-on-year; Target: 90% of the vouchers (based on annual targets) was distributed to eligible students; 70% of the vouchers were redeemed; and at least 80% of students who received vouchers attend school by 2019/2020

Recruitment of new teachers
As to posting of newly hired teachers, a priority is given to those who are able to work in any unfilled positions in girls' schools and in marginalized tehsils and union councils

School facilities
In the provision or repair of all missing schools, girls' schools are prioritized over the next 2 to 3 years. In addition, all non-functioning boys' and girls' schools are to be opened by 2016/2017.

3) **Implementation of the SSP 2015-2020**

Based on Annual Review undertaken by DFID in July 2016, some school facilities were improved through KP Education Sector Programme after 2011. According to this annual review report, out of 20,770 schools missing facilities of electricity, water, toilets, and boundary walls, those facilities were provided for over 15,736 schools. The report also states that the stipend was provided for 443,320 girls, and 14,789 OOSC were supported to attend low-fee private schools through the education voucher programme. Furthermore, 534 Girls Community Schools were established, which have benefitted 16,000 girls and their brothers (8,000).

Due to a lack of relevant data indicating changes/improvements in gender-wise enrollment rates in middle and high schools before and after the implementation of the SSP, it is also difficult to assess the impact or usefulness of the stipend for girl students enrolled in middle and high schools, voucher for OOSCs, and school construction on the enrollment of girls in middle and high schools. The annual review report made in July 2016 states that the enrollment of girls remained low at both at the primary and middle levels and suggests that the interventions in place to improve educational outcomes for girls, such as the stipend programme, the construction and rehabilitation of classrooms and other facilities in girls' schools and the construction of GCS should be improved and expanded, and supplemented with new interventions to accelerate progress for girls.

(2) **NFE**

Recognizing the urgency of Non-Formal Education in the province, KP NFE policy has been drafted recently through extensive consultative process. The Khyber Pakhtunkhwa NFE policy guides the NFE sub-sector in the province and suggests effective programming for alternative and accelerated education for different age groups including adult literacy with a blend of technology and market-oriented initiatives. The policy is currently in the approval process.

(3) **TVET**

In KP Province, the Skills Development Plan was developed in 2012 based on the National Skills Strategy (NSS), 2009. Objectives are identical to those in NSS (2009) as follows:
 Objective 1: Relevant Skills for Industrial and Economic Development
 Objective 2: Improving Access, Equity and Employability
 Objective 3: Assuring Quality

In the plan, activities with priorities to be implemented for the FY 2012/13 were specified. It is

not certain if evaluation was done regarding the year plan and if the subsequent year plan was developed.

In the report of the "Sector Study on Demand Driven Competency Based Training in Potential Sectors of Khyber Pakhtunkhwa, 2017" prepared by TVET Sector Support Programme (TSSP) in coordination with KP-TEVTA and NAVTTC, as way forward, the following recommendations are proposed in the area of TVET:

1. Possibilities for training facilities for pharmaceuticals and marble needs to be further explored
2. A mechanism needs to be adopted to identify demand and supply gaps and the trends in the job market for informed decision making in KP
3. The future training shall be offered on basis of market demand not on the basis of supply
4. The role of chambers of commerce and trade associations needs to be further strengthened for TVET design and delivery
5. A comprehensive liaison shall be developed amongst all stakeholders regarding TVET skills demand; TVET skills training facilities, quality of TVET skills imparted and job placement

There are also paragraphs regarding skills development in the Industrial Policy 2016 published by the Department of Industry, Commerce and Technical Education. It mentions:

1. Strengthening collaboration with private sector,
2. Establishing University of Technology in KP,
3. Focusing on sector specific training skills development through industry participation,
4. Creating model for enhancing employability

2. System of Education in Pakistan

2.1 Education System

In Pakistani education system, after preprimary education (Kachi), 5-year primary education (G1-G5), 3-year middle education (G6-8), 2-year secondary education (G9-G10)[45], and 2-year higher secondary education (G11-G12) are provided and followed by higher education. Figure 2-1 represents the education system in Sindh Province, which is almost the same in the other provinces. Particularly concerning primary and secondary education, the system is identical for all the provinces. Elementary education is a common name for 8-year education from primary to middle level, while it should be taken into consideration that solely middle education is sometimes referred to as elementary. Likewise, it is common to call a school providing primary and middle education an elementary school. Furthermore, for example, a secondary school may provide from preprimary to G10 and a higher secondary school may implement all the level of education. Thus, as a common phenomenon, the highest level of education provided in a school determines the school's name.
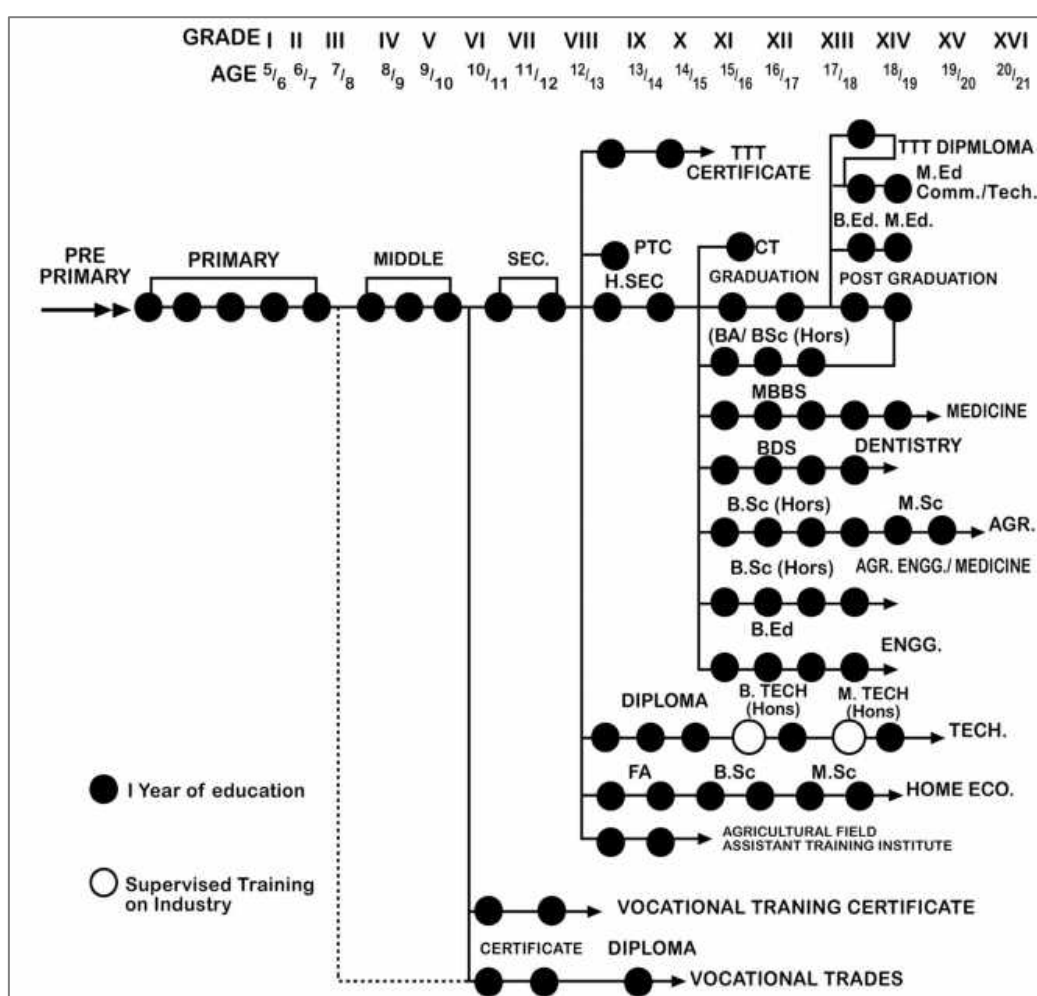
Source: Sindh Education Sector Plan 2014-2018

Figure 2-1 Education System in Sindh Province

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[45] The institutions for G9 and G10 education are sometimes called high schools as well as secondary schools. In order to distinguish it from the secondary education as a whole, the 2-year education after middle level is sometimes called high stage/level.

The free and compulsory education which the Constitution ensures for the children aged 5 to 16 years may be generally understood as 10-year school education from G1 to G10. However, without making specific levels of education compulsory, the Constitution guarantees that all the children in that age bracket have the right to receive free education and the State have the duty to provide it. Therefore, once a child exceeds the age of 16, he or she loses the right of free and compulsory education even before completing primary education.

Though Figure 2-1 does not contain it, there exists NFE in parallel with the formal education system to complement the latter. While NFE includes adult literacy and others, the education equivalent to school education particularly for out-of-school children is referred to as non-formal basic education (NFBE). NFBE may grant a certification equivalent to formal education completion at a certain level, if the curriculum authority for school education or another relevant organization guarantees the equivalency between that NFE programme and formal one at a specific level.

In general, with some exceptional courses, admission from general education to TVET requires secondary or high secondary education completion.

2.2 Educational Administration and Finance

2.2.1 Organization and functions of the Ministry of Federal Education and Professional Training

The MoFEPT is structured of six wings: 1) Administration/Finance/Coordination (Admn) Wing; 2) International Coordination (IC) Wing; 3) Professional Training & Skill Development (PT&SD) Wing; 4) Education Policy & Commission (EP) Wing; 5) Formal Education (FE) Wing; and 6) Non-Formal & Special Education/Social Welfare (NF&SW) Wing. For the Ministry, Federal Minister, Parliamentary Secretary, Secretary, and Additional Secretary are appointed. Joint Secretary appointed takes care of each of the Wing, except FE Wing. The FE Wing is taken care of by Joint Educational Advisor/Director General.

As previously described, Ministry of Education was dissolved after devolution in 2010. However, based on discussion between the federal and provincial governments, it was reestablished and renamed as MoFEPT. The MoFEPT is mainly mandated to ensure coordination among provincial and area education offices[46]. Affiliated to the MoFEPT, there are several institutions/systems, such as Inter Provincial Education Ministers' Conference (IPEMC), National Curriculum Council (NCC), and so on (see Figure 2-2).

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[46] ADB. 2019. *School Education in Pakistan: A Sector Assessment*. Manila: ADB.
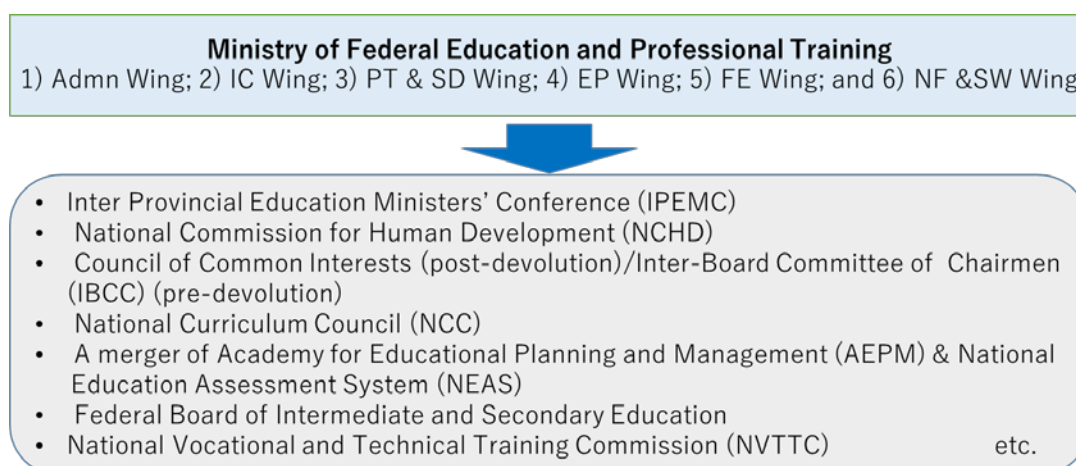
Source: ADB. 2019. *School Education in Pakistan: A Sector Assessment*. Manila: ADB.
Figure 2-2 Platform for Education Sector at the Federal Level

As described earlier, IPEMC is a forum proposed in the NEP 2009 and has been serving as a coordinating body among the provinces at the federal level[47]. The NCC takes up the difficult task of coordinating curriculum and standards development across provinces and areas[48]. Similarly, NEAS is a national-level body that takes a responsibility to carry out student assessments across the country[49]. Although the NEAS conducted diagnostic assessments in the subjects of science, mathematics, and languages in grades 4 and 8 across the public education system in the country on a regular basis, these activities waned due to a lack of government funding[50].

2.2.2 Major programmes and projects executed at the federal level

(1) Federal Public Sector Development Programme

In Pakistan, the Federal Public Sector Development Programme (PSDP) is a major budget source of federal government's education projects, and Provincial Annual Development Programmes (ADPs) are major budget source of provincial governments' education projects. Under the PSDP, the MoFEPT is responsible for all education-sector projects and budget allocation for the projects. According to the report (Chapter 10 Education) of Pakistan Economic Survey 2018-19, the PSDP 2018-2019 allocated an amount of PKR3.14 billion for 6 on-going and 3 new projects of the MoFEPT. In addition, an amount of PKR2.40 billion was also been provided for 15 on-going and new education related projects to Finance and Capital Administration & Development Divisions of the Ministry[51].

(2) Provincial Annual Development Programmes

Under ADPs 2018/2019, the provincial government have prioritized the sectors, such as provision of missing facilities, upgrading of girls and boys primary schools to middle and high schools, construction of new boys and girls schools, provision of scholarship through endowment funds and scholarship schemes, provision of stipends to girls students up to Matriculation (G10), improvement of the physical infrastructure, establishment of IT/Science labs in secondary and higher secondary schools, strengthening of Provincial Institutes of Teacher Education (PITE), etc. All the provinces have allocated budget for the education foundations and development budget

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[47] ibid.
[48] ibid.
[49] ibid.
[50] UNESCO. 2015. *EFA: Global Education Monitoring Report: Education for All: Achievements and Challenges: 2000-2015*. Paris: UNESCO.
[51] ibid.

has allocated for capacity development of teachers to provide quality education and for the establishment of the cadet colleges to meet the prerequisites of education.

1) **Punjab Province**

During 2018/2019, the Punjab Government allocated PKR32.8 billion for 1,091 on-going and 61 new development projects for education. This amount includes PKR25.0 billion for school education, PKR 5.0 billion for higher education, PKR1.0 billion for special education, and PKR1.8 billion for literacy & non-formal education.

2) **Sindh Province**

During 2018/2019, the Sindh Government allocated PKR27.4 billion for 209 on-going development projects for education. This amount includes PKR23.0 billion for Education & Literacy, PKR 0.2 billion for Special Education, PKR0.96 billion for Sindh TEVTA, and PKR3.24 billion for Universities & Boards.

3) **Balochistan Province**

In 2018/2019, the Balochistan Government allocated PKR12.45 billion for 205 on-going and 449 new development projects for education. Out of the total budget allocated, an amount of PKR1.77 billion has been allocated for primary education, PKR4.15 billion for middle-level education, PKR3.03 billion for secondary education, PKR2.11 billion for college education, PKR0.57 billion for university education, PKR0.74 billion for general education, and PKR0.069 billion for technical education.

4) **KP Province**

The KP Government allocated PKR12.85 billion in 2018/2019 for 107 on-going and 28 new development projects for education. The amount includes PKR1.5 billion for primary education, PKR 7.2 billion for secondary education, and PKR4.12 billion for higher education.

2.2.3 Organization and functions of provincial and district educational administrations

In Pakistan, there are four provinces of Punjab, Sindh, Balochistan, and KP, as well as one federal territory of ICT and two autonomous territories of Azad Jammu and Kashmir (AJ & K) and Gilgit-Baltistan (GB). In all provinces, there are a respective education department at the provincial level and respective education offices at the district levels[52]. After devolution in 2010, education service delivery up to Grade 12 has become the responsibility of these organizations at the provincial and district levels[53]. Implementation of school education policies and daily operation is mainly the responsibility of the district education offices[54]. The education offices at the district level also take care of teacher recruitment, placement, transfers, school infrastructure maintenance, and other related tasks[55].

The main structure/function of the respective education department and other supporting organizations are as shown in the table below.

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[52] ADB. 2019. *School Education in Pakistan: A Sector Assessment*. Manila: ADB.
[53] ibid.
[54] ibid.
[55] ibid.

Table 2-1 Education Departments at the Provincial Level

Province	Name	Main Functions/Units/Cells & Supporting Institutes
Punjab	School Education Department	Functions of "Legislation, Policy Formulation, and Planning"; "Maintaining of School Standards"; "Monitoring & Evaluation System"; "Promotion of Quality"; "Staff Development"; and Others
	Literacy & Non-formal Basic Education Department	NFE Monitoring & Evaluation Unit, NFE Assessment & Examination Cell, NFE Curriculum & Material Development Unit, NFE Human Resource Development Institute, etc.
Sindh	School Education & Literacy Department	Secretariat composed of "Schools", "Law", "General Administration", "Academy & Training Wing", etc., and Allied Institutions, including Sindh Teacher education Development Authority, PITE, Sindh Textbook Board, Director Non-formal Education, etc.
Balochistan	Secondary Education Department Social Welfare, Special Education, Literacy & Non-Formal Education and Human Rights Department	Directorate of Schools, Bureau of Curriculum (BOC), PITE, Textbook Board, Board of Intermediate & Secondary Education (BISE), Policy, Planning, Implementation Unit (PPIU), etc.
KP	Elementary & Secondary Education Department	Secretariat of Elementary and Secondary Education (ESE), Directorate of ESE: "Financial Management Function"; "Human Resource Development Function", and "Planning & Development Function", Planning Cell, Education Sector Reform Unit, Directorate of Curriculum & Teacher Education, etc.

Source: developed by survey team, based on information in the website of each department

The platform of the education sector at the provincial level mostly corresponds with that of the education sector at the federal level. There is a provincial education department, under which there are several supporting organizations as shown in the figure below. For example, there are 28 Provincial BISE over the country which are responsible for designing and conducting annual examinations for public and private schools [56]. Similarly, Provincial Education Assessment System (PEAS) or provincial and area assessment centres function as a provincial body to help National Education Assessment System (NEAS) undertaking assessments at the provincial level, while their mandates are unclear, and financing is unpredictable [57].

Provincial Education Department
Secretariat & Directorate

- Bureau of Curriculum (BOC)
- Provincial Institute of Teacher Education (PITE)/ Regional Institute of Teacher Education (RITE)
- Board of Textbook (BOT)
- Board of Intermediate and Secondary Education (BISE)
- Provincial Education Assessment System (PEAS)
- Literacy and Non-formal Basic Education Department
- Technical Education and Vocational Training Authority

etc.
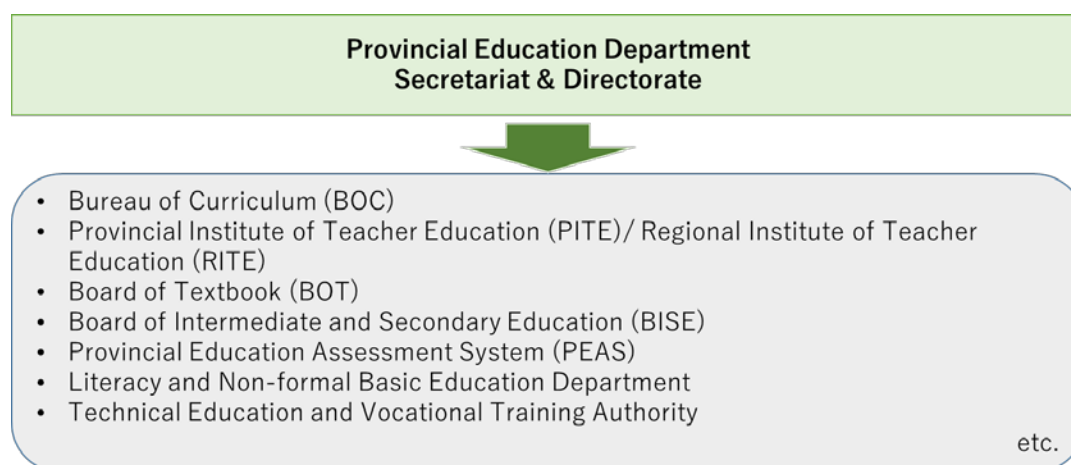
Source: ADB. 2019. *School Education in Pakistan: A Sector Assessment*. Manila: ADB.
Figure 2-3 Platform for Education Sector at the Provincial Level

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[56] ibid.
[57] ibid.

2.2.4 Other governmental organizations related to TVET sector besides the Ministry of Federal Education and Professional Training

As stated earlier, TVET sector is going through major reform. Under the circumstance, proposals to establish new bodies and abolishing existing ones are seen here and there. Organizations appearing in various papers are shown below.

(1) National Vocational and Technical Training Commission (NAVTTC)

The National Vocational and Technical Education Commission was established by Cabinet Division's Notification No.4-16 in 2005, then became a body constituted by Ordinance No.VI in 2009. After the 18th amendment of Federal Constitution, it was again established as the National Vocational and Technical Training Commission, 'Education' replaced by 'Training', by Act No. XV.

It is an autonomous organization with its own Board and own office building in Islamabad. The Act depicts NAVTTC is administratively attached with Prime Minister's Secretariat. However, it is observed that NAVTTC has strong partnership with MoFEPT at federal level.

TVET Reform Support Programme (TRSP, 2011-2016) and TVET Sector Support Programme (TSSP, 2017-2021) that are being implemented with assistance of GIZ since 2011 have been propelling the NAVTTC activities at Federal level while TEVTAs established in each Province are main regional partners. Punjab Vocational Training Council (PVTC) and TVET Directorate of Gilgit Balochistan Government are also listed as partners in the reform[58]. Areas for intervention vary from Policy and Governance, Private Sector Engagement, Implementation of Reformed TVET and Human Resources Development/Teacher Training.

(2) National Training Bureau

National Training Board was officially established by National Training Ordinance, 1980 (amended 2002) under Ministry of Labour and Manpower (MoLM). National Training Bureau was also established as its secretariat. Skill Development Council (SDC) in each province and ICT were established as its direct arms in each area, but SDCs do not come under Provincial administration. Responsibility of overseeing NTB was transferred from MoLM) to MoFEPT after 18th amendment of Constitution.

As to NTB in the context of TVET reform, there was a statement in earlier document prepared in 2014 that NTB was going to be abolished. According to interview from NTB officer, Cabinet resolution to merge NTB into NAVTTC adopted in 2017. However, high court judged the cabinet resolutions as invalid so that NTB came into existence after two years of uncertain status. It is noted that NTB is headed by its Director General, who is also present Executive Director of NAVTTC.

As to SDC, there seems to be internal issues in NTB according to interview session with NTB. Because of that, NTB is not certifying training courses delivered by SDC currently. There is a plan to solve the existing issues and normalize SDC by calling a meeting at Federal level inviting representatives from all the SDCs within a few months as of March 2020.

(3) ICT

There is neither ICT TEVTA nor authority resembling TEVTA, which exist in other four Provinces. Skills Development Council, Islamabad that should be a direct sub organization of

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[58] https://tvetreform.org.pk/tvet-reform-support-programme/

National Training Bureau exists, or existed, as website is available. There is no update of information on training courses after 2019 in the website, however, it does not seem to be very active now.

In ICT, the Directorate of Federal Education (DFE) administers education sector. However, the Director confirmed that it does not have any roles to play with regard to TVET sector in Islamabad. ICT does have its own administration body (i.e., ICT Administration) but it covers very minimum administration services but not education services. For instance, FDE does not come under the ICT Administration but directly under MoFEPT.

Technical Training Centre Islamabad that is the only one public TVET institute under National Training Bureau (NTB) is administered by NTB. Construction Technology Training Institute is administered by Ministry of Communication in administration matters while curriculum approval is from Punjab TEVTA according to an interview session on 3 March. Furthermore, 3-year course Diploma of Associate Engineer (DAE) testing and certification is done under Punjab Board of Technical Education (PBTE), which is outlined later in this report. PBTE website has a list of affiliated institutes that means testing and certification are done by PBTE and 6 TVET institutes from Islamabad are listed there.

(4) Government of Punjab

The following figure shows the current organogram of public stakeholders in TVET in Punjab Government and its line with the Federal Government.
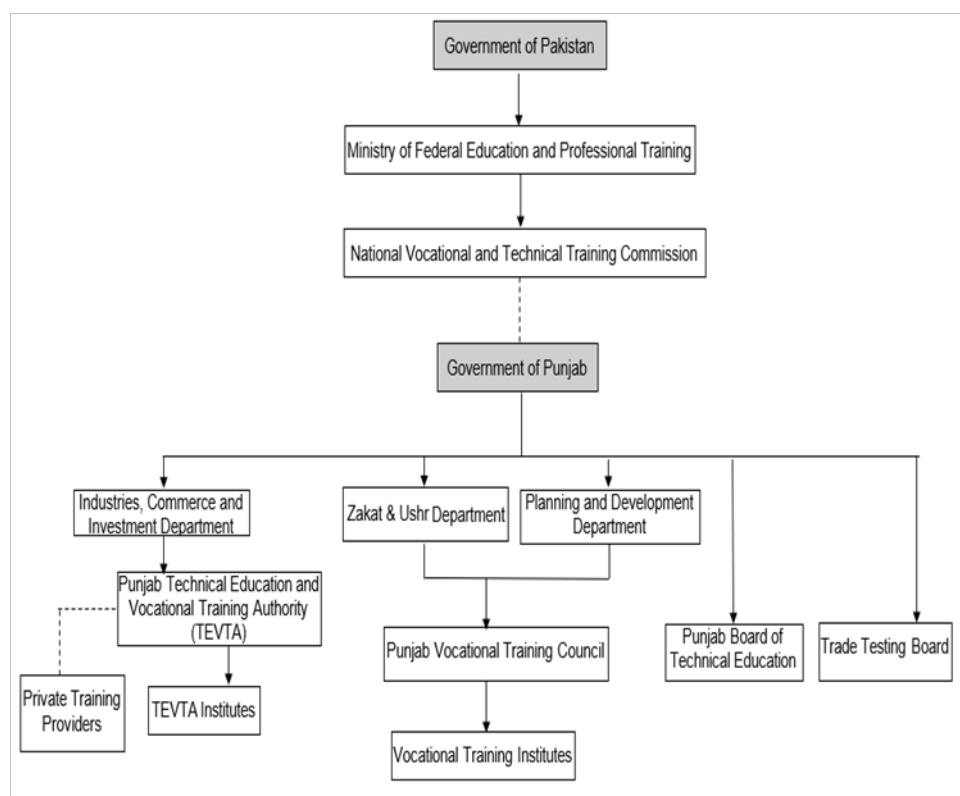
Source: Data Collection Survey on Education Sector in Pakistan, JICA Pakistan

Figure 2-4 Organogram of TVET Stakeholders in Punjab Government

1) **Punjab-TEVTA**

TEVTA is standard organization for regional TVET administration in Pakistan (it is noted that it does not exist in ICT). P-TEVTA that is TEVTA in Punjab Province currently administers its own public institutes and private institutes in terms of accreditation and monitoring of institutes and courses offered by them. As to those public institutes, it manages implementation of TVET courses as well. P-TEVTA manages all levels of varieties of TVET institutes. Among those, DAE (Diploma of Associate Engineer) is the academically highest course that is equivalent level of higher secondary education level after completing matric level.

2) **Punjab Vocational Training Council (PVTC)**

In Punjab Province, Punjab Vocational Training Council (PVTC) administers Vocational Training Institutes that offers TVET courses, which are not coming under P-TVET in any sense.

One feature of PVTC is that Zakat fund of the Province finances its activities under the Zakat and Usher Department. Zakat fund is a kind of taxation system for the purpose of helping those suffering from poverty particularly in Islamic society. Therefore, eligible trainees must be in poverty. Zakat fund covers not only training fees but also monthly stipends. It should be noted, however, that PVTC is agreed to be transferred to administration of Industry, Commerce and Investment Department to be administered by PSDA. It implies that budgeting PVTC may be also affected as well. According to an interview session to the secretary of Zakat and Usher Department, it is confirmed that it is not appropriate to transfer PVTC in the middle of a fiscal year so that the Department is still looking after PVTC. However, after the new fiscal year starting in July 2020, the transfer to the ICID should be realized in all senses under direct administration of PSDA.

When visited PVTC, it stressed strength in relationship with industry by having many members from industry in their council for PVTC management. it helps them very much in organizing two months industry training at the end of all courses provided.

3) **Punjab Skills Development Fund (PSDF)**

Another important player in TVET in Punjab is Punjab Skills Development Fund (PSDF) established with assistance of UK in 2010. This organization is registered as non-profit organization under Companies Ordinance 1984 of Punjab Province so that it is called a company in some contexts. This organization manages fund for private TVET institutes in principle. Fund is sourced by DFID and Provincial Government with share 50% each. In addition, it also manages fund for private TVET institutes sourced by World Bank exclusively[59]. The assistance from DFID for PSDF is planned to continue until June 2022.

Unique feature of PSDF is strict performance-based management. Since ultimate objective of TVET is employment, condition for final disbursement is tagged with confirmation of employment of trainees completed courses. That is how PSDF controls applications for the fund. Another important rule is that institutes are not allowed to collect any sort of fees from trainees when using the PSDF fund. This requires fund management capability of accounting and finance sections of their administrations. PSDF does not administer its own institutes not as TEVTA and PVTC do. It strictly pursues effective and efficient implementation of TVET courses and employment as consequence with principle of performance-based funding.

4) **Punjab Board of Technical Education（PBTE）**

As an independent organization from those which conduct TVET programmes, Punjab Board of

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[59] https://www.psdf.org.pk/about-us/our-company/

Technical Education (PBTE) do conduct assessment and certification based on the result of assessment. According to interview session, it covers Federally Administered Areas, AJK and GB in addition to Punjab Province. Under the Provincial Government, it comes under Industry, Commerce and Investment Department in parallel with TEVTA. Functions of PBTE are starting from registration of institutes and applicants for assessment, then plan and conduct of assessment to awarding certifications to successful applicants who pass assessment.

5) **Punjab Trade Testing Board（PTTB）**

A similar organization to the above mentioned PBTE called Punjab Trade Testing Board (PTTB) is in Panjab. Functions are assessment and certifications as so are those of PBTE. According to interview session with PTTB, the difference between PBTE and PTTB is responsible levels, i.e., PBTE is responsible originally for DAE courses for three years or longer or higher while PTTB is responsible for shorter courses than two years or shorter. Currently, however, there are duplications since PBTE handles short courses as well.

Background of PTTB legally comes from establishment of NTB as explained earlier. It was established in 1980 in consequence of the promulgation of the NTB Act as an organization under the Labour Department of the Provincial Government. GTZ (former German organization of GIZ) provided assistance for the establishment then [60].

6) **Punjab Skills Development Authority (PSDA)**

In February 2019, Punjab Skills Development Authority (PSDA) Act has passed. Accordingly, Director General is appointed for the PSDA in March 2020. It is planned that TEVTA, PVTC and PSDF are to be regulated under PSDA. Functions of PSDA will be as follows after commencement of its operation:

- Implementing national policies and standards in relation to TVET;

- Registering and regulating public and private TVET institutes, bodies and assessment agencies;

- Regulating training standards for teachers and evaluators;

- Validating conformity of the curricula with national standards and its relevance to specific level descriptors;

- Conducting performance audit of TVET institutes; and

- Devising and enforcing mechanisms for the inspection, monitoring and evaluation of TVET institutes, bodies and assessment agencies to ensure compliance with national and provincial standards.

World Bank assistance had a plan to establish Punjab Skills Agency, but with the establishment of PSDA, the plan is revised to set standard but not a new agency [61]. I.e., unification of assessment system by integrating standards for assessment, which currently PBTE and PTTB as well as PVTC explained earlier administer independently without coordination, should lead to strengthening the entire assessment system for TVET courses. In relation to this plan. Punjab Government has another plan to newly establish Punjab Skills Testing Agency.

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[60] https://ttbp.edu.pk/chornological-history-of-ttb/
[61] Restructuring Paper on a Proposed Project Restructuring,
http://documents.worldbank.org/curated/en/910711562919761696/pdf/Disclosable-Restructuring-Paper-Punjab-Skills-Development-P130193.pdf

Organizations in TVET sector in Punjab Province are summarized above where field survey was conducted. It is observed that Provincial Government is planning and taking actions for rationalization of TVET administration while each organization is making own way with its own priority rationales under the federal reform initiative with their administration capacity that is higher than other provinces.

On the other hand, it is also observed that they understand roles of NAVTTC that is leading the reform. All the organizations visited mentioned NAVTTC as the apex organization in federal level. They all had logo of NAVTTC on brochures or sign boards. All the stakeholders recognize NAVTTC as an authority for final accreditation of curricula. Understanding of CBT curricula and necessity of shift to CBT assessment based on competencies are also gradually prevailing. The differences from current curricula, however, may be causing certain hesitations in the field of TVET programme implementation.

(5) Government of Sindh

The following figure shows the organogram of public stakeholders in TVET in Sindh Government and its line with the Federal Government.
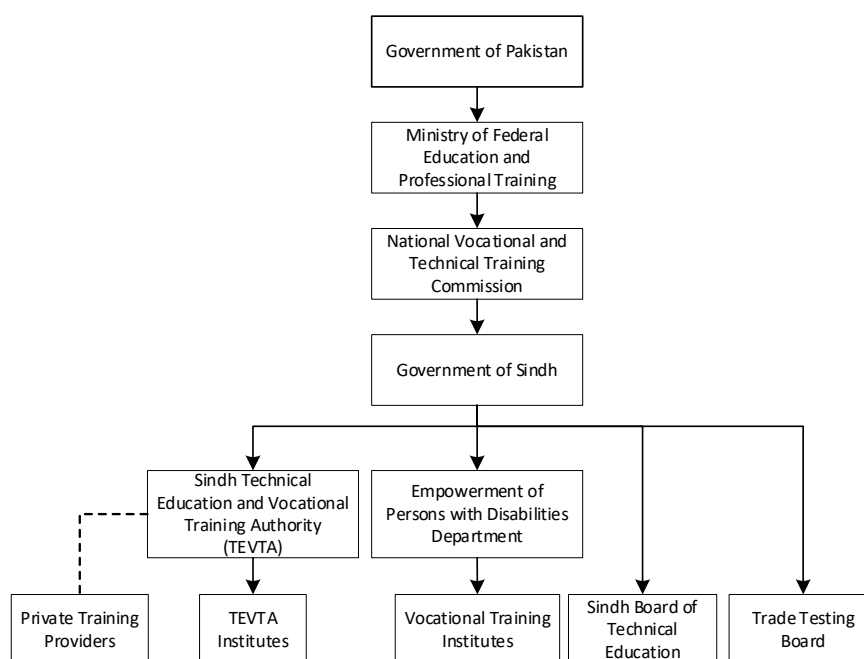
Source: Data Collection Survey on Education Sector in Pakistan, JICA Pakistan
Figure 2-5 Organogram of TVET Stakeholders in Sindh Government

1) Sindh TEVTA (S-TEVTA)

The TEVTA position is similar to Punjab but it comes directly under the Provincial Government but not any Departments. No organization corresponding to PVTC in Sindh either. According to S-TEVTA Act[62] passed in 2010 that is the legal ground of S-TVETA, functions include the following;

(i) to formulate technical education and vocational training policies and plans in collaboration with the Commission (NAVTTC) and SBTE towards the objective of strengthening and bringing

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[62] S-TEVTA Act, http://www.ilo.org/dyn/natlex/docs/ELECTRONIC/92245/107317/F-2046698423/PAK92245.pdf

these programmes in consonance with current industry requirements;

(ii) to facilitate establishment of institutional linkage with the industry to ensure that the multiple technical education and skill development programmes are aligned to current industry requirement both nationally and internationally;

(iii) to evolve and implement technical education and vocational training programmes including their curriculum, standards and testing criteria;

(iv) to provide policy direction and facilitate resources including financial, manpower resources for the technical education and vocational training programmes;

(v) to evolve policy framework for the institutional structure, human resource management, policies including recruitment, promotion, placement, staff development and staff benefit schemes;

(vi) to undertake restructuring of the technical education and vocational training institutions including their merger, closure, overhaul, upgradation towards the objective of unfolding a cohesive, rational and effective institutional framework in the Province;

2) Sindh Board of Technical Education (SBTE)

Sindh Board of Technical Education (SBTE) was established in 1970 by Provincial Act. It is responsible for assessment of the TVET participants and certification based on the result of assessment as so is PBTE in Punjab.

(6) Government of Balochistan

According to the Semiotics survey results, Balochistan TEVTA Act was promulgated in March 2011 and it became functional in 2014 through Skill Development Programme (SDP) by deputation of a Director. B-TEVTA was looked after during 2016-18 by a Director. Although the Act was approved in 2011, the Authority remained dormant and it had no infrastructure and staff.

The 2nd meeting of the Board of B-TEVTA was eventually convened in April 2019, after lapse of 3 years, wherein the post of Managing Director was created and the staff and assets of Skill Development Programme have been brought under the ambit of BTEVTA for operationalization. Following the decisions of 2nd Board meeting, amendments in the Act of Balochistan TEVTA was proposed. The Service Rules of B-TEVTA also have been framed and submitted to Law Department for vetting since 5 July 2019. However, Law Department has kept them pending till finalization of Amendment of Act. B-TVETA Steering Committee was formed having representation of allied Departments and a private sector[63].

The following figure shows the organogram of public stakeholders in TVET in Balochistan. Government and its line with the Federal Government.

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[63] Industries, Labour & Manpower Department, Social Welfare Department, Planning & Development Department, Finance Departments) and as Chamber of Commerce
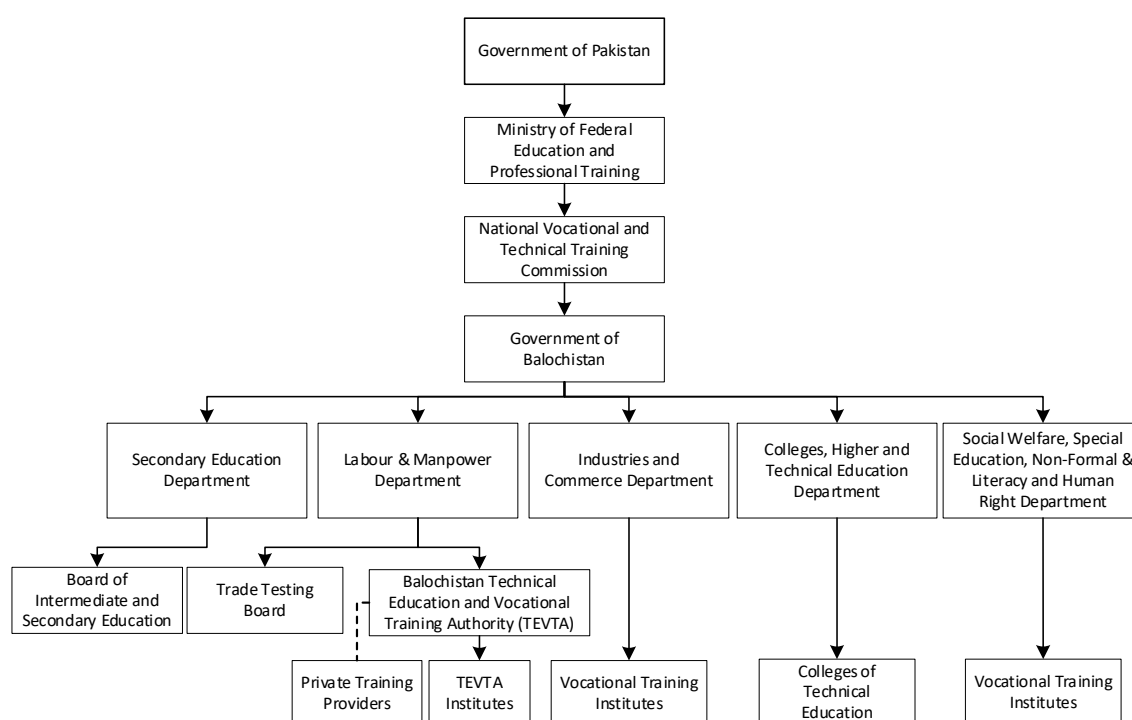
Source: Data Collection Survey on Education Sector in Pakistan, JICA Pakistan
Figure 2-6 Organogram of TVET Stakeholders in Balochistan Government

The TEVTA in Balochistan is under Labour and Manpower Department but no VTC in KP that is different from other Provinces. According to local consultant report, only three managers (Managing Director, Director, Deputy Director) are appointed but no other staff. All activities of B-TEVTA are covered by budget of Public Sector Development Programme including staffing under Balochistan Skill Development Programme. As to the assessment and certification in Balochistan, there is no Board of Technical Education (BTE), but Board of Intermediate and Secondary Education covers those responsibilities.

(7) Government of KP

According to the draft report prepared by local consultant, NWFP-TEVTA (Agency) Ordinance, was promulgated in 2002, but was not implemented. On the other hand, Directorate of Technical Education under the Higher Education Department was established in 1971. Subsequently Directorate of Manpower & Training was established under Department of Industries, Commerce and Labour Department in 1986. The two organizations were merged in 2001 under one Administrative Department, i.e., Industries Commerce & Technical Education. It was upgraded to the level of Directorate General, Technical Education & Manpower Training. Re-activation of KP-TEVTA as an agency took place under the Provincial Government Reform Agenda in 2014, and as a result, KP-TEVTA was notified. In 2015 TEVTA was transformed from Agency into Authority.

The following figure shows the organogram of public stakeholders in TVET in KP Government and its line with the Federal Government.
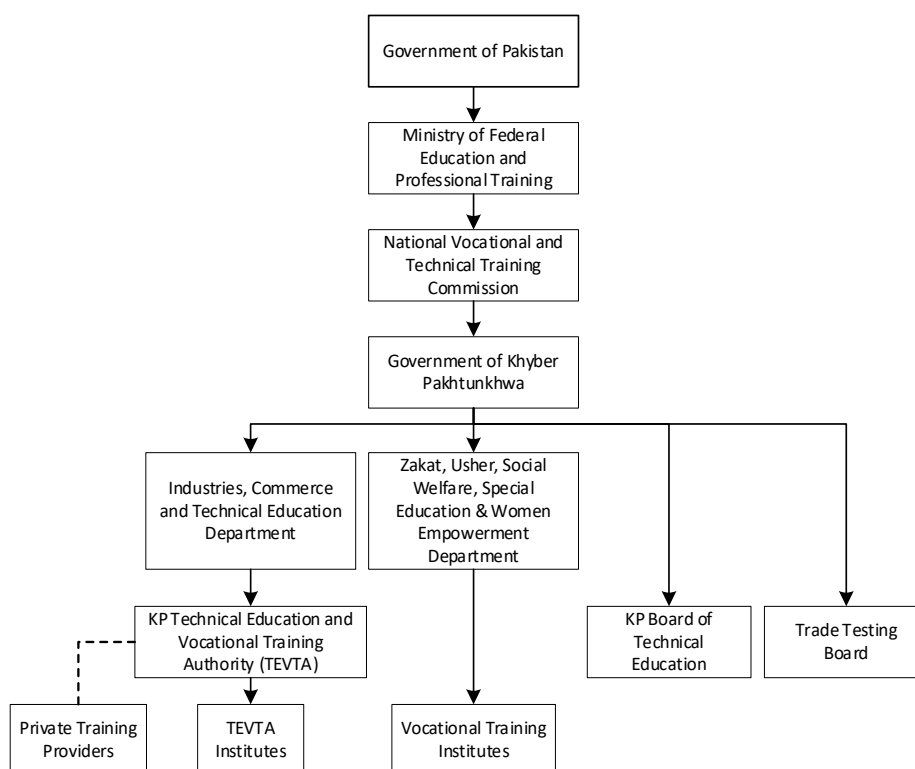
Source: Data Collection Survey on Education Sector in Pakistan, JICA Pakistan
Figure 2-7 Organogram of TVET Stakeholders in KP Government

The TEVTA position is similar to Punjab. KP BTE (Board of Technical Education) is responsible for assessment and certification as done in Punjab. It covers other areas than KP Province including ICT[64].

2.2.5 Budget for education sector of the federal and provincial governments

(1) Public expenditure on education

According to the report of Pakistan Economic Survey 2018-19, public expenditure on education was estimated at 2.4% of Gross Domestic Product (GDP) in 2017/2018, with a slight increase from 2.2% in 2016/2017. Public expenditure on education by other neighboring countries is much greater, compared to Pakistan, in terms of the percentage of their GDP[65]. According to the report of Pakistan Economic Survey 2015-16, public expenditure on education was 4.6 % of GDP by Afghanistan, 6 % by Bhutan, 5.2% by Maldives, and 3.8% by India. EFA Global Monitoring Report 2016 states that most of less developed countries of the world spent much more than 4% of their GDP on education (see the table below).

Table 2-2 Expenditure on Education in South Asia and Sub-Sahara African Countries (above 4 % of GDP)

Country	Region	% of GDP	% of Total Budget
Bhutan	South Asia	5.9	17.8
India		3.0	14.1
Maldives		5.2	15.3
Nepal		4.7	22.1
Burkina Faso	Sub-Sahara Africa	4.5	19.4
Ethiopia		4.5	27.0

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[64] http://www.kpbte.edu.pk/pages/introduction.aspx
[65] ibid.

Ghana			6.0	21.7
Malawi			6.9	16.3
Mali			4.3	18.2
Niger			6.8	21.7
Rwanda			5.0	16.6

Source: EFA Global Monitoring Report 2016

According to the draft NEP 2017, most of the total budget for education in Pakistan is usually spent on recurrent heads, mainly salaries, and only small portion is left as development budget for the provision of school facilities, teachers' training, curriculum development, monitoring and supervision of education, and so on[66]. Moreover, this draft policy considers it as problematic that most of the meager allocated for development budget is not utilized mainly due to poor management at different levels. For the year of 2012/2013, for example, development expenditure was only 5% of the total education budget in Punjab, 6% in Sindh, 9% in Balochistan, and 22% in KP. Furthermore, the utilization of the meager development budget allocation for 2012/2013 was only 23% for Punjab, 41% for Sindh, 72% for KP, and 82% for Balochistan (see the table below).

Table 2-3 Distribution of Education Expenditure by Current and Development Heads (2012/2013)

Province	Distribution of Actual Education Expenditure (in million PKR)			Proportion of Actual Education Expenditure	
	Current	Development	Total Amount	Current	Development
Punjab	186,763	9,323	196,086	95%	5%
Sindh	92,697	5,728	98,425	94%	6%
KP	65,856	18,602	84,458	78%	22%
Balochistan	26,601	2,570	29,171	91%	9%
Federal	57,027	14,686	71,713	80%	20%
Total	428,944	50,909	479,853	89%	11%

Source: Office of the Controller General, Accounts, 2013, Government of Pakistan cited in National Education Policy 2017

ADB's education sector assessment report provides some of the reasons why the execution rate of development budget is low. First, the main reason is that provincial governments lack the capacity to make and execute budget plans. Regarding the construction, repair, and maintenance of school buildings and purchase of furniture, which occupy the majority of development budget, provincial education departments and district education offices lack the capacity of coordination with constructors and vendors to manage the delivery date for each project and cause delays for many projects. Secondly, the delay in budget allocation from each provincial government/finance department to education department and educational offices also affects the low budget execution rate. According to the ADB report, although the annual development programme budget allocated to each province comes to each provincial government/finance department in June, the budget is allocated to education department/education offices only in September. Thirdly, lack of understanding of the procurement system (rules) by education departments/education offices is also the reason for insufficient budget execution. In the case of Sindh, it is very likely that one out of every four publicly announced new projects by education department/education offices is inappropriate procurement, and the department/offices spend four months to redo it[67].

As stated in the draft NEP 2017, the Government is committed to increase financial resources for education. As the figure below shows, education-related expenditure has been gradually rising since 2013-2014, and the expenditure of 2017-2018 (PKR829.2 billion) increased by 18.6%, compared to that of 2016-2017[68] (see the figure below).

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[66] The National Education Policy 2017
[67] ADB. (2019). *School Education in Pakistan: A Sector Assessment.*
[68] Pakistan Economic Survey 2018-2019 (Chapter 10 Education)
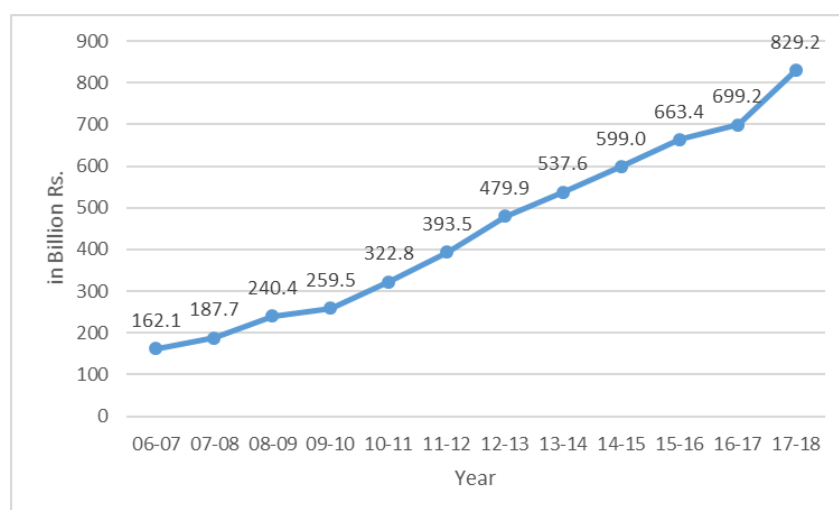
Source: Pakistan Economic Survey 2018-19 (Chapter 10 Education)
Figure 2-8 Trend of Total Education Expenditure (2006-07 to 2017-18)

The unbalanced distribution of education expenditure on current heads was slightly improved in 2017/2018 for Punjab, Sindh, and Balochistan, while that for KP and Federal Level was more unbalanced (see the table below).

Table 2-4 Distribution of Education Expenditure by Current and Development Heads (2017/2018)

Province	Distribution of Actual Education Expenditure (in million PKR)			Proportion of Actual Education Expenditure	
	Current	Development	Total Amount	Current	Development
Punjab	295.893	44,910	340,803	86.8%	13.2%
Sindh	152,298	13,705	166,003	91.7%	8.3%
KP	126,149	16,494	142,643	88.4%	11.6%
Balochistan	47,107	5,673	52,780	89.3%	10.7%
Federal	100,428	26,495	126,923	79.1%	20.9%
Total	721,875	101,277	829,152	87.1%	12.2%

Source: Pakistan Economic Survey 2017-18

(2) Expenditure on TVET

The budget for TVET is dealt within that of education in general. The above budget for education is supposed to be all the expenditure on education including TVET. Figures in the Table 2-5 are presented in different manner by sub-sector in the same document as shown in the following table.

Table 2-5 National Education Expenditure by Sub-Sector Heads (2012/2013)

Province	Distribution of Actual Education Expenditure (in million PKR)					
	FY2010/11	FY2011/12	FY2012/13	FY2010/11	FY2011/12	FY2012/13
Primary Education	100,518	132,150	178,255	39.3%	37.4%	37.1%
Secondary Education	77,828	108,648	138,512	30.4%	30.7%	28.9%
General Universities, Colleges & Institutes	60,365	69,453	82,616	23.6%	19.6%	17.2%
Teacher & Vocational Training	8,886	9,572	10,484	3.5%	2.7%	2.2%
Others	8,306	33,733	69,986	3.2%	9.5%	14.6%
Total	253,903	353,556	479,853	-	-	-

Source: Office of the Controller General, Accounts (CGA), 2013, Government of Pakistan cited in National Education Policy 2017

As observed in the table, expenditure specifically on TVET, including teacher training as well, is considered to be small, which are 2% to 4% of total expenditure on education. Public Financing

in Education Sector published by AEPAM reports figures by Provinces (ICT does not appear in the data). The following table and figure show budget allocation as well as expenditure by Province.

Table 2-6 Budget Allocation and Expenditure on TVET by Province (PKR In billion)

		FY2016/2017				FY2017/2018				FY2018/2019	
		Allocation	% in Total	Expenditure	% of Allocation	Allocation	% in Total	Expenditure	% of Allocation	Allocation	% in Total
Punjab	Total	379.462		344.966		356.5		334.256		383.254	
	TVET	7.897	2.08%	8.586	109%	6.755	1.89%	6.229	92%	6.455	1.68%
Sindh	Total	189.092		155.722		204.775		145.025		205.654	
	TVET	5.97	3.16%	3.976	67%	6.131	2.99%	4.743	77%	5.96	2.90%
KP	Total	133.934		126.51		155.977		130.253		168.199	
	TVET	2.847	2.13%	2.366	83%	2.954	1.89%	1.904	64%	2.677	1.59%
Balochistan	Total	49.452		60.464		53.925		47.57		63.261	
	TVET	0.606	1.23%	0.957	158%	0.618	1.15%	0.476	77%	0.634	1.00%

Source: Public Financing in Education Sector 2019, AEPAM
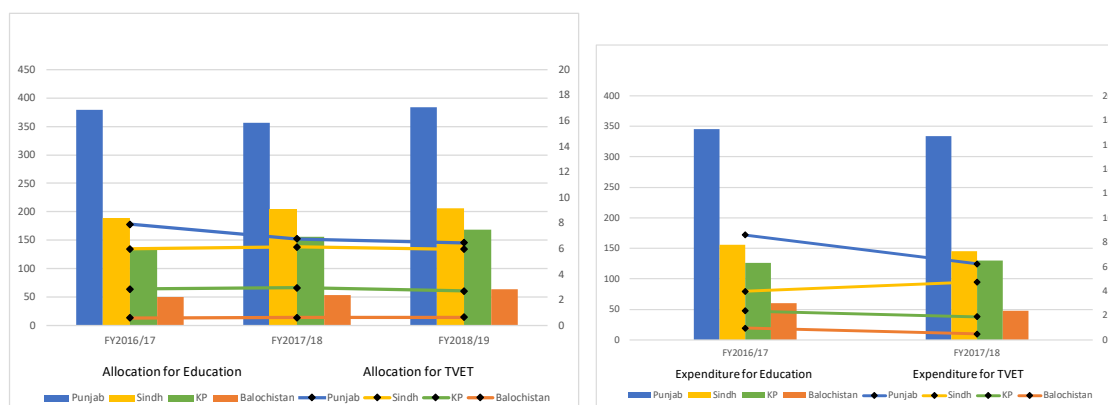
Source: Public Financing in Education Sector 2019, AEPAM
Figure 2-9 Budget Allocation and Expenditure on TVET by Province (PKR in billion)

Please note that bars represent education in total with scales on the left while lines represent TVET with scales on the right. It is observed that expenditure exceeded allocation in Punjab and Balochistan in FY 2016/17 although the amounts are still small compared to those for education in total. When compared with Figure 2-8, steady increase observed in Figure 2-8 is not seen in this set of data.

Finance authority of both Federal and Provincial Government archiving budget documents. In federal level, Budget Statement 2019/20 published by Federal Ministry of Finance does not have any description of NAVTTC while Higher Education Commission, which is another commission under the MFEPT, is given independent budget. It may be possibly included in the budget for MFMPT. It may be included in education budget as a whole. Since all the project type activities are funded by international donors through TSSP, its own budget from the Federal Government would be very minimum for salaries for government employees and office operation and maintenance.

Budget Estimates 2019/20 of Balochistan Province has figures specifically for Technical Education and Manpower. Budget Statement 2019/20 of Punjab Province has Grant Aid to TEVTA specifically. And it is unique in Punjab, there is a TVET organization named Punjab Vocational Training Council which is basically financed by Department of Zakat and Ushr. Sindh and KP budget document do not show specific expenditure items for related to TVET. It is not clear if they are included in budget related to education or industry development.

2.3 School Education (Basic Education)

2.3.1 Types and number of schools in basic education (G1-G10)

National Education Policy Framework 2018 describes the existence of three types of schools, namely public sector schools, private sector schools, and madrassah schools. It urges the issue of differences in standard and quality of education, so that "Uniform Education System" is defined as one of the prioritized strategies. Apart from public schools, because accreditation system is not established, the number of private and madrassa schools as well as that of students going to those schools are not fully grasped by the educational statistical bodies (private school registration mechanism will be described later). As a consequence, those students attending unregistered private or madrassa schools are considered to be out-of-school children in the educational statistics because they do not have any record of school enrolment. 50,915 private schools from Grade1 to 8 (18,753 primary and 32,162 middle) are counted in Pakistan Education Statistics 2016-17 as compared with 135,577 public ones (119,149 primary and 16,428 middle). And there are 32,272 madrassa schools, including both public and private institutions of all grades, according to the same source. However, the number of private and madrassa schools are only "estimated using past trend[69]". During the present survey, it was frequently mentioned by several educational administrators that the number of OOSC would be considerably reduced if the data of all private and madrassa schools were correctly inputted in the provincial and national Education Management Information System (EMIS).

According to Pakistan Education Statistics 2016/2017, there is a total number of 150,129 primary schools across Pakistan, out of which 131,376 (88%) are in public sector, whereas 18,753 (12%) are in private sector (see the table below). The size of public sector's primary schools, specifically in rural area, tends to be much smaller than that of private sector's primary schools since most of private sector's schools are in urban area.

Table 2-7 Educational Institutions by Level and Sector (2016/2017)

Level	Public	Other Public	Private	Total
Primary	119,149	12,227	18,753	150,129
Middle	16,428	500	32,162	49,090
High	12,576	553	18,422	31,551
Total	148,153	13,280	69,337	230,770

Note: "Other Public" means Public Institutions run by other than Provincial/Regional Education Departments.
Source: Pakistan Education Statistics 2016-17.

In Pakistan, there are 49,090 middle schools, of which 16,928 (34%) are in the public sector, whereas 32,162 (66%) are in private sector[70], as shown in the table above. Compared to the primary level, the private sector has a much higher proportion of middle schools than in the public sector. The table below shows the data of all institutions in Pakistan, disaggregated by province, level, sector, and type of schools/education (boys, girls, and co-education schools).

Table 2-8 Institutions by Sector, Province, Level, and Gender 2016/2017

Province Region	Level	Public Sector			Other Public Sector				Private Sector			
		Boys	Girls	Total	Boys	Girls	Co-ed	Total	Boys	Girls	Co-ed	Total
Punjab	Primary	20,868	16,122	36,990	125	513	9,429	10,067	203	435	11,820	12,458
	Middle	3,737	4,631	8,368	17	16	229	262	538	1,136	22,599	24,273
	High	3,412	2,991	6,403	79	56	154	289	1,302	1,373	9,322	12,007
Sindh	Primary	29,888	8,244	38,132	342	870	0	1,212	2	184	2,822	3,086
	Middle	1,474	767	2,241	53	68	0	121	80	64	3,536	3644
	High	1,136	583	1,719	57	62	0	119	44	118	3,325	3,554

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[69] Pakistan Education Statistics 2016-17, MoFEPT, p.49
[70] ibid.

KP	Primary	13,537	8,642	22,179	11	99	636	746	32	16	1,227	1,275
	Middle	1,480	1,131	2,611	8	6	88	102	115	30	2,115	2,260
	High	1,417	778	2,195	27	19	79	125	160	60	1,496	1,716
Balochistan	Primary	8,455	3,172	11,627	134	54	0	188	73	31	393	497
	Middle	736	535	1,271	5	4	0	9	10	6	279	295
	High	620	285	905	5	2	0	7	18	4	157	179
ICT	Primary	112	79	4,202	0	0	7	7	4	1	376	721
	Middle	23	37	1,011	0	0	0	0	1	2	411	903
	High	45	52	718	0	0	4	4	7	5	251	377
Pakistan	Primary	78,601	40,548	119,149	617	1,538	10,072	12,227	445	700	17,608	18,753
	Middle	8,501	7,927	16,428	85	98	317	500	801	1,267	30,094	32,162
	High	7,401	5,175	12,576	174	142	237	553	1,702	1,589	15,131	18,422

Note: "Other Public" means Public Institutions run by other than Provincial/Regional Education Departments.
All figures on Pakistan include data of four provinces, ICT, AJ&K, GB, and FATA.
Source: Pakistan Education Statistics 2016-17

The table above indicates that all schools in public sector are separated by gender and there is no co-educational school under the formal system. However, some public girls' primary schools in rural areas, in particular, allow boys to attend classes in lower grades. In urban areas, too, co-education is carried out in the school adopted by private sector which was visited during the present survey (detailed later). The limitation on co-education is based on the idea of *purdah* which is a religious and social practice of female seclusion prevalent among many Muslim communities in Pakistan and other traditional Islamic societies in the world. On the other hand, most of private sector's primary and middle schools are co-educational across the country. As a whole, there is not a critical difference in number of schools among different levels across the country; however, the number of middle schools and high schools in public sector are quite few, compared to the number of primary schools in public sector. In Sindh and Balochistan, girls' schools are much less than a half of boys' schools at the primary level in particular. Thus, the additional construction of girls' schools or upgradation of girls' primary schools to their middle schools should be one of the most urgent needs to be addressed.

All provinces and ICT have a law and regulations regarding the registration of private schools and an organization in charge of it (see Table 2-9). According to the law, all newly established and existing private schools must be registered to the government by completing the set procedures and paying the fee. However, there is an issue of implementation. For example, Punjab Education Sector Plan (2019/20 – 2023/24) points out that the integration of private sector in the government education system has not been completely realized yet and there remains lots of unregistered private schools[71]. Moreover, the registration procedures are not clear[72], so that the operation of unregistered schools is overlooked though the registration is a legal duty.

Table 2-9 Law and Organization Related to Primary School Registration

Province	Law and regulation	Organization in charge
Punjab	Punjab Private Educational Institutions (Promotion and Regulation) Ordinance, 1984 Punjab Private Educational Institutions (Promotion and Regulation) (Amendment) Act 2017	District Committee to act as Registering Authority
Sindh	Sindh Private Educational Institutions (Regulation and Control) Ordinance 2001 Sindh Private Educational Institutions (Regulation and Control) (Amendment) Act 2003	Directorate of Inspection and Registration of Private Institutions, Sindh

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[71] Government of the Punjab. (2020). *Punjab Education Sector Plan 2019/20-2023/24*, p.55.

[72] The above cited document of Punjab province describes that the laws and regulations related to private school registration do not have quality standards, so that enrollment in a private school is not yet assured. The first condition for private school registration in ICT barely says, "in general terms it is suitably located, staffed and equipped with proper learning facilities" (http://www.peira.gov.pk/ Registration.htm).

Balochistan	Balochistan Private Educational Institution Registration and Regulation Authority Act, 2015	Balochistan Education Foundation (Balochistan Private Educational Institution Registration and Regulation Authority)
KP	Khyber Pakhtunkhwa Private Schools Regulatory Authority Act, 2017	Private Schools Regulatory Authority, Government of KP
ICT	Islamabad Capital Territory Private Educational Institutions (Registration and Regulation) Act 203	Islamabad Capital Territory-Private Educational Institutions Regulatory Authority

Source: Constructed by the Survey Team

With regard to the service provision by the private sector, the number of low-cost private schools is quickly increasing. They may have lower cost per student than public schools and thus charges low fees (often between PKR 10 to 2,500 per months[73]). However, a World Bank funded research revealed that the student performance in those schools tend to attain higher level than their counterparts in government schools[74]. Furthermore, the research report says, "The public-private learning gap is much larger than that across children from different socioeconomic backgrounds[75]" and "Even among schools with similar students, similar infrastructure and STR, private schools substantially outperform government schools[76]." After an experimental research comparing the group of low cost private schools belonging to the villages where all private schools received unconditional cash grants of PKR50,000 (treatment 1), the group of private schools granted as only one school in the village (treatment 2) and the group of schools without cash grants (control), the team of almost the same researchers as those of the above-cited research concluded that alleviation of financial constraints leads schools to significant gains in enrolment and/or learning. And to explain the research result that the increased test score of students could observed only in the treatment 1 group, they argued that under the condition of high saturation, that means the situation in which all schools have equal access to finance, private schools "have a greater incentive to invest in quality to avoid a price war by competing over the same set of students."

Moreover, under the framework of PPP, currently expanding adoption of public schools by the private sector including non-profit organizations is providing good examples in terms of improved quality of education[77].

BOX-1 Renovation of a Government School by Adoption (an example)

NJV Government Higher Secondary School was founded in 1855 as the first public school in Sindh. It is in Saddar Town at the central part of Karachi, where many historical monuments of the British colonial era are situated. This old town is now resided particularly by underprivileged population. The school has 1,020 students from preprimary to higher secondary level and of the College of Visual Arts.

In 2015, the Government of Sindh made this historical educational institution adopted by a non-profit company named Akhuwat. It was established in 2001 and first engaged in the provision of microfinance for marginalized segments of the society. This PPP operation is carried out under the Adopt-A-School Programme of Sindh Education Foundation (SEF), which is an autonomous body affiliated to the School Education and Literacy Department. For the purpose of improving government schools, SEF started the programme in 1998 and is supporting 582 schools in 18 districts with the help of 102 adopters, including individuals, organizations and groups such as educationists, local community-based organizations (CBOs),

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[73] According to the Semiotics survey results.
[74] Andarabi, T., Das, J., Khwaja, A. I., Vishwanath, T. & Zajonc, T. (2009) *PAKISTAN Learning and Educational Achievements in Punjab Schools (LEAPS): Insights to inform the education policy debate*, World Bank
[75] ibid. p.31
[76] ibid. p.33 In the citation, STR stands for "student-teacher ratio".
[77] For example, NJV Government Higher Secondary School in Karachi which is adopted by an NPO named Akhuwat and was visited by the Survey Team

NGOs, and members of the armed forces[78].

After the planning stage, the actual operation started in 2017. Akhuwat has been renovating physical facilities and providing technical assistance in school management and pedagogy. With regard to the teaching staff, while there were 151 government teachers before the adoption, 35 of them are continuing working and 47 were newly recruited on a merit-basis (all of them are paid by the government). Besides the teaching staff, Akhuwat has appointed 70 staff including management and academic personnel. Through Akhuwat's intervention, teachers' pedagogical skills have been improved, and the school has been equipped with a variety of teaching-learning materials, including Information and Communication Technology based ones. An English lesson adopting phonics method in which children are actively engaged in learning by singing and dancing according to the video programme projected on a large screen was observed during the school visit in the present survey. Teachers now adopts activity-based methodologies and have opportunities to share their classroom experiences with their colleagues in teacher meetings which hardly took place earlier. Students also participates in various co-curricular activities, such as continuing education programmes, practical learning activities with external experts, paining workshops, summer camps, etc. The school is strengthening communication with parents about their children's performance and attendance. The running costs of PKR4 million per month are all funded by the Government of Sindh.

As a consequence of the two-year intervention, students' attendance rate has increased from 20-25% to 96-97%, and pass-out rates in the final exams (Grade 4 onward) have increased by 4-5%. Now, the school is trying to engage the parents more in school activities by activating the Parent-Teacher Association. The School Education and Literacy Department, while acknowledging the improved performance of the school in comparison with that under the government operation, is now considering the cost effectiveness of this PPP model and the possibility of further expansion.

2.3.2 Curriculum, textbooks and evaluation

(1) Curriculum and textbooks

From 2006 to 2007, the Ministry of Education developed National Curriculum 2006 for Grades 1 through 12. The main objectives of its development were "to make the curriculum more vibrant and more responsive to the modern, socio-economic, technical, professional and labour market needs of the country[79]". As a feature of the curriculum, it determined standards, benchmarks, and learning outcomes for each subject in a structural manner.

Afterward, as a result of the 18th amendment to the Constitution passed by the National Assembly in April 2010, "education, including curriculum, textbooks and all other related matters

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[78] Adopt-A-School-Programme (AASP) retrieved on March 19, 2020 from https://www.sef.org.pk/sef-adopt-a-school-program/

[79] National Curriculum for Mathematics Grades 1-XII 20016, Ministry of Education, 2006, p.1

concerning learning in the schools, are now the sole responsibility of the provinces and areas[80].”
Then, by reviewing the aforementioned National Curriculum 2006, each province has been
developing its curriculum according to which textbooks are elaborated and published. The Table
2-10 represents the relevant legislations, responsible organizations and the latest status of the
provincial curricula. Meanwhile, as described in “1.3.1 Islamabad Capital Territory”, since ICT
is not a province which is a main actor determined by the Constitution, there are some setbacks
in education development in comparison with other provinces. After the National Curriculum was
developed in 2006, no curriculum review had happened until the ongoing development of “Single
National Curriculum” started (details will be provided later).

Table 2-10 Legislations, responsible organizations and the status of the provincial curricula

Province	Legislation	Responsible Organization	Current Status of Curricula
Punjab	Punjab Curriculum and Text Board Act (2015)	Punjab Curriculum and Text Board	Provincial curricula are notified in 2019 for Pre-Primary, Urdu (G1-8), General Knowledge (G1-2), English (G1-12), Mathematics (G1-10), Islamiyat (G3-12), Social Studies (G3-5), Science and Technology (G3-10), Computer Education (G6-8), History (G6-8), Geography (G6-8), Physics (G9-12), Chemistry (G9-12), Biology (G9-12), Computer Science and IT (G9-12), General Mathematics (G9-12), Agriculture (G9-12), Ethics and Maternity (G3-12).
Sindh	Sindh School Education Standard and Curriculum Act 2014	Directorate of Curriculum, Assessment & Research Sindh	Provincial curricula are notified by 2019 for Biology (G11-12), Computer Science (G9-12), ECCE, English (K-G12), English Literature (G11-12), Ethics (G3-5), Islamiat (G11-12), Pakistan Studies (G9-10), Physics (G11-12), Social Studies (G6-8), Sindhi (G1-5 and G11-12), Urdu (G1-5).
Balochistan	Administrative order in the light of Federal Act of National Bureau of Curriculum in 1976.	Bureau of Curriculum and Extension Centre Balochistan	Though it is mentioned that curriculum development and review is the mandate of the Bureau, the latest status of the review is not available.
KP	Supervision of Curricula, Textbooks and Maintenance of Standards of Education Act 2011	Directorate of Curriculum and Teachers Education	On the basis of the National Curriculum 2006, KP Textbook Board reviews it and publishes textbooks in accordance with KP Textbooks and Learning Materials (KPTLM) Policy 2017.

Source: Constructed by Survey Team

Textbooks are developed at the provincial level. The responsible organizations are Punjab
Curriculum and Textbook Board, Sindh Textbook Board, Balochistan Textbook Board, and
Khyber Pakhtunkhwa Textbook Board respectively. At the federal level (ICT), Academic Wing
of the Federal Directorate of Education is in charge of provision of textbooks for students from
preprimary to G10. National Curriculum 2006 is statically implemented, and the textbooks
developed by the then National Bureau of Curriculum and Textbooks before the devolution are
being used. For public schools, textbooks developed by the competent authorities are provided
free of charge by the provincial government while a variety of textbooks developed by publishing
houses are used in private schools. Use of teaching-learning materials in private schools is not
well controlled by the government authorities[81].

National Curriculum Council (NCC) was established under the Ministry of Federal Education and
Professional Training. It consists of three members from each Province/Area – one from
Curriculum Bureaus, one of Textbook Book Boards, and one from Education Department. In 2017,
National Curriculum Council approved National Curriculum Framework (NCF) which is a policy

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[80] National Curriculum Framework Pakistan, MoFEPT, 2018, p.xi
[81] For example, an article on the use of textbooks without approval appears on a newspaper. (retrieved on March 18, 2020, from https://www.dawn.com/news/1506733)

document to provide "guidelines for achieving national Vision. Mission, Goals and Objectives of education through school curricula.[82]" It was developed in consultation with all the federating units. It gives guidelines as to how to develop curriculum, textbooks and supplementary learning materials, how to carry out assessment and examination and teacher education, and how to ensure favorable learning environment, and so forth.

At the time of this survey, NCC is developing the "Single National Curriculum" in consultation with the federating units. According to the NCC[83], the curricula for pre-primary to Grade 5 are supposed to be notified at the end of March 2020. Likewise, those for Grade 6-8 would be completed in March 2021 and for Grade 9-12 in March 2022. The key considerations for the Single National Curriculum are:

- Constitutional framework

- National policies, aspirations and national standards

- Alignment with the goals and targets of SDG4

- Emerging international trends in teaching, learning and assessment

- Outcomes based approach

- Focus on values, life skills based and inclusive education

- Respect and appreciation for different cultures and religions in local and global context

- Promotion of intellectual, spiritual, aesthetic, emotional, social and physical development of learners

- Move away from memorization and focus on project, inquiry and activity-based learning

- Development of 21st century skills including analytical, critical and creative thinking

- Use of information and communication technology

- Alignment with Trends in International Mathematics and Science Study (TIMSS)

(2) Assessment and Evaluation

Before the devolution having resulted from the 18th constitutional amendment, the National Education Assessment System (NEAS) with provincial arms known as the Provincial Education Assessment System (PEAS) carried out assessments across Pakistan in subjects such as mathematics, science and language in Grade 4 and Grade 8. NEAS continues nationwide assessment called National Achievement Test as a sample-based assessment to draw a holistic picture of student achievement in the education system of Pakistan.

The devolution has given the provincial governments right and responsibility for educational evaluation, so that they came to conduct their examinations at Grade 5 and Grade 8 to issue completion certificate of primary education and middle education respectively. The responsible authorities of the provinces are Punjab Examination Commission (PEC), Directorate of

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[82] National Curriculum Framework Pakistan, MoFEPT, 2018, p.xi

[83] Interview on Feb. 4, 2020 with Muhammad Rafique Tahir, Joint Educational Advisor, NCC. Meanwhile, on the basis of the devolution after the 18th constitutional amendment, there are strong resistances to the adoption of one common curriculum throughout the country. Therefore, many concerned people expressed during the present survey their doubt about the possibility of its approval or its implementation in provinces even if approved. Furthermore, the completion of development of the Single National Curriculum was reported to the Prime Minster by MoFEPT on March 20, 2020 and recruitment of textbook authors in accordance with the new curriculum started on May 1, 2020 (https://www.facebook.com/PAKISTANNCC/)

Curriculum, Assessment & Research, Sindh (DCARS), Balochistan Assessment and Examination Commission (BAEC), and Directorate of Elementary and Secondary Education Department of KP. Respective provincial Boards of Intermediate and Secondary Education (BISE) also carry out assessments for secondary grade levels.

At the time of the survey, the examination framework for primary and middle education is in a transition period. In the school year 2019/20, as far as confirmed, primary completion examination at Grade 5 is abolished in Punjab, and that of Grade 8 is expected to be abolished before long. The justification for this action is that young students' anxiety about examinations should be removed and repetition should be avoided to improve their retention at school. The Constitution guarantee the right to education for children and therefore no certification is required if they do not get out of the school system. Instead of terminal examination, they give emphasis on the classroom assessment on a more regular basis. To help the teachers conduct classroom assessment, PEC develops test items and makes an "item bank" so that teachers can choose items relevant to the learning contents of the lessons just completed. Because assessment which is used to be conducted by PEC will be carried out at school level under the supervision of the district, it is pointed out that educational administrators and teachers must receive adequate training[84].

2.3.3 Teachers

(1) Statistics on number of teachers

In Pakistan, there are 1.47 million teachers in total who teach in primary, middle, or high school/level of public or private sector. Of this total, 0.453 million teachers teach in primary school/level, of which 0.339 million are public sector's teachers and 0.114 million are private sector's teacher (see the table below). In both middle and high school/level, the number of teachers teaching in private sector schools exceeds that of teachers teaching in public sector schools.

Table 2-11 Teachers by Level and Sector (2016/2017)

Level	Public	Other Public	Private	Total
Primary	322,267	16,968	114,379	453,614
Middle	134,103	3,982	317,360	455,445
High	229,656	11,622	319,364	560,642
Total	686,026	32,572	751,103	1,469,701

Note: "Other Public" means Public Institutions run by other than Provincial/Regional Education Departments.
Source: Pakistan Education Statistics 2016-17.

The table below shows the data of all teachers for primary-, middle-, and high-school levels in Pakistan, disaggregated by sector, province/region, level, and gender.

Table 2-12 Teachers (Public, Other Public & Private Sector School)
by Province, Level, and Gender 2016/2017

Province	Level	Public Sector School			Other Public Sector School			Private Sector School		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Punjab	Primary	47,345	67,341	114,686	1,833	10,453	12,286	9,465	64,578	74,043
	Middle	31,836	48,888	80,724	481	1,561	2,042	39,811	201,341	241,152
	High	65,331	59,885	125,216	2,011	4,502	6,513	43,962	161,278	205,240
Sindh	Primary	67,695	23,397	91,092	879	1,939	2,818	3,189	17,499	20,688
	Middle	8,116	5,119	13,235	161	642	803	7,554	26,662	34,216
	High	20,866	15,213	36,079	476	1,519	1,995	13,980	49,465	63,445
KP	Primary	47,061	26,729	73,790	242	1,076	1,318	3,338	5,471	8,809
	Middle	8,951	6,002	14,953	334	668	1,002	10,785	12,723	23,508
	High	20,120	9,351	29,471	1,098	1,407	2,505	16,967	15,069	32,036

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[84] In an interview with PEC on February 11, 2020 during the Consultative Mission for AQAL Project.

Balochistan	Primary	12,802	5,341	18,143	115	24	139	946	1,321	2,267
	Middle	7,981	4,947	12,928	52	42	94	1,049	1,890	2,939
	High	12,845	6,547	19,392	33	96	129	1,423	2,004	3,427
ICT	Primary	590	1,865	2,455	8	66	74	329	3,279	3,608
	Middle	212	534	746	-	-	-	696	4,405	5,101
	High	950	1,122	2,072	49	57	106	934	4,302	5,236
Pakistan	Primary	188,068	134,199	322,267	3,207	13,761	16,968	19,663	94,716	114,379
	Middle	64,307	69,796	134,103	1,045	2,937	3,982	64,404	252,956	317,360
	High	131,861	97,795	229,656	3,760	7,862	11,622	82,443	236,921	319,364

Source: Pakistan Education Statistics 2016-17
Note: All figures on Pakistan include data of four provinces, ICT, AJ&K, GB, and FATA.

Based on the data shown in the table above, teaching posts in private sector schools and other public sector schools are largely dominated by women almost regardless a difference of levels and provinces/region. In public sector schools, on the other hand, the number of male teachers exceed that of female teachers at all levels in Sindh, KP, and Balochistan, while the cases of Punjab and ICT are opposite.

Table 2-13 and Figure 2-10 represent the member of teachers distributed by province, level of education, all or public institutes, location in terms or urban or rural area. Except for Punjab province and ICT, number of female teachers of public schools in rural areas is considerably fewer than that of the male counterpart, especially in primary schools. Lack of female teachers becomes often an obstacle to girls' schooling when the parents have willingness to make their daughters taught by female teachers[85]. Therefore, by studying the statistics about teachers' number, one reason for unfavorable enrolment rate of rural girls can be immediately identified.

Table 2-13 Number of Public School Teachers by Province, Level, Gender and Location (2016/17)

Province	Level	Urban			Rural			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Punjab	Primary	5,713	11,103	16,816	41,632	56,238	97,870	47,345	67,341	114,686
	Middle	5,202	10,075	15,277	26,634	38,813	65,447	31,836	48,888	80,724
Sindh	Primary	14,391	12,111	26,502	53,304	11,286	64,590	67,695	23,397	91,092
	Middle	2,328	3,061	5,389	5,788	2,058	7,846	8,116	5,119	13,235
KP	Primary	4,014	3,559	7,573	43,047	23,170	66,217	47,061	26,729	73,790
	Middle	802	707	1,509	8,149	5,295	13,444	8,951	6,002	14,953
Balochistan	Primary	2,585	1,538	4,123	10,217	3,803	14,020	12,802	5,341	18,143
	Middle	2,292	1,942	4,234	5,689	3,005	8,694	7,981	4,947	12,928
ICT	Primary	-	1,272	1,272	590	593	1,183	590	1,865	2,455
	Middle	13	241	254	199	293	492	212	534	746
Pakistan	Primary	26,967	30,131	57,098	161,101	104,068	265,169	188,068	134,199	322,267
	Middle	10,947	16,528	27,475	53,360	53,268	106,628	64,307	69,796	134,103

Source: Pakistan Education Statistics 2016-17, MoFEPT

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[85] *"Shall I Feed My Daughter, or Educate Her?" Barriers to Girls' Education in Pakistan*, Human Rights Watch, 2018
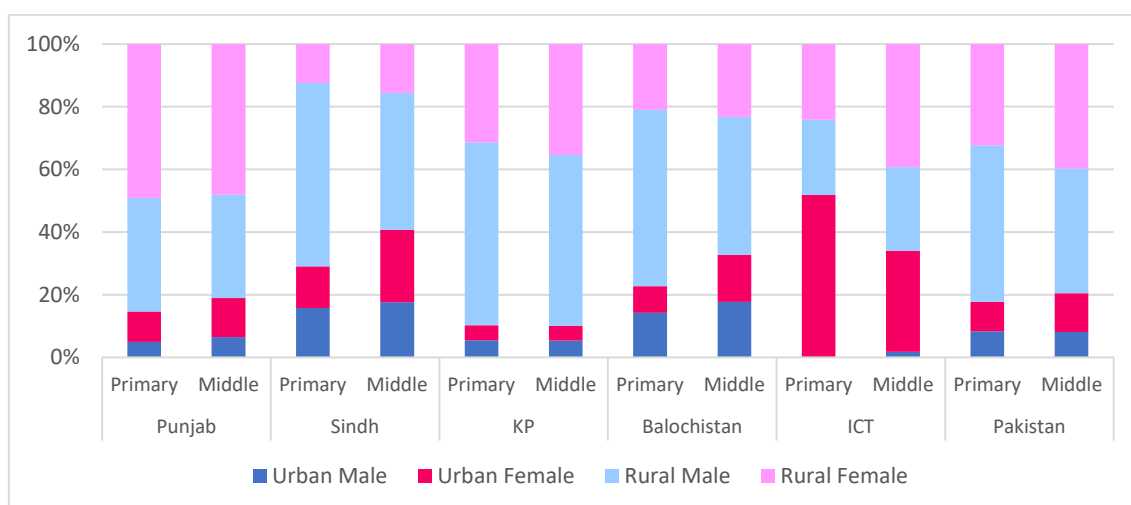
Source: Pakistan Education Statistics 2016-17, MoFEPT

Figure 2-10 Proportion of Public School Teachers by Province, Level, Gender and Location (2016-17)

The table below shows the number of teachers who are employed for sanctioned and filled-in posts, disaggregated by province/region, level, and gender.

Table 2-14 Sanctioned and Filled-in Teachers Posts in Public Schools by Province/Region, Level, and Gender (2016/2017)

Province/ Region	Gender	Primary		Middle		High		Total	
		Sanct-ioned	Filled-in	Sanct-ioned	Filled-in	Sanct-ioned	Filled-in	Sanct-ioned	Filled-in
Punjab	Male	-	47,345	-	31,836	-	65,331	-	144,512
	Female	-	67,341	-	48,888	-	59,885	-	176,114
	Total	149,880	114,686	118,571	80,724	186,016	125,216	454,467	320,626
Sindh	Male	-	67,695	-	8,116	-	20,866	-	96,677
	Female	-	23,397	-	5,119	-	15,213	-	43,729
	Total	-	91,092	-	13,235	-	36,079	-	140,406
KP	Male	64,754	47,061	13,763	8,951	32,462	20,120	110,979	76,132
	Female	39,092	26,729	9,864	6,002	16,071	9,351	65,027	42,082
	Total	103,846	73,790	23,627	14,953	48,533	29,471	176,006	118,214
Balochistan	Male	13,193	12,802	8,601	7,981	14,333	12,845	36,127	33,628
	Female	5,511	5,341	5,472	4,947	7,187	6,547	18,170	16,835
	Total	18,704	18,143	14,073	12,928	21,520	19,392	54,297	50,463
ICT	Male	-	590	-	212	-	479	-	1,281
	Female	-	1,865	-	534	-	711	-	3,110
	Total	-	2,455	-	746	-	1,190	-	4,391
Pakistan	Male	-	188,068	-	64,307	-	131,861	-	384,236
	Female	-	134,199	-	69,796	-	97,795	-	301,790
	Total	287,337	322,267	162,208	134,103	263,368	229,656	712,913	686,026

Source: Pakistan Education Statistics 2016-17.

Based on the above table, in Balochistan teachers have been hired and filled in at a number close to the number of the sanctioned teachers posts at all stages of education, while in Punjab and KP there is a gap between the numbers of the sanctioned and filled-in teachers posts and only 60 to 70% of the number of the sanctioned teachers posts have been filled in at all stages of education. On the other hand, in Sindh and ICT, it is uncertain to what extent the sanctioned posts have been filled in since the number of the sanctioned teachers' posts is unknown[86].

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[86] At least, on March 9, 2020 during the present survey, the issue of unoccupied posts was revealed by the interviewed teachers, so that it is very certain that all the posts are not filled.

Looking at teachers in public schools by their professional qualification, there is a certain number of teachers who have only "Primary Teaching Certificate" teach at middle and high school levels and of those who have only "Certificate of Teaching" teach at high school level in all of Punjab, Sindh, and KP (see the table below). More problematically, those who have not been trained teach at all levels, specifically in Sindh. In this light, it is critical for provincial education departments to recruit teachers on a merit basis, so that they can finally start addressing quality of education.

Table 2-15 Professional Qualification of Teachers by Province, Level, and Gender

Level	Professional Qualification	Punjab			Sindh			KP		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Primary	P.T.C	14,371	17,957	32,328	29,187	8,884	38,071	26,794	17,575	44,369
	C.T	4,110	1,757	5,867	2,384	1,395	3,779	4,984	1,934	6,918
	B.Ed/ BS.Ed	17,359	25,713	43,072	21,298	7,009	28,307	11,138	4,988	16,126
	M.Ed	5,695	10,811	16,506	6,405	2,910	9,315	3,646	1,871	5,517
	Other Trained	266	216	482	6,240	2,369	8,609	484	249	733
	Not trained	-	-	-	2,181	830	3,011	15	112	127
	Not mentioned	5,544	10,887	16,431	-	-	-	-	-	-
	Total	47,345	67,341	114,686	67,695	23,397	91,092	47,061	26,729	73,790
Middle	P.T.C	4,048	7,223	11,271	1,415	1,128	2,543	73	105	178
	C.T	2,433	2,249	4,682	486	445	931	748	529	1,277
	B.Ed/ BS.Ed	14,267	21,646	35,913	2,721	1,686	4,407	3,422	2,233	5,655
	M.Ed	6,406	12,789	19,195	1,786	1,103	2,889	1,738	1,255	2,993
	Other Trained	1,333	1,243	2,576	1,414	621	2,035	2,970	1,880	4,850
	Not trained	-	-	-	294	136	430	-	-	-
	Not mentioned	3,349	3,738	7,087	-	-	-	-	-	-
	Total	31,836	48,888	80,724	8,116	5,119	13,235	8,951	6,002	14,953
High	P.T.C	3,899	7,007	10,906	2,474	2,241	4,715	148	94	242
	C.T	3,656	3,295	6,951	2,257	1,443	3,700	1,785	675	2,450
	B.Ed/ BS.Ed	30,441	25,809	56,250	6,484	6,103	12,587	8,046	3,764	11,810
	M.Ed	17,064	17,065	34,129	6,571	3,925	10,496	5,361	2,797	8,158
	Other Trained	3,584	2,087	5,671	2,750	1,190	3,940	4,779	2,021	6,800
	Not trained	-	-	-	330	311	641	1	-	1
	Not mentioned	6,687	4,622	11,309	-	-	-	-	-	-
	Total	65,331	59,885	125,216	20,866	15,213	36,079	20,120	9,351	29,471

Source: Pakistan Education Statistics 2016-17.

(2) Teacher recruitment and deployment

With regard to the teacher recruitment process, lack of transparency and nepotism including political interference are often pointed out[87]. Teacher recruitment is usually carried out at the district level. The District Education Office recruits and employs necessary teachers according to the number and qualification of vacancies, transferred teachers, or newly established classes. However, the process is too often inequitable.

Against that background, recently, in order to exclude influencers' interference and make the procedures more objective, merit-based teacher recruitment is implemented and has succeeded to a certain degree by outsourcing the selection process to an organization independent from the administrative bodies, such as university[88]. Furthermore, as mentioned in Chapter 1, the education sector education plans for 2019 onward of Punjab and Sindh provinces include precisely merit-based teacher recruitment as a priority action (those of other provinces are not yet available), so that improvement could be expected in quality of teachers.

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[87] For example, ADB. (2019). *School Education in Pakistan: A Sector Assessment*
[88] Alam, A. (2015, May 1). The state of teacher recruitment in Pakistan. *The Express Tribune*. Retrieved from https://tribune.com.pk/story/973856/the-state-of-teacher-recruitment-in-pakistan/

In addition to the recruitment process, it is also often observed in Pakistan that teachers appointed in rural areas use political influences to realize their wish to be transferred to urban areas. As a consequence, sudden withdrawal and change of a teacher in a rural school practically hinder it from ensuring adequate quality in teaching. Every province tries to deal with the issue by suspending the teacher's right to transfer for 3 years after an appointment, for example, without obtaining however satisfactory results thus far[89].

(3)   Teacher education

As for teacher education, even before the 18th amendment, it was a mandate of provincial government. Table 2-16 represents provincial bodies in charge of pre-service and in-service teacher training.

Table 2-16 Provincial Organizations Responsible for Teacher Education

Province	Pre-Service Training	In-Service Training
Punjab	Government colleges for elementary teachers at the district level	Quaid-e-Azam Academy for Educational Development (QAED)
Sindh	Sindh Teacher Education Authority (STEDA)/ Directorate of Teacher Education Institutions	
	Teacher training institutions such as government elementary college of education	Provincial Institute of Teacher Education (PITE) Sindh
KP	Provincial Institute of Teachers Education (PITE) Khyber Pakhtunkhwa	
Balochistan	Teacher training institutes such as college of education under Higher Education Commission	Provincial Institute of Teacher Education (PITE) Balochistan
ICT	Academics Wing of FDE, Federal College of Education	

Source: Constructed by the survey team

In line with the education reform, higher qualification is required to become a teacher. NEP 2019 proposed a policy action of making minimum requirement for elementary teacher a bachelor's degree in academic area plus Bachelor of Education (BEd). However, the actual regulation differs from a province to another. Table 2-17 shows the requirement to become a teacher in each province.

Table 2-17 Requirement for Teacher by Province

Province	Level of Teacher	Required Qualification	
		Academic	Professional
Punjab	Elementary School Educator Senior Elementary School Educator Secondary School Educator (Art/Science)	Master's degree / BS (Honors) (16years) in different subject according to disciplines (arts/science)	BEd / BSEd / MEd / MSEd / ADE
Sindh	Junior Elementary School Teacher	Intermediate + ADE (3 years)	ADE
		BSc, BCS/MCS/BS (in any Computer Discipline), BA/BS/MA/MS English	MEd/BEd
	Secondary School Teacher	MSc/BSc, BCS/MCS/BS (in any Computer Discipline), BA/BS/MA/MS English	BEd (Honors)/BEd
KP	Primary School Teacher	Intermediate	PTC/Diploma in Education/ADE
	Elementary School Teacher	Bachelor's degree	CT/Diploma in Education/ADE
	Secondary School Teacher	Master's degree in the subject	BEd

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[89] ADB. ibid.

Balochistan	Junior Vernacular Teacher	Matric	PTC
	Junior English Teacher / subject / technical teacher	Intermediate	CT/ADE/ One-year Agr. diploma for technical
	Secondary School Teacher	BA/BSc	BEd

Note: ADE=Associate Degree of Education, BA=Bachelor of Arts, BCS=Bachelor of Computer Science, BEd=Bachelor of Education, BS/BSc=Bachelor of Science, BSEd=Bachelor of Science in Education, CT=Certificate in Teaching, MA=Master of Arts, MEd=Master of Education, MCS Master of Computer Science, MS.MSc=Master of Science, MSEd=Master of Science in Education, PTC=Primary Teaching Certificate
Source: School Education Department, Punjab. (2017). *Recruitment Policy 2017-18 for Educators and AEOs*; School Education Department, Sindh (2017). *Recruitment Policy-2017 Teaching & Non-Teaching*; Draft NEP 2017 for KP and Balochistan

National Education Policy Framework 2018 reveals several problems related to teachers which have direct linkage with low students' performance, including low content knowledge and weak pedagogical skills, and lack of subject specialist teachers particularly in mathematics, science, and English (less than 10% are science and mathematics graduates)[90].

According to the respective provincial education sector plans as well as the National Education Policy Framework, the federal and provincial governments presently promote a continuous professional development (CPD) model for teacher education, shifting from "the current discrete training system through sporadic donor interventions[91]." The School Education Sector Plan and Roadmap for Sindh (2019-2024) also justifies the strategy by describing, "In the past, in-service training has been conducted with the support of donors in selected key areas/themes and in a sporadic manner, repeatedly attracting the same participants, without necessarily leading to improved teaching quality[92]." The common characteristics CPD model may include 1) decentralized manner of training executed often at the school cluster level, 2) periodic and regular meeting of teachers to improve their professional capacity, 3) peer learning among teachers with the support of conventional teacher training institutions, and 4) expectation of linkage with career progression of teachers. Figure 2-11 represents the implementation process of the CPD model developed by Sindh Teacher Education Development Authority (STEDA). The Government of Sindh adopts the model and has a plan to promote it to improve capacity of teachers[93] (see BOX-2).

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[90] The same phenomenon was identified during a meeting with teachers at Government Boys' Secondary School of Bhiroo Village, Karachi on 9 March 2020.
[91] Balochistan Education Sector Plan 2013-2018, Policy Planning and Implementation Unit, Education Department, Government of Balochistan, p.48
[92] School Education Sector Plan and Roadmap for Sindh (2019-2024), School Education & Literacy Department Government of Sindh, p.10
[93] During the discussions with School Education and Literacy Department of Sindh in the present survey, adoption of the model was requested for the sake of consistency in case of JICA's possible assistance for CPD promotion.
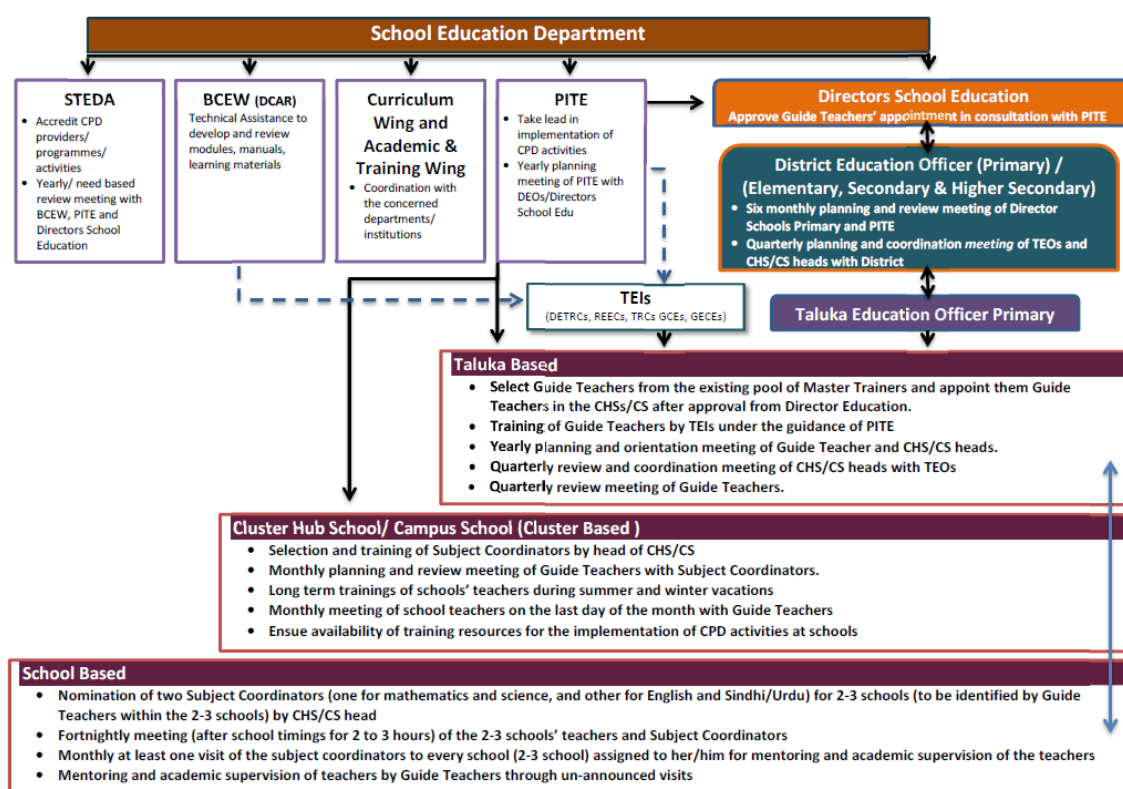
Source: CPD Model, Sindh Teacher Education Development Authority (STEDA), 2017
Note: BCEW = Bureau of Curriculum and Extension Wing; DCAR = Directorate of Curriculum, Assessment and Research; PITE = Provincial Institute of Teacher Education; CHS/CS = Cluster Hub School/Campus School; TEI = Teacher Education Institution; DETRC = Division/District Education Teacher Resource Centre; REEC = Regional Education Extension Centre; TRC = Teacher Resource Centre; GCE = Government College of Education; GECE = Government Elementary College of Education; TEO = Taluka Education Officer

Figure 2-11 Implementation Process of the CPD Model

BOX-2 CPD Model Just Initiated

In Sindh Province, with the support of British Council, cluster-based CPD model has been introduced in the Headquarters of 6 Divisions (Karachi, Hyderabad, Larkana, Mirpurkhas, Sukkur, Shaheed Benazirabad). Each division has one pilot cluster which consists of one cluster hub school and several government schools in the same Union Council.

Government Boys' Secondary School Bhiroo Village is such a cluster hub school of one of the 6 pilot clusters. It provides middle and secondary education (Grade 6-10) for 262 students is in a suburban area of Karachi City. The secondary school has 12 teachers and 6 administrative and support staff besides 7 vacant posts. In addition to the hub school, the cluster has 8 member primary schools located in the same Union Council (Murad Memon Goth). In fact, the Union Council has another Government Girls' Secondary School, and 2 other primary schools (one

girls' school and one mixed). Even though the teachers from those schools also attend training programmes of CPD, the schools do not belong to the cluster as a whole.

In January 2019, though the concept of CPD exists for two decades, the cluster-based CPD model was introduced there and a British Council's international consultant came to carry out a workshop to launch the model. The most recent collective activity for CPD was a workshop on the way to develop lesson plans facilitated by 2 national consultants. Along with such training workshops, 5 or 6 Guide Teachers have been selected among the experienced and competent ones to give pedagogical advice to their colleagues on a regular basis. They spend 3-4 hours a week to visit neighboring schools and observe classroom lessons. After the observation, Guide Teachers give suggestion to the observed teachers to improve the latter's way of teaching. Guide Teachers are not remunerated for their additional responsibility though they heard initially that PKR8,000 would be paid per month. The level of involvement of teacher training institutions in cluster-based CPD programme is not very high as they are currently helping teachers only understand documents and forms prepared in English.

Teachers in cluster schools expressed their needs for training in CPD programme about student-centered and activity-based teaching, learning by playing, teaching in multi-grade and multi-language situation, child-friendly environment, etc. in order to make their school more attractive and their teaching easy to understand for students. Taking account of the higher dropout rate of Grade 1 students than that of older ones, teachers pointed out that how to accommodate newly enrolled students in the first few months is critically important.

Sindh School Education Sector Plan and Roadmap 2019-2024 estimates the expenditure of PKR 2.84 billion for the promotion of cluster-based CPD for 5 years. At the time of the present survey, the project document (PC-1) necessary to get a provincial budget was in the process of approval, and the assistance of ADB and UNICEF was also planned (though its details were not certain). In the Sector Plan, it is scheduled to employ peer-coaching method among teachers and to establish a mechanism for teacher evaluation after they participate in CPD.

2.4 Technical and Vocational Education and Training

2.4.1 Institutions, options and qualifications of TVET

The following table illustrates position of TVET in education system in Pakistan indicated in the red. Although the source report was developed more than 10 years ago, however, there are no major changes identified.

As to paths from basic education to TVET prgrammes, majorities are either DAE (Diploma of Associate Engineer) that require completion of secondary school certificate for application or courses requiring completion of lower middle school. Other than these, there are also some courses whose minimum requirement is primary education. DAE is placed in the equivalent level to higher secondary education so that promotion to bachelor's degree programmes in higher education is possible. Bachelor of Technology that is not familiar in other countries and specially arranged for DAE completers, however, are clearly differentiated from Bachelor of Engineering or Engineers. It is because Council of Engineers does not agree in the equivalency between the two.
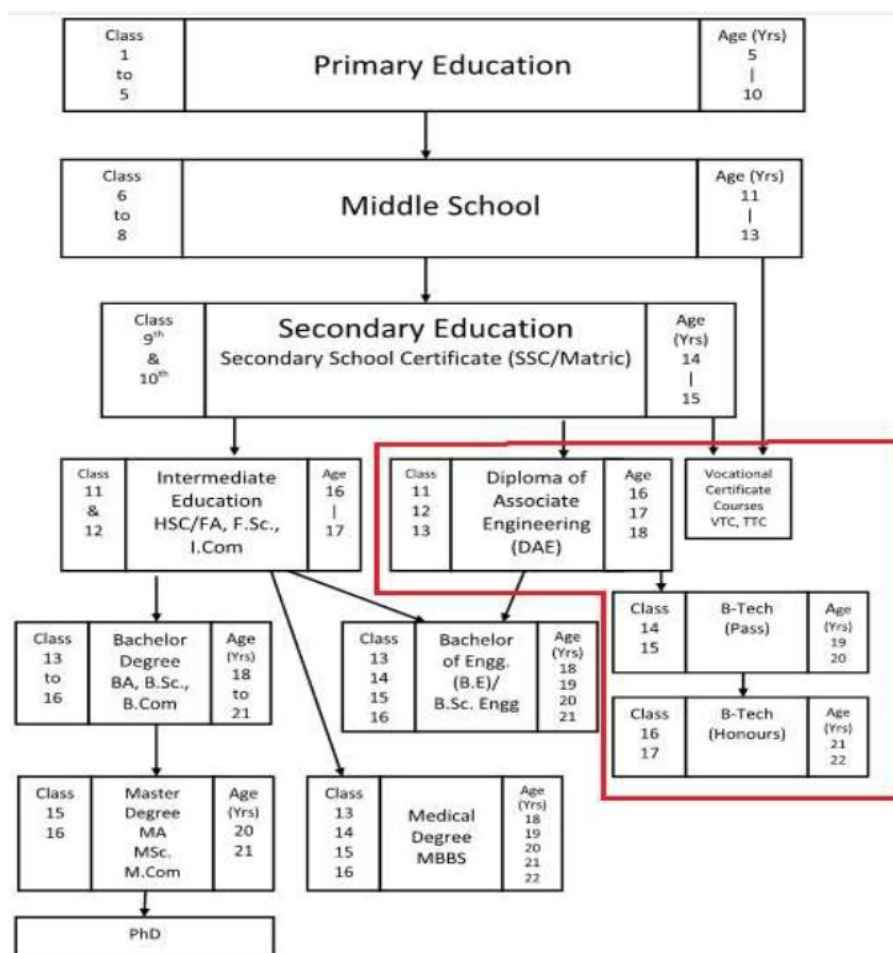
Source: *Research Study on Technical and Vocational Education in Pakistan at Secondary Level, National Institute of Science and Technical Education, 2009* with assistance from UNESCO

Figure 2-12 Education Setup in Pakistan

Types of TVET institutions in Pakistan differ by regulating authorities, by levels, by gender, by financial sources, by trades, by duration of TVET courses, etc. The report referred in the above figure, *Research Study on Technical and Vocational Education in Pakistan at Secondary Level, National Institute of Science and Technical Education, 2009* (assisted by UNESCO) summarizes levels and types of education and training.

Table 2-18 Various Levels of Education System

Description	Grade/Class	Duration	Remarks
Primary Education	1st to 5th class	5 years of education	Primary Pass
Secondary Education	6th to 8th Class	3 years of education	Middle Pass
	9th & 10th Class	2 years of education	Secondary School Certificate (SSC)/ Matriculation (Subjects: Science/ Humanities/ Commerce/Technical School Certificate)
Higher Secondary Education	11th & 12th Class	2 years of education	Higher Secondary School Certificate/Intermediate (Subjects: Science/Arts/ Commerce) (FA, F.Sc,I.Com)
Bachelor's degree Education	13th & 14th 13th to 16th (new scheme)	2 years of education 2 years (old scheme) 4 years of education (new scheme)	- Bachelor of Arts / commerce (BA / B.Com) - Bachelor of Science (B.Sc.)

Master's degree Education	15th & 16th	2 years of education	- Master of Science/ Arts/Commerce - M.Sc./MA/M.Com
Engineering Degree Education	13th to 16th	4 years of education	Bachelor of Engineering (BE) / Bachelor of Science Engineering (B.Sc. Eng.)
Medical Education	13th to 17th	5 years of education	MBBS
Technology Education	14th to 17th	2+2 years of education (old scheme) 4 years of education (new scheme)	Bachelor of Technology (Pass) + Bachelor of Technology (Hons) (old scheme) (B-Tech (Honours) is at par with B.E./ B.Sc. Engineering)
Technical Education	11th to 13th	3 years	Diploma of Associate Engineers (DAE) (It is at par with F. Sc.)
Vocational Education	8th to onward	6 months to 2 years	Trade Certificates Vocational Certificate (G-II and G-III level)

Source: *Research Study on Technical and Vocational Education in Pakistan at Secondary Level, National Institute of Science and Technical Education, 2009* with assistance from UNESCO

A finding about usage of terminology in Pakistan is that there is a concept and common understanding that 'technical' is higher than 'vocational' which may be observed in other society but still is not universal understanding. The report visualizes differences of courses by education attainment (age) as entry requirement as shown in the following table.

Table 2-19 Availability of TVET Options against Education Attainment (age)

No.	Available TVE Options	Age										In case
		11	12	13	14	15	16	17	18	19	20	In Punjab
1.	Vocational Trade Courses (after Grade VIII)				■	■						GVTI, GVTI
2.	Matric Tech (Grade IX-X)				■	■						GVTI, GVTI
3.	Technical School Certificate (Grade IX-X)				■	■						GVTI, GVTI
4.	Agro-Tech Courses (Grade-IX-X)				■	■						GVTI, GVTI
5.	Vocational Certificate Courses (after Grade-X): iv) G-III (Basic Level) v) G-II (Intermediate Level) vi) G-I (Advance Level)						■	■	■			GCT
6.	Diploma of Associate Engineers (DAE) after Grade-X						■	■	■			GCT
7.	Customized Training for In-Service Workers of Industry (after Grade-X / DAE)									■	■	University

Source: *Research Study on Technical and Vocational Education in Pakistan at Secondary Level, National Institute of Science and Technical Education, 2009* with assistance from UNESCO

Additionally, model types of institutions with offered TVET courses are visualized as shown below.

Table 2-20 Types of Institutions and Availability of TVET Options

No.	TVET Option	Type of Institutions				
		General Secondary Schools	Vocational Training Centres	Vocational Training Institutes	Monotechnics/ Polytechnics/ Colleges of Technology	Customized Training Centres
	In case in Punjab	Sec. school, (GVTC, VTI)	GTTI, GVTI	GTTI, GVTI, GCT	GCT	Others
1.	Vocational Trade Courses (after Grade VIII)		■			
2.	Matric Tech (Grade IX-X)	■				
3.	Technical School Certificate (Grade IX-X)	■				

4.	Agro-Tech Courses (Grade-IX-X)					
5.	Vocational Certificate Courses (after Grade-X): i) G-III (Basic Level) ii) G-II (Intermediate Level) iii) G-I (Advance Level)					
6.	Diploma of Associate Engineers (DAE) after Grade-X					
7.	Customized Training for In-Service Workers of Industry (after Grade-X / DAE)					

Source: *Research Study on Technical and Vocational Education in Pakistan at Secondary Level, National Institute of Science and Technical Education, 2009* with assistance from UNESCO

These are still generalized summary and each province has its own system with various names. In this study, only Punjab Province was visited. The following information was obtained from interview session from stakeholders in Punjab (also appearing in the above tables):

(1)   TEVTA

TEVTA administers;

- Government Colleges of Technology (GCTs) offer the DAE and the Diplomas of the Business and Technician Education Council (BTEC) of the United Kingdom as well as 2 or 1 year courses

- Government Technical Training Institutes (GTTIs) offer not higher than the 2 year courses

- Government Vocational Training Institutes (GVTIs) are basically same as GTTI but specifically for females

- Government Technical Training Centre (GTTC) offer short courses less than one year

(2)   PVTC

PVTC administers Vocational Training Institutes which target those who suffer from poverty. Duration of offered courses are 12 months or less with compulsory field training in local industry for two months at the end of courses. Applications are strictly limited for those in poverty. The definition of poverty in Pakistan is given by Poverty Reduction Strategic Paper prepared in 2004[94], i.e., those nationals who take below 2,350 calories a month. Definition by income based on this calorie amount is also made, i.e., PKR 3,030 in FY 2013/2014[95]. Another criterion is age that limits between from 15 to 35 of age[96]. Due to the nature of zakat fund, only Muslims are eligible for the courses in principle. However, there are courses open for other religious beliefs in poverty. For instance, some VTI offer courses for minorities in poverty utilizing fund from Human Rights & Minorities Affairs Department under Provincial Government. In the context in Punjab, minority in poverty is Christians in many cases[97].

Academic attainment as requirement for applications varies from primary to matric depending on contents of courses. Information available on website[98] indicates that there are 9 courses require

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[94] https://www.imf.org/external/pubs/ft/scr/2004/cr0424.pdf

[95] http://www.finance.gov.pk/poverty/Annual_PRSP_Progress_FY_2015_16.pdf

[96] http://pvtc.gop.pk/FAQs.aspx#

[97] VTI, Walton visited on 6 March

[98] http://pvtc.gop.pk/Trades.aspx#

primary completion, 24 courses require lower secondary completion, 30 courses require matric completion and 5 courses require higher secondary completion among 68 courses in total.

(3) Private Institutes

Apart from these public TVET institutes, there are private institutes. One private institute was visited during the field survey. Pakistan Knitwear Training Institute (PKTI), where JICA is providing technical assistance in a form of a Technical Cooperation Project, was established by the initiative of a federal knitwear industry organization[99] with funding assistance from the Provincial Government for initial investment. It specializes in skills training in knitwear sub-sector. It utilizes PSDF fund that was briefed earlier. The industry organization that manages the institute is not capable of funding the courses these days due to tight finance status of member companies which was available in the past. Curriculum are usually drafted by the institutes and apply for accreditation by NAVTTC.

(4) Informal Training for New Recruits in Private Companies

Through field survey in Punjab, one large scale garment factory was visited. The company has its own training system. After selection for recruitment by screening application documents and interview, successful applicants will take 40 days training in both theoretical and practical sessions in the training area specially arranged for the training purpose. It is compulsory for every new recruit even for those who claim to have some similar experience. Regular full salary is paid during the training. They are assessed at the end of whole training. In case someone fails, the recruit needs to repeat the training again. Under their recruitment system, selection of new recruits is to accept those who have potential capabilities to acquire necessary skills through 40 days training, but not expecting them to already possess required skills for the factory to start working right after the selection. When asked if they could be interested to outsource their customized training, they may have positive ideas if the outsourced training will use the same equipment that they use in production line in their factory.

2.4.2 Number of TVET institutions and options

National Skills Information System (NSIS) has been developed by NAVTTC, which is a website based on database programme[100] to provide information of TVET institutes. *Comparative Study of TVET Sector in Pakistan* published by NAVTTC points out that fragmented data gathering has been a challenge and it is imperative to integrate information to provide a single source and a common window for all TVET-related information to the different stakeholders not only information on TVET programme provision in terms of supply but including skills demand from industry as well[101]. NSIS has been developed to fulfil this necessity through activity under TRSP. Information on TVET institutes, employers and job vacancies are available in the NSIS website[102], but not employees including pass-outs of TVET institutes yet. Errors in data presented in NSIS also identified, which was confirmed with database officer of NAVTTC. Therefore, this report refers to Comparative Analysis of TVET Sector in Pakistan published by NAVTTC in 2017, which presents compilation of relatively recent and various information, instead of NSIS currently onsite.

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[99] Pakistan Hosiery Manufacturers and Exporters Association (PHMA)
[100] http://skillingpakistan.org/
[101] Comparative Study of TVET Sector in Pakistan. NAVTTC
[102] http://www.skillingpakistan.org/

Table 2-21 Number of TVET Institutes by Type and Ownership[103]

Province	Technical		Vocational		Grand Total
	Public	Private	Public	Private	
Pakistan	445	489	617	2,030	3,581
Punjab	337	325	283	872	1,817
Sindh	65	121	127	276	589
KP	26	4	44	525	599
Balochistan	2	10	34	81	127
GB	1	7	25	142	175
AJ&K	4	4	44	58	110
ICT	3	16	34	50	103
FATA	7	2	26	26	61

Source: Comparative Analysis of TVET Sector in Pakistan, 2017, NAVTTC

As observed, there is no significant difference in numbers of technical institutes between public and private while number of private vocational institutes is more than three times as many as that of public ownership. For the total number of TVET institutes is small, the number of trainees Table 2-22 shows breakdown by gender.

Table 2-22 Number of TVET Institutes by Gender[104]

Province	Male	Female	Co-education	Total
Pakistan	1,443	1,497	644	3,581
Punjab	662	793	362	1,817
Sindh	190	210	189	589
KP	426	141	32	599
Balochistan	53	60	14	127
GB	28	121	26	175
AJ&K	35	67	8	110
ICT	27	66	13	103
FATA	22	39	0	61

Source: Comparative Analysis of TVET Sector in Pakistan, 2017, NAVTTC

If only looking at number of institutes, number of institutes accepting female trainees are more than that for male trainees except for KP Province.

The referred report has detailed data of TVET enrollment by trade and province. Some trades are offered in both public and private while some are offered only in one of the two. Table 2-23 shows summary of that.

Table 2-23 Summary of Vocational TVET Courses offered by Ownership and Province

Province	No. of Trades in Vocational Institutes	Offered by Public	Offered by Private	5 Largest enrolment in public and no enrolment in private	5 Largest enrolment in private and no enrolment in public
Punjab	182	182	40	Certificate in computer application D. Tailoring Clinical assistant Auto & farm machinery Civil surveyor	Heating, ventilation, AC & refrigeration 3 month Import & export document Cooking Office management Electronics technician
Sindh	65	51	37	Radio & TV electronics Oracle DBA Office automation Dress making & designing Accounting	Basic computer Professional IT Garments making D. IT Computer language
KP	60	44	49	Electrician Electrician G-ii Refrigeration & AC G-iii Plumber Welding G-iii	Rural Poultry AutoCAD Mason Marble cutting & polishing Domestic tailoring

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[103] Please note that Table 2-21 is presented as "Table 12" in the original document and there is almost same information in "Table 11" somehow having different figures in Balochistan and AJK.
[104] Total of ICT adds up to 106 which is unlikely because it is inconsistent with other information in the report. Possible mistakes such as double counts may have caused this.

| | 72 | 35 | 51 | Embroidery
Radio mechanic
Auto electrician
CCTV camera technician
Gpon/Fith advance optical fibre technology | Beautician
Tailoring, dress making
Professional IT
Dressing designing tailoring
Web development |
| ICT | | | | | |

Source: Comparative Analysis of TVET Sector in Pakistan, 2017, NAVTTC
Note: data of Balochistan by ownership is not available
　　In Punjab, all the trades are covered by public institutes but there is no single trade only offered by private institutes. Therefore, trades with the 5 highest ratios of number of participants offered by private institutes to those by public institutes are listed instead.

It may be observed that engineering related courses are not in private institutes probably because those are traditional TVET courses usually offered by public institutes.

Table 2-24 Summary of Technical TVET Courses offered by Ownership and Province

Province	No. of Trades in Vocational Institutes	Offered by Public	Offered by Private	3 Largest enrolment in public and no enrolment in private	3 Largest enrolment in private and no enrolment in public
Punjab	21	21	11	DAE Auto & farm machinery Mechatronics Auto & farm	Fashion designing Computer IT DAE Processing & Preservation
Sindh	29	21	15	DAE Mechanical DAE Garment technology DAE Auto & diesel	DAE Refrigeration and AC DAE Apparel marketing & merchandizing DAE Meteorology
KP	18	18	6	DAE Mechanical B. Tech Electrical DAE Computer Hardware	Certificate in IT DAE Architectural DAE Electrical

Source: Comparative Analysis of TVET Sector in Pakistan, 2017, NAVTTC
Note: data of Balochistan and ICT by ownership is not available
　　In Punjab and KP, all the trades are covered by public institutes but there is no single trade only offered by private institutes. Therefore, trades with the 3 highest ratios of number of participants offered by private institutes to those by public institutes are listed instead.

In terms of enrollment, DAE courses are larger than Bachelor of Technology (B. Tech) courses which are next level after DAE and offered in these institutes. From the original source of the above data, it is observed that B. Tech courses are mostly offered only by public institutes except for B. Tech Mechanical in Sindh that are offered by both public and private.

2.4.3　Curriculum and qualifications resulted from TEVET reform

(1)　CBT Curriculum

As to contents of TVET courses, ongoing TVET reform promotes to shift to Competency-based Training (CBT) which is the global trend today. CBT is, according to UNESCO-UNEVOC International Centre [105], is "an approach to vocational education and training that places emphasis on what a person can do in the workplace as a result of completing a programme of training." National Skills Strategy prepared when the reform was initiated states,

> The present skills development system in Pakistan makes it difficult for training programmes to meet the skill needs of industry. They focus on how far learners have progressed through an institution's curriculum rather than assessing how well they are able to demonstrate the competencies required in the workplace.

　　It also emphasizes involvement of industry by stating, "Industry endorsed competency standards will provide the basis for the development of competency-based curricula and training materials to be used by training providers." CBT curricula development in different trades training

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[105]　UNESCO-UNEVOC International Centre.　https://unevoc.unesco.org/home/Competency-Based+Training

are underway. From the view of assessment, NAVTTC together with TEVTA, TTB、PVTC、PBTE and a number of private sector TVET institutes has introduced Competency Based Training and Assessment (CBT & A）. advantage of CBT&A is stated as follows: [106]

• are focused on skills, knowledge, understanding and attitudes/values.

• describe observable, demonstrable and assessable performance.

• are broader in scope than a mere list of specific tasks or skills.

• enable the learners to acquire competencies, which are recognized by the industry all over the country through competency standards set under NVQF.

• offer greater prospective of employability to the learners.

• enable the informal skilled workers to get their skills assess and certified through recognition of prior learning and current competencies.

• involve industry in all the steps of training delivery right from designing the skills to assessment and placement of the skilled workers.

• allow flexibility in the movement of learners from one institution to another.

(2) National Vocational Qualification Framework

Another initiative under the reform related to curricula is development of National Vocational Qualification Framework. NSS states,

> The structure of training programmes will also be adapted according to the needs of a wider range of learners and situations. Trainees may prefer to have the option of taking several shorter courses over an unstipulated period of time, which combine to form a particular qualification rather than being expected to complete the training as one fixed time course. Similarly, where training combines classroom and workplace learning, some may prefer block allocations of time between both. Others may prefer a day release system. Modular qualifications will therefore, be designed, which conform to a future National (Vocational)[107] Qualifications Framework. Although modular training adopting flexible modalities of accumulation of credits is not commonly offered currently, units in CBT curricula developed are referred to as "Module". This development of CBT and modules in curricula led to development and introduction of NVQF.

It sets out the possible pathways for entry, progress and achievement of a qualification including credit accumulation, equivalences and transfer from one qualification to another. It is designed to facilitate both horizontal and vertical progress by learners within the TVET system. It provides the basis for improving quality, accessibility and recognition of qualifications at national and international level. For instance, after completing electrical course in level 3 offered by PVTC, it will be possible to advance to electrical course in level 4 offered by TEVTA institutes depending on entry requirement.

NVQF was launched during TSSP Phase 1, then revised during Phase 2. The revised NVQF contains levels 1 to 8 qualifications with levels 1 to 4 for National Vocation Certificates, Level 5 for Diploma and Level 6 to 8 leading to graduate and post graduate level degree qualifications assuring the upward mobility within TVET sector. NVQs certification for level 1 to 5 falls within

[106] NAVTTC website. http://navttc.org/?page_id=945
[107] In NSS, it is referred as National Qualification Framework without "Vocational".

the purview of the Qualification Awarding Bodies (QABs) while certification of qualifications for level 6 to 8 falls within the purview of universities. Each level of the qualification is defined by a set of approved Level Descriptors, describing the broad outcomes expected of achievers and the complexity of skills and knowledge at that level. Figure 2-13 illustrates the NVQF.

Source: National Vocational Qualification Framework, 2017, NAVTTC
Figure 2-13 National Vocational Qualification Framework (version 2)

Table 2-25 shows level descriptor of NVQF.

Table 2-25 NVQF Level Descriptor

Level	Descriptors			Qualification Type
	Knowledge and Understanding	**Skills**	**Responsibility**	
Level 1	Elementary knowledge of an area of work or study with safety procedures	Limited practical skills required to carry out single-process tasks and solve routine problems using simple rules and tools	Work or study under direct supervision with limited autonomy	National Vocational Certificate Level 1
Level 2	Basic knowledge of readily available facts, processes and general theory of an area of work or study	Basic practical skills required to complete tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for prioritizing and completing tasks in work or study under indirect supervision with some autonomy and adapt own abilities when solving problems	National Vocational Certificate Level 2
Level 3	Broad theoretical knowledge and interpretation of available information in relevant contexts within an area of work or study	Broad range of well-developed mental and practical skills required to plan and complete multi-stage tasks and generate optimum solutions to specific problems in a field of work or study	Plan and manage own work and/or supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities	National Vocational Certificate Level 3
Level 4	Comprehensive theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	Comprehensive range of mental, technical and practical skills required to complete complex tasks and develop creative solutions to abstract problem	Exercise full responsibility for management and supervision in contexts of work or study activities within well-defined boundaries and where there is unpredictable change Provide inputs to review and develop performance of self and others	National Vocational Certificate Level 4

	Advanced theoretical knowledge with analytical interpretation of an area of work or study and an awareness of the boundaries of that knowledge	Specialist level of mental, technical and practical skills required to complete variable complex tasks and develop innovative solutions to abstract and complex problems in an advanced field of work or study	Carry out planning and development of courses of action with complete accountability Exercise management and supervision in work or study activities where there is unpredictable change Review and develop performance of self and others	Diploma of Associate Engineer (DAE)
Level 5				

Source: National Vocational Qualifications Framework (NVQF) Version 2, National Vocational and Technical Training Commission (NAVTTC), 2017

Under the single national framework, accredited TVET institutes of any kind could deliver accredited TVET course. At the end, successful completion will be awarded qualification linked to one of levels in NVQF. It will open future option for further education and training in standardized and systematic manner. The following figure shows numbers of TVET institutes that offers courses in accordance with NVQF by Province.
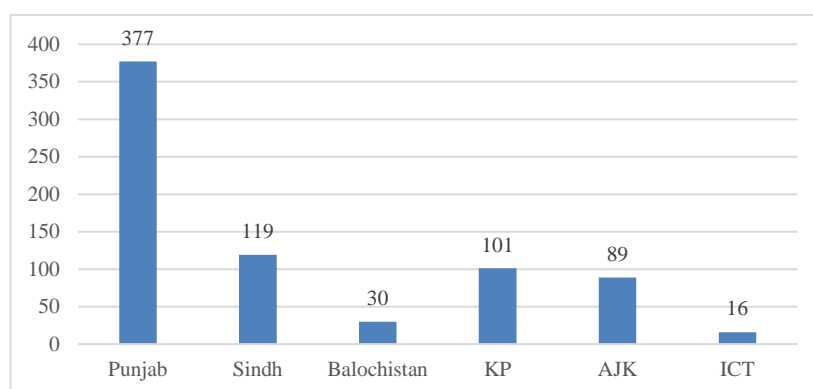
Source: NSIS, National Vocational Qualification Registry System (http://www.npess.pk/nvqf/)
Note: no information about date of data collection

Figure 2-14 Numbers of TVET Institutes Offering Courses based on NVQF

3. Current Status of Education and Training Sector in Pakistan

3.1 Current status of basic education

3.1.1 Access

(1) School-aged population

The total population of Pakistan is estimated to be about 206 million in 2018 according to the projection[108] based on the census carried out in 1998. The projection assumed an average population growth rate of 1.90% and total fertility rate of 3.15 during the period from 2010 to 2015. The population growth rate in Pakistan is higher than those of other South Asian countries[109].

Table 3-1 shows population distribution by 5-year age bracket and sex according to the projection. Young people under 15 years occupy 33.1%, thus one third of the total population, and the school aged children (5-16 years) occupy more or less one forth although the 5-year bracket distribution does not allow an exact calculation of their number. As Pakistan Vision 2025 and others point out, feature of Pakistan Demography is exploding for the younger generation. Having large population, especially younger generation, is not something negative alone. However, if those young generation is not educated, if not earning decent wages, if not producing values for their own society and community, they may face poverty and it may become a social problem.

Table 3-1 Population Distribution in 2018 Projected based on 1998 National Census

Age Bracket	Projected Population (thousand)			Proportion	
	Make	Female	Total	By Age Bracket	Cumulative
00-04	12,199	11,560	23,759	11.5%	11.5%
05-09	11,777	11,130	22,907	11.1%	22.6%
10-14	11,144	10,510	21,654	10.5%	33.1%
15-19	10,238	9,633	19,871	9.6%	42.8%
20-24	9,405	8,818	18,223	8.8%	51.6%
25-29	9,230	8,635	17,865	8.7%	60.3%
30-34	8,959	8,376	17,335	8.4%	68.7%
35-39	7,814	7,271	15,085	7.3%	76.0%
40-44	6,484	6,017	12,501	6.1%	82.1%
45-49	5,176	4,800	9,976	4.8%	86.9%
50-54	4,076	3,794	7,870	3.8%	90.7%
55-59	3,114	2,922	6,036	2.9%	93.7%
60-64	2,347	2,239	4,586	2.2%	95.9%
65-69	1,697	1,655	3,352	1.6%	97.5%
70-74	1,188	1,180	2,368	1.1%	98.7%
75+	1,383	1,372	2,755	1.3%	100.0%
All	106,231	99,912	206,143	100.0%	

Source: National Institute of Population Studies, Population Projection in 2018 based on 1998 National Census

Figure 3-1 is a population pyramid graph representing the above table. It is clear that the younger generation occupies a large part of the total population.

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[108] National Institute of Population Studies made three projections (High, Middle and Low) according to the differently assumed population growth rates. In the present survey, the projection with high growth rate is adopted because the provisional results of the most recent 2017 Census show that the Pakistani population has achieved 208 million in 2017, which exceeds even the population projected with the high growth rate for the same year according to the 1998 Census.

[109] Ministry of Planning Development & Reform. (2014). *Pakistan Vision 2025*
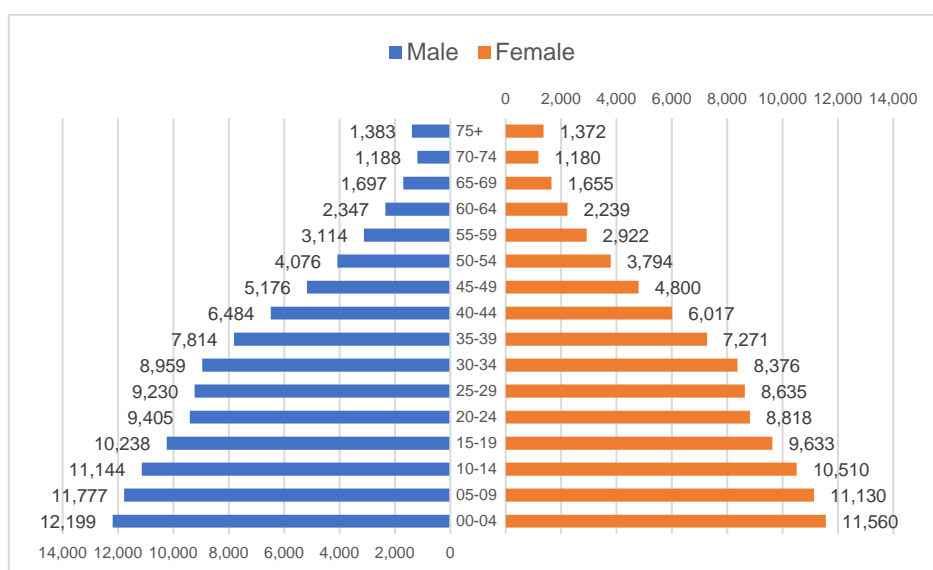
Source: National Institute of Population Studies, Population Projection in 2018 based on 1998 National Census
Figure 3-1 Population Pyramid, Pakistan, Projection based on 1998 National Census

It should be noted that a full National Census was conducted in 2017 after almost 20 years. However, the result is not published yet except for a provisional summary because of some provincial governments' disagreement about the results. According to the partially published provisional summary, the total population of Pakistan in 2017 was 208 million[110], which should suppose a more rapid population growth than the projection based on the 1998 Census.

(2) Number of students

In Pakistan, approximately 19.351 million students/learners are enrolled in primary school/level, out of which 11.895 million (61%) are in public sector and 7.456 million (39%) are in private sector[111] (see the table below). Out of the total enrollment at the primary level, 10.722 million (55%) are boys and 8.628 million (45%) are girls[112]. In middle school/level and high school/level, around 6.996 million and 3.583 million are enrolled, respectively[113]. Over the past 5 years from 2012/2013 to 2016/2017, the enrollments of both boys and girls in public sector's primary school/level were slightly increasing, but remained at almost the same level.

Table 3-2 Enrollment by Level and Sector (2016/2017)

Level	Public	Other Public	Private	Total
Primary	11,362,965	532,198	7,456,671	19,351,834
Middle	3,929,343	128,005	2,469,280	6,526,628
High	2,187,421	66,697	1,071,414	3,325,532
Total	17,479,729	726,900	10,997,365	29,203,994

Source: Pakistan Education Statistics 2016-17.

In the public sector's primary level, a gender gap in the number of enrolled students between boys and girls remains more than one million in 2016/2017, as shown in the figure below.

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[110] Pakistan Bureau of Statistics. *Provisional Summary Results of 6th Population and Housing Census-2017*. Retrieved from http://www.pbs.gov.pk/content/provisional-summary-results-6th-population-and-housing-census-2017-0
[111] Pakistan Education Statistics 2016-17.
[112] ibid.
[113] ibid.
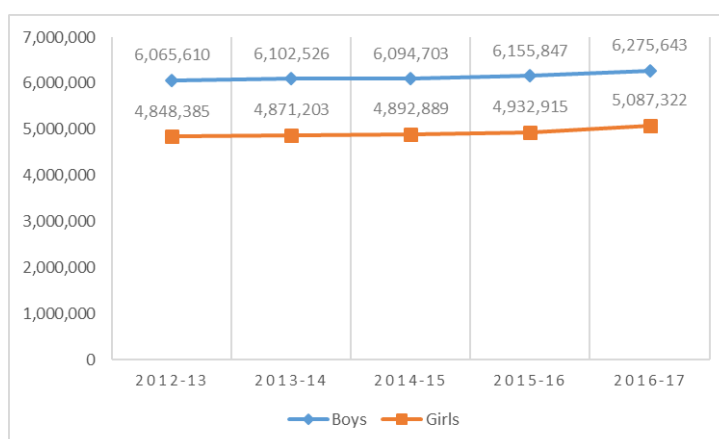
Source: Pakistan Education Statistics

Figure 3-2 Comparison of Five Years Enrollment in Primary by Gender (Public Sector Only)

In public sector's middle-school/level, the enrollment of boys has continued to slightly decline since 2013/2014, while the enrollment of girls has slightly increased in 2016/2017 from 1.68 million in 2015/2016. As a result, the gender gap in the number of enrolled children in this school/ level was slightly closer in 2016/2017, compared to that in 2012/2013 (see the figure below).
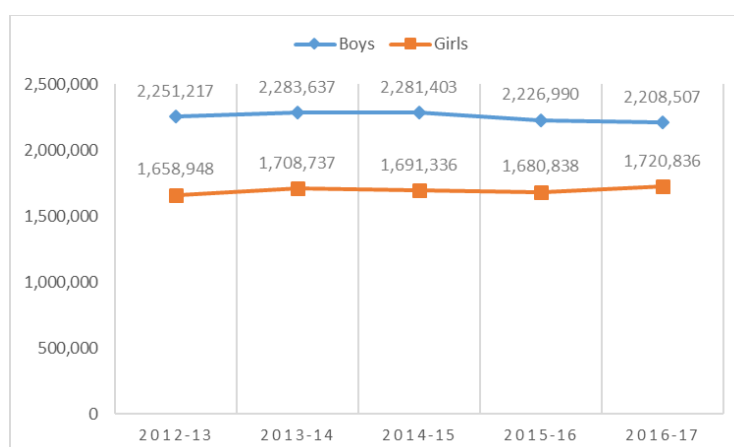
Source: Pakistan Education Statistics

Figure 3-3 Comparison of Five Years Enrollment in Middle by Gender (Public Sector Only)

In 2012/2013, there were 1.112 million boys and 0.767 million girls enrolled in public sector's high school. After 5 years in 2016/2017, public sector's high schools/level enrolled 1.255 million boys and 0.932 million girls. Over the time, enrollments in boys and girls in this level increased by 11.3% and 17.7%, respectively[114] (see the figure below).

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[114] Pakistan Education Statistics 2016-17.
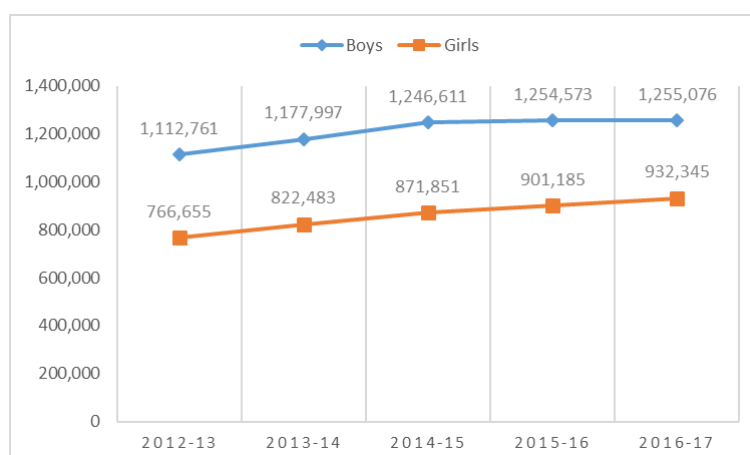
Source: Pakistan Education Statistics

**Figure 3-4 Comparison of Five Years Enrollment in High School/Level by Gender
(Public Sector Only)**

The Table below shows the data of those who are enrolled in public sector school, other public sector school, or private sector school, disaggregated by province/region, level, location, and gender.

**Table 3-3 Enrolment (Public, Other Public & Private Sector) by Province, Level,
Gender, and Location 2016/2017**

Province Region	Level	Urban			Rural			Total		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Punjab	Primary	1,711,332	1,682,545	3,393,877	3,774,971	3,335,105	7,110,077	5,486,3035	5,017,651	10,503,954
	Middle	793,455	796,407	1,589,862	1,188,199	989,163	2,177,362	1,981,654	1,785,570	3,767,224
	High	508,745	479,375	988,120	534,346	396,289	930,635	1,043,091	875,664	1,918,755
Sindh	Primary	1,123,452	941,757	2,065,209	1,194,441	674,333	1,868,774	2,317,893	1,616,090	3,933,983
	Middle	403,721	361,752	765,473	244,663	116,457	361,120	648,384	478,209	1,126,593
	High	245,696	213,414	459,110	126,192	52,364	178,556	371,888	265,778	637,666
KP	Primary	311,736	216,805	528,541	1,551,537	1,082,949	2,634,486	1,863,273	1,299,754	3,163,027
	Middle	156,680	101,931	258,611	543,022	280,920	823,942	699,702	382,851	1,082,553
	High	84,018	55,846	139,864	253,196	117,271	370,467	337,214	173,117	510,331
Balochistan	Primary	140,955	95,456	236,411	259,249	108,315	367,564	400,204	203,771	603,975
	Middle	51,690	34,167	85,857	51,912	20,600	72,512	103,602	54,767	158,369
	High	29,781	17,688	47,469	21,648	6,534	28,182	51,429	24,222	75,651
ICT	Primary	37,907	33,866	71,773	68,126	62,327	130,453	106,033	96,193	202,226
	Middle	20,851	19,031	39,882	25,723	25142	50,865	46,574	44,173	90,747
	High	13,696	12,590	26,286	13,370	12,426	25,796	27,066	25,016	52,082
Pakistan	Primary	3,378,369	3,017,197	6,395,566	7,344,536	5,611,732	12,956,268	10,7222,905	8,628,929	19,351,834
	Middle	1,454,822	1,336,503	2,791,325	2,209,285	1,526,018	3,735,303	3,664,107	2,862,521	6,526,628
	High	900,293	792,464	1,692,757	1,012,001	620,774	1,632,775	1,912,294	1,413,238	3,325,532

Source: Public Sector data is provided by provincial/regional EMISs and Other Public and Private Sector data is estimated based on past trend, cited in Pakistan Education Statistics (pp.68).
Note: All figures on Pakistan include data of four provinces, ICT, AJ&K, GB, and FATA.

The table above shows that as a whole, a gender disparity in enrollment is minimum in urban Punjab, compared to rural Punjab and other provinces/region. The gender gap at the middle-school level in urban Punjab is even reversal. In Balochistan, on the other hand, there is a critical gender gap in the number of enrolled boys and that of enrolled girls even for urban area, while there is a much huger gender gap at all levels, specifically the high-school level, in rural area. In Sindh, a gender gap close to double is seen at all levels in rural area, but not in urban area.

(3) Gross Enrollment Ratio

According to Pakistan Education Statistics 2016-17, Pakistan's Gross Enrollment Ratio (GER) for primary education (Grade1 to 5) is 97%, which does not achieve universal primary education. GER of primary education for boys is 104%, whereas that for girls is 90%, resulting in 0.87 of GPI[115]. GER for middle-level (Grade 6 to 8) and secondary-level (Grade 9 to 12) education is only 55% and 34%, respectively[116]. Looking at gender disparity, GPI for middle-level education is 0.86, whereas GPI for secondary-level education is 0.76[117].

Over the past 5 years from 2012/2013 to 2016/2017, GER at the primary-, middle-, and secondary- school levels were not necessarily improved drastically, but improved to a minor extent, as shown in the figure below.
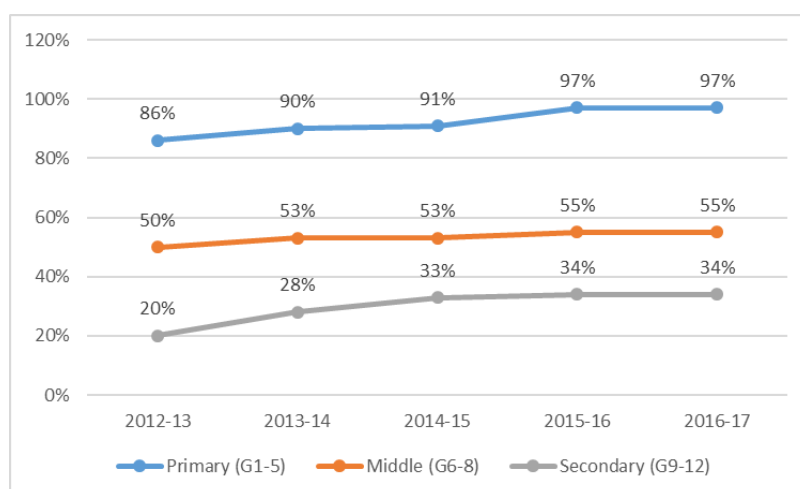
Source: Pakistan Education Statistics 2016-17.

Figure 3-5 Comparison of Five Years Gross Enrollment Ration at Primary, Middle, and Secondary School Levels 2012/2013 to 2016/2017

The table below compares province-wise GER at primary-, middle-, and high-school (G9 to 10) levels over the past 5 years from 2004/2005 to 2014/2015, based on the result of Pakistan Social and Living Standards Measurement (PSLM) Surveys 2004-05, 2008-09, and 2014-15.

**Table 3-4 Province-wise GER at Primary, Middle, and High School Levels
2004/2005, 2008/2009, and 2014/2015**

(Unit: %)

Province	Primary			Middle			Secondary		
	2004-05	2008-09	2014-15	2004-05	2008-09	2014-15	2004-05	2008-09	2014-15
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
KP	80	86	92	53	62	71	42	50	55
Balochistan	65	74	73	39	45	48	32	31	39

Source: PSLM 2004-05, 2008-09, and 2014-15, cited in ADB. 2019. *School Education in Pakistan: A Sector Assessment*. Manila: ADB.

Pakistan's GER at the primary school level was gradually improved from 85% in 2004/2005 to 91% in 2014/2015, so was Punjab's and KP's GER. However, GER at the primary-school level for Sindh and Balochistan slightly declined from 82% in 2008/2009 to 79% in 2014/2015 and

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[115] Pakistan Education Statistics 2016-17.
[116] ibid.
[117] ibid.

from 74% in 2008/2009 to 73% in 20014/2015, respectively. The similar tendency can be observed with GER at the middle-school level, while all provinces achieved the improvement of GER at the secondary-school level in all survey years.

Looking at province-wise GPI of GER at the primary-school level in 2016/2017, ICT achieved over 1.0 and Punjab marked 0.96, whereas Sindh, KP, and Balochistan were lagged behind with the score of 0.79, 075, and 0.61, respectively[118], as shown in the figure below.
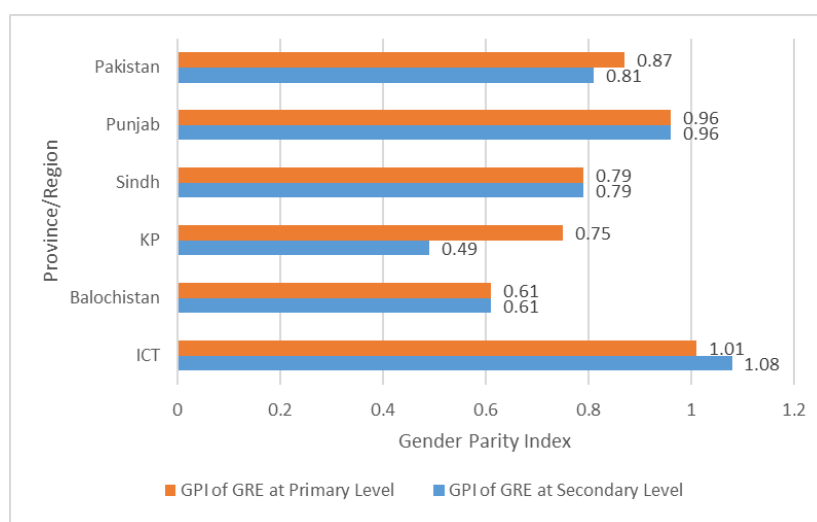
Source: Pakistan Education Statistics 2016-17.

Figure 3-6 Province-wise GPI of GER at Primary and Secondary School Levels 2016/2017

GPI of GER at the secondary-school level in 2016/2017 also varies by province/region, as shown in the figure above. ICT achieved gender parity with the score of 1.08 and Punjab marked 0.96, whereas KP did not mark even a half of boys' GER with the score of 0.49.

GRE for primary school-level is affected not only by gender, but also province, residential area (urban/rural), and economic status of children's families. The table below indicate that girls from the poor families (1st and 2nd quintile) in rural area are less likely to attend primary school in all provinces, specifically Balochistan and Sindh.

**Table 3-5 Quantile-wise GER for Primary School-Level
by Province and Gender (2014/2015)**

(Unit: %)

Province/ Quintile	Urban		Rural	
	Boys	**Girls**	**Boys**	**Girls**
Punjab	117	113	106	90
1st (poorest)	89	91	81	60
2nd	120	115	106	99
3rd	119	113	119	103
4th	128	122	134	118
5th (richest)	119	119	127	119
Sindh	99	90	69	47
1st (poorest)	59	46	55	35
2nd	91	70	75	47
3rd	86	110	84	68
4th	115	109	95	87
5th (richest)	121	117	93	119
KP	111	98	99	75

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[118] Pakistan Educational Statistics 2016-17.

1st (poorest)	86	65	86	48
2nd	113	94	100	70
3rd	114	97	98	88
4th	98	108	106	89
5th (richest)	132	116	115	105
Balochistan	88	78	69	36
1st (poorest)	79	31	59	24
2nd	103	74	69	38
3rd	77	84	79	38
4th	90	116	87	74
5th (richest)	95	127	114	66
Pakistan	108	102	93	74
1st (poorest)	79	68	71	49
2nd	106	93	93	74
3rd	101	109	106	87
4th	119	113	122	104
5th (richest)	120	118	117	113

Source: PSLM 2014-15.

(4) Adjusted Net Enrollment Ratio[119]

According to Pakistan Education Statistics 2016-17, 77% of the primary-level children (aged 5 to 9 years) and 39% of the secondary-level children (aged 10 to 16 years) are enrolled in any level of education in Pakistan (see the table below).

Table 3-6 Province-wise ANER at Primary and Secondary School Levels by Gender 2016/2017

(Unit: %)

Province/ Region	Primary (G1 to 5)			Secondary (G6 to 12)		
	Boys	Girls	Total	Boys	Girls	Total
Pakistan	83	71	77	43	35	39
Punjab	85	81	83	43	41	42
Sindh	77	60	69	35	28	31
KP	98	75	87	65	32	49
Balochistan	56	35	46	20	13	17
ICT	96	96	96	79	85	81

Source: Pakistan Education Statistics 2016-17

Based on Pakistan Education Statistics 2016-17, the highest Adjusted Net Enrollment Ratio (ANER) is ICT's 96%, followed by KP with the ratio of 87% and Punjab with that of 83%. ICT's ANER at the primary-school level is the same between boys' and girls'. In this light, however, there is a 23% point difference in GER between boys and girls in KP and a 22% point difference in Balochistan.

ANER at the secondary-school level is quite low, except that of ICT. In the case of ICT, girls' ANER (85%) exceeds boys' (79%), whereas there is a 33% point difference between boys' ANER (65%) and girls' (32%) in KP. In Balochistan, regardless gender, ANER is extraordinarily low, compared to even Sindh's and KP's.

The table below compares NER at the primary-, middle-, and high-school levels among 4 provinces and 1 region in the years of 2004/2005, 2008/2009, and 2014/2015, based on the results of PSLM surveys conducted in these years.

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[119] Adjusted Net Enrollment Rate is "Enrolment of the official age group for a given level of education either at that level or the levels above, expressed as a%age of the population in that age group." (UNESCO International Institute for Educational Planning, Learning Portal)

Table 3-7 Province-wise Net Enrollment Ratio at Primary-, Middle-, and High-School Levels in 2004/2005, 2008/2009, and 2014/2015

(Unit: %)

Province	Primary			Middle			Secondary		
	2004/05	2008/09	2014/15	2004/05	2008/09	2014/15	2004/05	2008/09	2014/15
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
KP	57	64	71	29	33	41	17	20	27
Balochistan	44	54	56	17	22	26	9	11	15

Source: PSLM 2004-05, 2008-09, and 2014-15, cited in ADB. 2019. *School Education in Pakistan: A Sector Assessment*. Manila: ADB.

Based on the data in the table above, NER stagnated even at the primary-school level and in Punjab. ADB's Sector Assessment Report points out that the data of NER, as well as those of GRE, might not have been collected or measured in a correct way in Pakistan. The PSLM 2014-15 measured both GER and NER of children aged 5 to 9 (official primary-level age) and of children aged 6 to 10 (more common school age on a custom basis).

(5) Number of out-of-school children

In Pakistan, there is a very huge number of children at ages of 5 to 16 years who are out of school. Out of a total number of 51.53 million children who are between the ages of 5 and 16 years, only 28.68 million children are attending schools from pre-primary up to higher-secondary level in both public and private sectors. Remaining 22.84 million children, who represent 44% of all this age group of children, are out of school[120]. Those OOSC in Pakistan accounts for 18.8% of OOSC in the world[121].
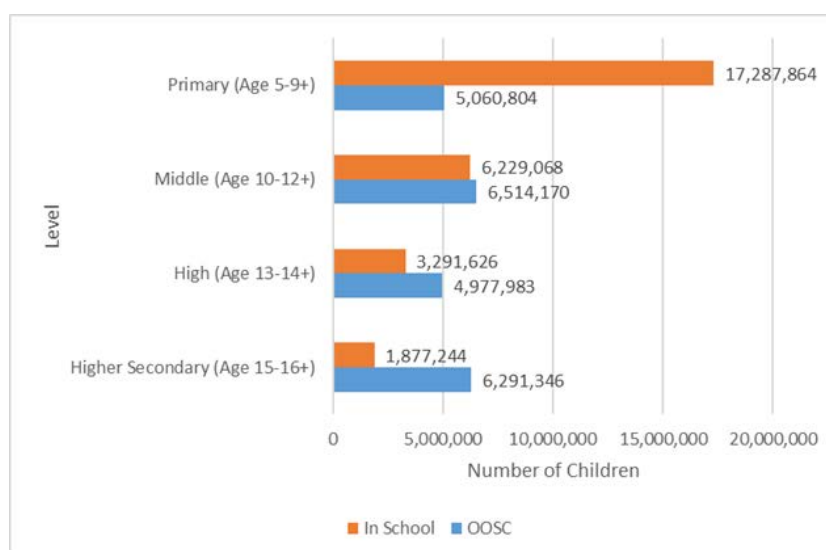
Source: Pakistan Education Statistics 2016-17
Figure 3-7 OOSC by Level in Pakistan 2016/2017

Looking at OOSC by gender, more girls are out of school than boys in Pakistan[122]. At the primary-to higher-secondary-school level, 49% (12.2 million) of the total population of girls at the ages of 5 to 16 years are out of school, compared to 40% (10.7 million) of their counterpart of the boys'

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[120] Pakistan Education Statistics 2016-17.
[121] ADB. 2019. *School Education in Pakistan: A Sector Assessment*. Manila: ADB.
[122] Pakistan Education Statistics 2016-17.

population[123] (see the table below).

Table 3-8 OOSC by School Level and Sex

Level	Sex	Population	Enrolled	Out of School	Ratio
Primary (5-9 years)	Boys	11,599,850	9,570,557	2,029,293	17.5%
	Girls	10,748,818	7,717,307	3,031,511	28.2%
	Total	22,348,668	17,287,864	5,060,804	22.6%
Middle (10-12 years)	Boys	6,623,763	3,481,205	3,142,558	47.4%
	Girls	6,119,475	2,747,863	3,371,612	55.1%
	Total	12,743,238	6,229,068	6,514,170	51.1%
Secondary and Higher Secondary (13-16 years)	Boys	8,527,788	3,016,434	5,511,354	64.6%
	Girls	7,910,410	2,152,436	5,757,974	72.8%
	Total	16,438,198	5,168,870	11,269,328	68.6%
Total	Boys	26,751,401	16,068,196	10,683,205	39.9%
	Girls	24,778,703	12,617,606	12,161,097	49.1%
	Total	51,530,104	28,685,802	22,844,302	44.3%

Source: Pakistan Education Statistics 2016-17

Observing changes in the number of OOSC by gender over the past 5 years from 2012/2013 to 2016/2017, the number of girls' OOSC declined from 13.75 million in 2012/2013 to 12.16 million in 2016/2017, whereas that of boys' OOSC also declined from 12.2 million in 2012/2013 to 10.68 million in 2016/2017 (see the figure below).
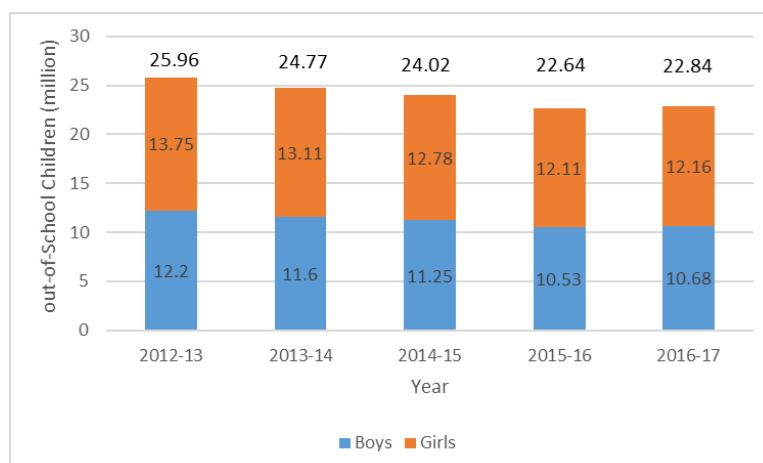
Source: Pakistan Education Statistics
Figure 3-8 OOSC G1 to G12 by Gender in Pakistan (2012/2013 to 2016/2017)

3.1.2 Quality

(1) Survival, transition, and promotion rates

Survival ratio to Grade 5 is "the proportion of a cohort of pupils who reached Grade 5 expressed as a percentage of pupils enrolled the in the first grade of a given cycle in a given school year[124]." It is often utilized as an indicator which represents quality of education assuming that education of high quality may facilitate students' smooth promotion. According to the statistics, one student out of three cannot reach Grade 5. In Balochistan, only one third of the whole students who entered in school and more regrettably one fourth of female students can reach Grade 5. It should be also noted that those survivors having reached Grade 5 are not guaranteed to complete their primary education because there is also a risk of drop out during their final school year.

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[123] ibid.
[124] Pakistan Education Statistics 2016-17, MoFEPT, p.28

Table 3-9 Survival Rate to Grade 5 (2016/2017)

(Unit: %)

Province/Area	Male	Female	Total
Pakistan	66.8	66.8	66.8
Punjab	71.3	74.2	72.6
Sindh	60.3	58.4	59.5
KP	71.4	57.0	65.2
Balochistan	38.9	26.4	33.1
ICT	100.0	100.0	100.0

Source: Pakistan Education Statistics 2016-17, MoFEPT

The survival rate to Grade 5 in Pakistan has not been improved at all, but stagnated over the past 5 years. Looking at the 5-year change from 2012/2013 to 2016/2017, a slight increase can be observed in 2014/2015. However, it decreased again in 2015/2016, and consequently, there is no difference between the rate of 2012/2013 and that of 2016/2017.

Table 3-10 Survival Rate and Effective Transition Rate from Primary to Middle Level (2012/2013 to 2016/2017)

(Unit: %)

Year	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
Survival Rate	67	67	69	66	67

Source: Pakistan Education Statistics 2016-17.

The following table shows the transition rate for each grade, disaggregated by sector (public and private), in Pakistan in 2016/2017.
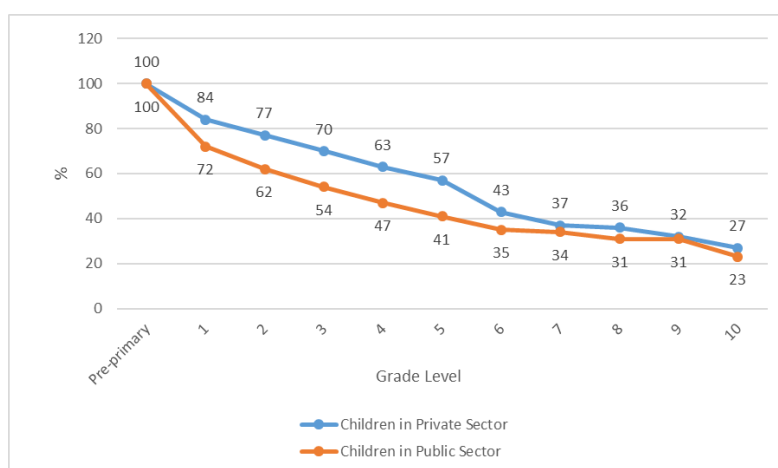
Source: Pakistan Education Statistics 2015-2016, cited in ADB. 2019. *School Education in Pakistan: A Sector Assessment*. Manila: ADB.

Figure 3-9 Transition Rates for Each Grade by Gender in Pakistan 2015/2016

The figure above shows that of the total students enrolled in the pre-primary class (Kachi), those who transited to primary-school level in the next year was 84% for children in private sector school and only 72% for those in public sector school, and children who transited up to Grade 5 after 5 years from the enrollment in Kachi was 57% for those in private sector school and 41% for those in public sector school.

The effective transition rate[125] presented in Table 3-11 is an indicator related to both access to and quality of education. In fact, those students who have successfully completed a level of

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[125] Number of new entrants to the first grade of the higher level of education in the following year expressed as a percentage of the students enrolled in the last grade of the given level of education in the given year who do not repeat that grade the following year (UNESCO Institute of Statistics)

education have a chance to be promoted to a higher level of education. And those who enjoyed education of good quality may have stronger willingness to continue their learning. However, since a student's decision of continuation of education does not depend only on the quality of education which he/she received.

Table 3-11 Effective Transition Rate (From 2012/2013 to 2016/2017)

(Unit: %)

Level	2012/13	2013/14	2014/15	2015/16	2016/17
Primary to Middle	78	82	81	82	84
Middle to Secondary	88	91	96	92	91

Source: Pakistan Education Statistics 2016-17, MoFEPT

According to those data, transition rates from primary to middle and from middle to secondary all increase gradually during the 5 successive years, which shows therefore a certain degree of improvement. In all years, the transition rates from middle to secondary is about 10% higher than those from primary to middle school. Taking it into account together with the above-mentioned low survival rates to Grade 5, it can be maintained that a child can get a good opportunity to be enrolled in the next stage of education if he or she can successfully complete one stage of education and that the opportunity is even greater at a higher stage. However, many students have to drop out of schools for a reason or another before completion, which leads to the existence of a large number of OOSC.

(2) Primary education completion rate

Based on the report of PSLM 2014-15, 60% of boys in Pakistan complete "primary level or higher" in 2014/2015, whereas 43% of girls complete it in Pakistan in the same year (see the table below).

Table 3-12 Completion Rate at Primary Level by Province, Location, and Gender 2014/2015

(Unit: %)

Province	Urban			Rural			Total		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Pakistan	73	63	68	53	31	42	60	43	52
Punjab	73	66	70	54	38	46	61	47	54
Sindh	75	64	70	47	20	34	62	43	53
KP	69	43	56	57	25	41	59	28	44
Balochistan	62	33	48	43	13	30	48	19	35

Source: PSLM Survey 2014-15

Looking at the completion rate with the intersection of province, location, and gender, the rate for rural girls in Balochistan is the lowest rate of 13%, whereas that for urban boys in Sindh is the highest rate of 75%. The gap in the completion rates between boys and girls tend to be wider in rural area than in urban area in all provinces. In Balochistan and KP, however, even urban areas of these provinces mark the gender gap of 29% point and 26% point, respectively, whereas their counterparts of Punjab and Sindh mark that of 7% point and 11% point, respectively. The gender gap of rural Balochistan and rural KP is 30% point and 32% point, respectively, whereas that of rural Punjab and rural Sindh is 16% point and 27% point, respectively. Thus, girls, specifically those residing in rural area, are critically disadvantaged with the completion of primary education.

(3) Pupil-teacher ratio and pupil-classroom ratio

Pupil-Teacher Ratio and Pupil-Classroom Ratio are used as proxy indicators on the hypothesis that overcrowded learning environment hinder students' effective learning and that a teacher cannot address students' individual learning needs if they have to teach too many students at the same time. In this regard, at least in average, Pakistan doesn't face this problem substantially.

Table 3-13 Pupil-Teacher Ratio (2016-17)

Province/Area	Primary	Middle
Pakistan	32	21
Punjab	30	21
Sindh	29	25
KP	42	16
Balochistan	25	16
ICT	16	17

Source: Pakistan Education Statistics 2016-17, MoFEPT

Table 3-14 Pupil-Classroom Ratio (2016-17)

Province/Area	Primary	Middle
Pakistan	38	33
Punjab	38	38
Sindh	39	28
KP	40	25
Balochistan	21	23
ICT	30	35

Source: Pakistan Education Statistics 2016-17, MoFEPT

(4) Lack of classrooms and multi-grade teaching

In Pakistan, there are many schools which have no classroom[126] or have only one classroom, which is not only the problem faced by primary schools, but also middle and high schools, specifically in Sindh and Balochistan. In Sindh, out of a total 38,132 primary schools, 4,810 (12.6%) have no classroom and 14,678 (38.5%) have only one classroom, whereas 99 middle schools (4.4%) of a total 2,241 middle schools have no classroom and 221 (9.9%) have only one classroom, as shown in the table below.

Table 3-15 Classroom Availability Status by Province and Level (2016/2017)

Province	Level	Available Number of Classroom/s					Not reported	Total
		0	1	2	3	4 or more		
Punjab	Primary	663	2,166	16,518	6,049	11,594	-	36,990
	Middle	19	8	101	154	8,086	-	8,368
	High	11	7	8	34	6,343	-	6,403
	Total	693	2,181	16,627	6,237	26,023	-	51,761
Sindh	Primary	4,810	14,678	12,979	1,826	3,839	-	38,132
	Middle	99	221	255	519	1,147	-	2,241
	High	1	6	11	44	1,657	-	1,719
	Total	4,910	14,905	13,245	2,389	6,643	-	42,092
KP	Primary	349	342	8,812	3,863	7,421	1,392	22,179
	Middle	50	24	63	1,853	505	116	2,611
	High	20	2	7	62	2,084	20	2,195
	Total	419	368	8,882	5,778	10,010	1,528	26,985
Balochi-stan	Primary	827	3,352	4,718	647	984	1,099	11,627
	Middle	13	34	162	78	977	7	1,271
	High	2	7	13	11	872	-	905
	Total	842	3,393	4,893	736	2,833	1,106	13,803

Source: Pakistan Education Statistics 2016-17.

As far as the number of teachers in a school is concerned, out of 120 thousand public schools in Pakistan, 31 thousand (26%) schools have only one teacher, 69 thousand (58%) schools have two teachers or less[127] (see Table 3-16).

Table 3-16 Number of Schools (Public) by Teaching Strength, Location and Gender (Primary)

Number of teachers	Urban			Rural			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	986	402	1,388	21,351	8,226	29,577	22,337	8,628	30,965
2	1,145	677	1,822	21,478	14,625	36,103	22,623	15,302	37,925
3	867	524	1,391	11,281	5,713	16,994	12,148	6,237	18,385
4	641	499	1,140	5,686	2,515	8,201	6,327	3,014	9,341
5	518	426	944	3,234	1,449	4,683	3,752	1,875	5,627
>5	2,087	1,621	3,708	4,907	2,239	7,146	6,994	3,860	10,854
Not Reported	316	134	450	4,104	1,498	5,602	4,420	1,632	6,052
Grand Total	6,560	4,283	10,843	72,041	36,265	108,306	78,601	40,548	119,149

Source: Pakistan Education Statistics 2016-17, MoFEPT

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[126] In many cases of schools with "no classrooms", classes should be held in the open air especially in rural and remote areas.

[127] Pakistan Education Statistics 2016-17, MoFEPT

Likewise, majority of primary schools (81%) have less than 5 teachers, which implies frequent practices of multiple grade teaching. Although multiple grade teaching does not necessarily produce education of lower quality than single grade one, teachers often feel difficulty to manage a multiple grade class as it is complex. However, the teachers interviewed in the present survey explained that training on multiple-grade teaching is not sufficiently carried out except for sporadic ones having been assisted by UNICEF and teachers appointed to a school with multi-grade classes have to find their own pedagogy by trial and error[128]. Therefore, the fact that multiple grade teaching is commonly implemented could be considered as a hindering factor for quality of education. In the above-mentioned study on Causes of Dropout Rate at Primary Level in Pakistan, multi-grade teaching is considered as a "very important" factor by 27.5% of investigated teachers and 31.3% of education managers, and "important" by 27.8% of teachers and 39.4% of managers[129].

(5) Learning achievement assessment

According to the Annual Status of Education Report (ASER) 2018 which is a citizen-led, household-based survey conducted with in 154 rural and 21 urban districts in 20018, it is reported that "around half of the children of Grade 5 have not reached Grade 2 levels of learning[130]." It reveals that learning levels of Pakistani children are improving but the pace of improvement is very limited. The followings are key findings about learning levels of children in rural areas.

- 44% class 5 children could not read a class 2 level story in Urdu/Sindhi/Pashto compared to 48% in 2016.

- 48% class 5 children could not read sentences (class 2 level) compared to 54% in 2016.

- 47% class 5 children could not do two digit division as compared to 42% in 2016.

The National Achievement Test (NAT) 2016 carried out with Grade 4 and Grade 8 students by National Education Assessment System (NEAS) revealed several factors affecting to student learning achievement. Table 3-17 describes those factors:

Table 3-17 Factors affecting to student learning achievement

Factor	Higher Performer	Lower Performer
Urban-rural differences	Students attending schools in urban areas	Students attending schools in rural areas.
Student absenteeism	Students in schools with less student absenteeism	Students in schools where absenteeism is common among students
Experienced school leadership	Students of such schools which have head teachers with higher years of experience	Students in schools with head teachers with fewer years of experience.
Student involvement in co-curricular	Students in schools taking part in co-curricular activities	Students who have not in taking part in co-curricular activities.
Course completion by teachers	Students who reported that they had completed all of the course book	Students who said they had not completed the course book
Use of local language in classroom teaching	Students whose teachers did not use local language at grade 8 level	when teachers used local language as medium of instruction/teaching at grade 8 level
School with boundary wall	Students in schools with boundary wall	Students in schools with non-functional wall or without boundary wall.
Student age	Younger students performed better in all subjects	Older students of the class
Books at home	Students who had books for use at home	Students who had no such books at home.
Getting homework	Students in schools where teachers gave homework frequently	Students who were not given homework frequently
Checking homework by	Students who had their homework checked	Students who had homework rarely or never

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[128] Interview with teachers at Government Boys' Secondary School Bhiroo Village, Karachi. Furthermore, during the present survey, different educational administrators often pointed out the needs for training on multiple-grade teaching.

[129] AEPAM. (2018). *Causes of Dropout Rate at Primary Level in Pakistan*

[130] Annual Status of Education Report: ASER-Pakistan 2018, ASER Pakistan Secretariat, 2019, p.8

the teacher	by their teachers	checked by their teachers
Feedback (correction) on homework	Students in schools where homework mistakes were pointed out by teachers	Students in schools where such facility was not provided
Home possession	Students from homes with more home possession items (i.e. calculator, computer, internet, dictionary, radio, mobile phone and landline phone)	Student from homes with fewer home possession items.
Educated parents	Students whose parents were highly educated	Students whose parents were less or not educated
Paid tuition	Students who did not take paid tuition	Students who took paid tuition
Helping parents	Students who said they were not involved in household work.	Student who said that household chores affected their school work
Distance travel to school	Students with less travel distance to school	Students who travelled long distances to school.

Source: 5th National Stakeholders Conference, Dissemination of National Achievement Test (NAT) Findings 2016-17, NEAS, 2018

In order to illustrate the above-mentioned factors which are influential on the student achievement, Figure 3-10 and 3-11 shows relationships between the factors and the achievement expressed as "scaled mean score" of students. NEAS explains, "The achievement scales are constructed so that a student achieving 50% correct marks receives a scaled score of 500 and the Standard Deviation of the scale is set at 100.[131]" Therefore, if the score falls below 500 for a given group of students, the average mark obtained by all students in that group is less than 50%.
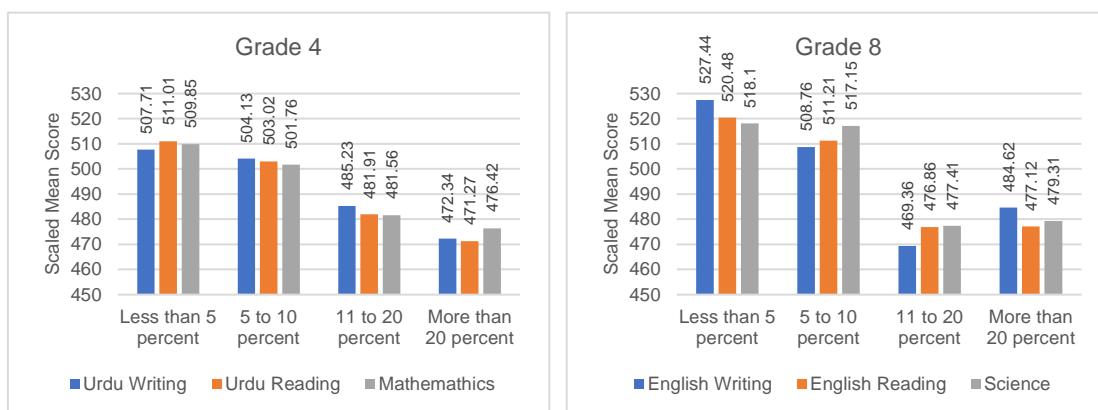
Source: National Assessment Report 2016, NEAS
Note: Absenteeism expressed by percentage is the proportion of students in the school who are "daily absentees".

Figure 3-10 Absenteeism and Achievement
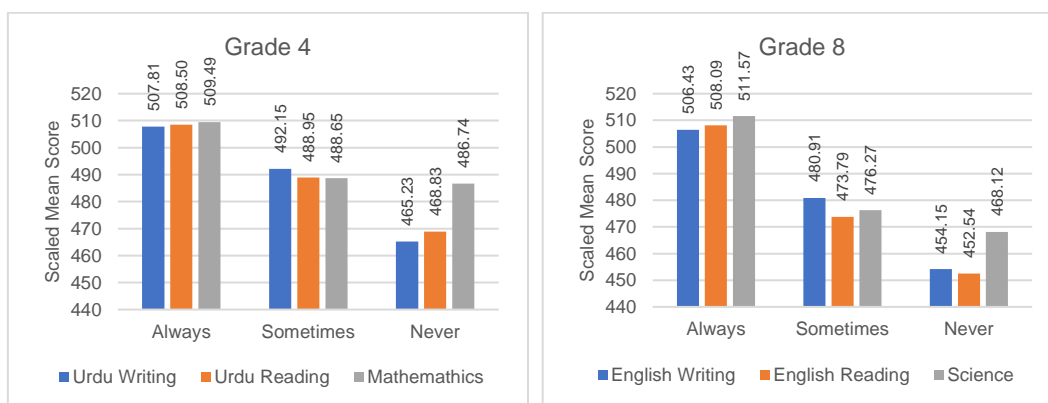
Source: National Assessment Report 2016, NEAS

Figure 3-11 Relationship between Achievement and Homework Checking by Teachers

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[131] Dissemination of National Achievement Test (NAT) Findings 2016-17, presented at 5th National Stakeholders Conference on January 24, 2018

3.1.3   School Management

(1)   School leadership

Though it is not easy to measure school management by quantitative indicators, the National Assessment Report 2016 provided several concerned. Among them, as mentioned in the subsection "2.2.10 Learning achievement assessment", lengths of head teacher's experience had positive correlation with students' performance. Figure 3-12 represents the teaching experience of head teachers.
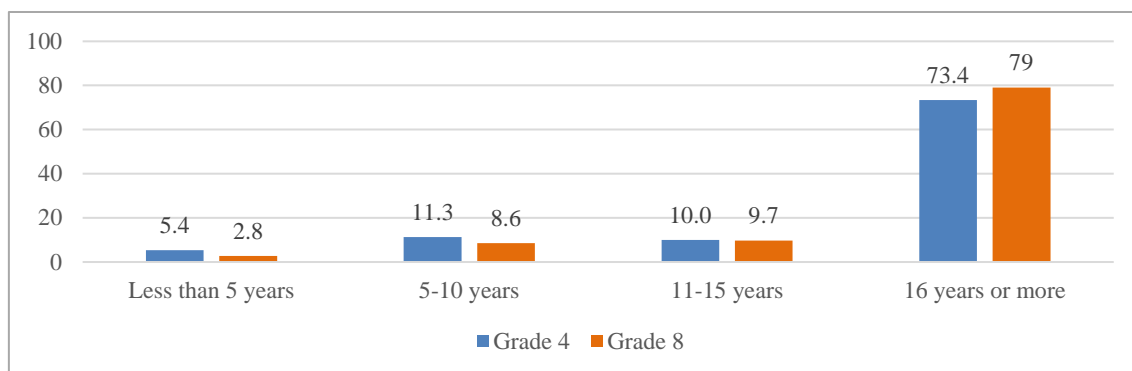
Source: National Assessment Report 2016

Figure 3-12 Teaching Experience of Head Teachers

The NAT 2016 report also provides challenges faced by head teachers as follows[132]:

- Support from higher authorities for action suggested by head teachers is essential

- Lack of teachers is the biggest challenge to manage classes

- Teacher absenteeism has been resolved to large extent due to government policies

- Continuous professional development of teachers has been strengthened by governments

- The transfer of teachers during academic years creates problem for head teachers

- Specific content based trainings for teachers at school level is needed

- The recruitment of content qualified but professionally untrained teachers is a challenge for head teachers

- Lack of Audio Visual (AV) aids in schools is a hurdle in quality teaching

(2)   Participation of parents

In addition, assuming that parents' involvement in school activities promote their children's participation in education, level of their involvement could be one of the indicators related to school management. The Figure 3-13 represents the degree of parents' participation in school activities explored in the above-cited NAT 2006. According to the data in the Figure, parents participates in the communications with school regarding children's performance and discipline relatively in an active manner while they participate less enthusiastically in activities related to school management, such as volunteer work or financial assistance.

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[132] National Education Assessment System. (2016) *National Assessment Report 2016* [Brochure], p.8.
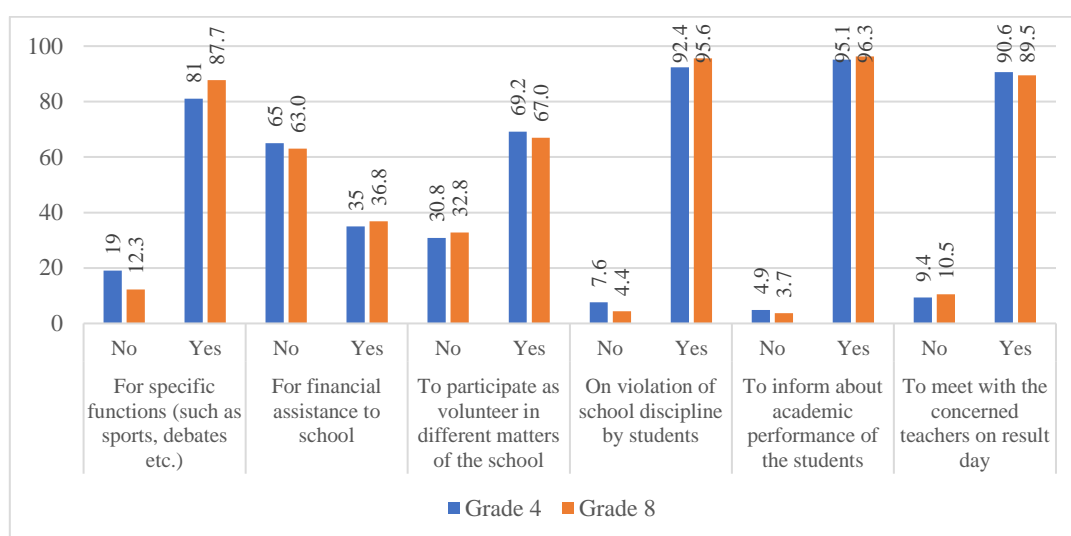
Source: National Assessment Report 2016
Figure 3-13 Parents' Participation in School Activities

As far as participation of community including students' parents is concerned, School Management Committee (SMC) in Sindh and School Council in Punjab are considerably noticed[133]. In Sindh, SMC was promoted in the Sindh Education Project assisted by the World Bank. SMC was provided with and accountable for the subsidies for repairing school facilities, purchasing consumables, ensuring transportation for girls and younger children, etc. Furthermore, it was supposed to support forming and implementing a school development plan, monitor teacher's attendance, and distribute textbooks and girls' stipends. While ADB's report points out the necessity for further examination on its effectiveness[134], Sindh School Education and Literacy Department explains that the subsidization has been suspended for two years because of several cases of wrong use of funds[135]. Therefore, School Education Sector Plan and Roadmap for Sindh 2019-2024 includes review on the SMC's functions and modalities of subsidization. Likewise, while School Councils in Punjab is supposed to execute funds according to the school development plan, need for further training is revealed for its more effective operation[136].

(3) Facilities of educational institutions

Problems for education typically perceived by teachers involves lack of facilities, equipment, and teaching-learning materials[137]. While other problems exist and cannot be solved through better management at the school level alone, the poor physical conditions are also severe problems to be considered. Thus, Table 3-18 provides information on the availabilities of some key facilities.

Table 3-18 Availability of Physical Facilities (Public Schools)

Issue	Options	Pakistan		Punjab		Sindh		Balochistan		KP		ICT	
		Primary	Middle	Primary	Middle	Primary	Middle	Primary	Middle	Primary	Middle	Primary	Middle
Building	Available	108,999	15,937	36,846	8,364	33,322	2,142	9,217	1,241	22,179	2,611	191	60
	Not Available	8,469	319	89	0	4,810	99	1,815	20	0	0	0	0
	Not Reported	1,681	136	55	4	0	0	541	10	0	0	0	0
Electricity	Available	73,655	12,930	33,674	8,184	16,039	1,405	1,733	414	19,343	2,048	190	60
	Not Available	42,892	3,315	3,262	180	22,093	836	9,266	844	2,677	529	1	0
	Not Reported	2,602	183	54	4	0	0	628	13	159	34	0	0
Drinking Water	Available	86,648	13,892	36,744	8,359	20,852	1,566	5,920	686	19,738	2,245	186	60
	Not Available	29,637	2,335	222	9	17,280	675	4,836	570	2,282	332	5	0
	Not Reported	2,828	201	24	0	0	0	871	15	159	34	0	0

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[133] ADB. (2019). *School Education in Pakistan: A Sector Assessment*.

[134] ibid.

[135] According to the discussion with SELD on March 11, 2020.

[136] ADB. ibid.

[137] For example, expressed in the above-mentioned interview and in other discussions during the present survey.

Latrine for Students	Available	86,671	14,465	36,611	8,347	23,239	1,763	2,213	801	21,216	2,469	185	59
	Not Available	29,360	1,733	344	19	14,893	478	8,315	463	804	108	6	1
	Not Reported	3,118	230	35	2	0	0	1,099	7	159	34	0	0
Boundary Wall	Available	87,875	14,538	35,850	8,295	22,363	1,788	4093	919	21,235	2,470	186	57
	Not Available	28,703	1,653	1,106	73	15,769	453	6,993	342	785	107	5	3
	Not Reported	2,571	237	34	0	0	0	541	10	159	34	0	0
Building Condition	Satisfactory	60.699	9,463	25,029	5,558	12,544	906	1,573	245	19,458	2,395	95	26
	Need Repair	36,410	5,107	11,217	2,766	14,605	903	5,354	765	2,721	216	90	33
	Dangerous	8,993	604	655	44	6,173	333	2,159	226	0	0	6	1
	No Building	8,380	319	0	0	4,810	99	1,815	20	0	0	0	0
	Not Reported	4,667	935	89	0	0	0	726	15	0	0	0	0
Total		119,149	16,428	36,990	8,368	38,132	2,241	11,627	1,271	22,179	2,611	191	60

Source: Pakistan Education Statistics 2016-17, MoFEPT

In Pakistan, the availability of facilities, such as toilets, boundary walls, and drinking water, is one of the most critical factors to determine the enrollment of girls in particular. In Punjab and KP, most of public primary and middle schools in urban area have toilets, while some of their counterpart schools in rural area do not. In Sindh, on the other hand, around 40% of public primary schools in rural area and around 25% of public middle schools in rural area do not have toilets. More problematically, in Balochistan, many of public primary school do not have toilets, regardless the location of school.

(4) Functionality of schools

The table below shows that out of a total of 113,386 public primary schools, 3,872 schools are not functional, and 1,891 schools were closed in Pakistan. A major reason for the dysfunction is that teachers are not appointed or do not come to school to teach. Another main reason is that since the school location is not selected according to the school-aged population size, the number of children is too small or there are many children who find it impossible to come to school because of the long distance from home. Looking at the data by province and level, out of a total of 35,002 public primary schools in Sindh, 1,466 (4.2%) are not functional and 1,664 were already closed. More problematically, in Balochistan, out of a total of 10,161 public primary schools, 1,466 (14.4%) are not functional. On the other hand, non-functional primary schools are more likely to be girls' schools in Punjab and KP, while opposite for Sindh and Balochistan.

Table 3-19 Status of Public Schools by Province, Level, and Types of Schools/Education (2016/2017)

Province	Type	Primary				Middle			
		Functional	Non Functional	Closed	Total	Functional	Non Functional	Closed	Total
Punjab	Boys	20,740	2	126	20,868	3,736	-	1	3,737
	Girls	16,051	14	57	16,122	4,622	-	9	4,631
	Total	36,791	16	183	36,990	8,358	-	10	8,368
Sindh	Boys	27,330	1,180	1,378	29,888	1,419	18	37	1,474
	Girls	7,672	286	286	8,244	737	11	19	767
	Total	35,002	1,464	1,664	38,132	2,156	29	56	2,241
KP	Boys	13,494	43	-	13,537	1,477	3	-	1,480
	Girls	8,525	117	-	8,642	1,127	4	-	1,131
	Total	22,019	160	-	22,179	2,604	7	-	2,611
Baloch - istan	Boys	7,437	1,018	-	8,455	729	7	-	736
	Girls	2,724	448	-	3,172	530	5	-	535
	Total	10,161	1,466	-	11,627	1,259	12	-	1,271
ICT	Boys	112	-	-	112	23	-	-	23
	Girls	79	-	-	79	37	-	-	37
	Total	191	-	-	191	60	-	-	60
Pakistan	Boys	74,394	2,674	1,533	78,601	8,377	86	38	8,501
	Girls	38,992	1,198	358	40,548	7,845	54	28	7,927
	Total	113,386	3,872	1,891	119,149	16,222	140	66	16,428

Source: Pakistan Education Statistics 2016-17.

3.2   Current status of TVET

3.2.1   Access

(1)   Number of participants and instructors

Table 3-20 shows enrollment and relevant information.

Table 3-20 Enrollment in Vocational TVET Institutes

Province	Capacity	Teaching staff	Dropout	Enrollment	Enrollment against Capacity(%)	Student teacher Ratio	No. of student/Room
Pakistan	314,706	13,330	9,153 (4%)	232,340	73.8%	17	21
Punjab	118,587	8,248	3,099 (4%)	85,790	72.3%	10	15
Sindh	49,450	836	1,343 (4%)	37,292	75.4%	45	39
KP	88,387	1,512	2,506 (3%)	73,912	83.6%	49	32
Balochistan	2,972	207	116 (3%)	3,695	124.3%	18	22
GB	14,446	626	1,290 (10%)	12,890	89.2%	21	15
AJ&K	12,161	611	65 (1%)	5,227	43.0%	9	16
FATA	7,248	341	606 (27%)	2,230	30.8%	7	14
Islamabad	21,455	949	128 (1%)	11,304	52.7%	12	18

Source: Survey Team prepared based on Comparative Analysis of TVET Sector in Pakistan, 2017, NAVTTC

Table 3-21 Enrollment in Technical TVET Institutes

Province	Capacity	Teaching staff	Dropout	Enrollment	Enrollment against Capacity(%)	Student teacher Ratio	No. of student/Room
Pakistan	110,184	2,984	2,665 (3%)	81,836	74.3%	27	32
Punjab	51,250	796	1,775 (7%)	24,104	47.0%	30	65
Sindh	20,800	556	536 (2%)	25,998	125.0%	47	41
KP	25,580	870	422 (5%)	25,580	100.0%	29	35
Balochistan	560	96	18 (10%)	187	33.4%	2	5
GB	1,949	88	60 (3%)	1,786	91.6%	20	25
AJ&K	6,290	126	146 (8%)	1,927	30.6%	15	27
FATA	765	52	19 (3%)	600	78.4%	12	39
Islamabad	2,990	400	111 (7%)	1,654	55.3%	4	15

Source: Survey Team prepared based on Comparative Analysis of TVET Sector in Pakistan, 2017, NAVTTC

Actually, the rates of enrolment against capacity of Technical TVET Institutes in Sindh and Vocational TVET Institutes in Balochistan are exceeding 100%, i.e. over capacity[138]. That of Technical TVET Institutes in KP is also 100%. This situation may imply the shortage of number of institutes and/or offered courses. On the other hand, rates of enrolment against capacity of Technical TVET Institutes in Punjab, Balochistan and ICT are around or less than 50%. Enrollment rate of Vocational TVET Institutes in ICT is also just over 50%. This indicates that

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[138] As shown in Table 2-18, courses that require Grade 10 completion such as DAE courses for three years or higher courses are categorized as technical education and delivered by technical institutes such as monotechnic, polytechnic or college of technology deliver, while vocational institutes delliver vocational courses whose entry requirement are lower than those for technical courses in Pakistan.

there are training opportunities provided but which are not efficiently utilized. There could be an access issue of physical distance as well as shortfalls of the enrolment due to possible unpopular courses. This needs urgent attention since limited TVET resources should be utilized effectively and efficiently.

For the comparison, Table 3-2 could be referred. Total enrolment in primary schools, middle schools and high schools are approximately 29.3 million, while TVET enrollment is only 0.3 million for both vocational and technical together. Although durations of programmes are different, TVET enrolment is still very low.

Unemployment rates in Pakistan in FY2017/2018 are 4.9% for male and 8.5% for female. The one for female is obviously higher than male as pure rates [139]. Employment to population ratios of population in age of 15 or above are 48.9% in total, 77.2% and 20.9% for male and female respectively, in FY2017/2018. [140] Employment to population ratio of youth (age 15~24) is 36.9% (Male 56.3%, Female 17.0%) [141]. Therefore, there are potential needs to TVET institute which leads to employment.

(2) Physical and geographical factors

Table 2-7 earlier shows that there are over 150 thousand of primary schools, nearly 50 thousand of middle schools and over 30 thousand of high schools. Although capacities of institutes may vary, total number of TVET institutes that is only 3,581 shown in Table 2-21 seems to be relatively small. There are over 4,000 of higher secondary schools according to Pakistan Education Statistics. It indicates that physical and geographical accessibility to TVET institutes is simply lower than that to higher secondary school. In addition, type and level of training courses offered in TVET institutes vary much more than in higher secondary schools. It is easy to imagine if someone wants to find a very specific skills training course which is not very popular, they are not in commutable distance in most of cases.

Distance is not an issue if hostel facilities are available actually. Currently, however, availability of hostel facility in Sindh, Balochistan, Punjab and Islamabad are only 9.2%, 6.1%, 3.9% and 3.3% respectively according to *Comparative Analysis of TVET Sector in Pakistan* (KP Province figure is not stated in the report).

This issue of physical access is serious to everyone, but crucially serious for girls considering cultural aspects that general public don't think that it is safe for girls to commute by public transport. This is not an issue again if transport facility is provided by institutes. Availability of transport facility of institutes in Punjab is 22% that is higher than other Provinces. Sindh is 3% while other Provinces are not mentioned about this specific data.

The concern about transport for females was actually one of interest in Social and Gender Survey conducted by JICA Project for Skills Development and Market Diversification of Garment Industry in Pakistan. Questionnaire survey was conducted among 75 females who were potential trainees for textile and clothing sub-sector in Lahore and Faisalabad.

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[139] Employment Trends 2018, Pakistan Bureau of Statistics, definition of unemployment is the rate of those who are 15 years of age or higher and not employed but willing to get employed during the period of the survey (more detailed definition is given such as sick leave or seasonal lay off ordered by employees). The actual number of male is larger than that of female since most of female are not willing to get employment.
[140] ibid
[141] Employment Trends 2018, Pakistan Bureau of Statistics
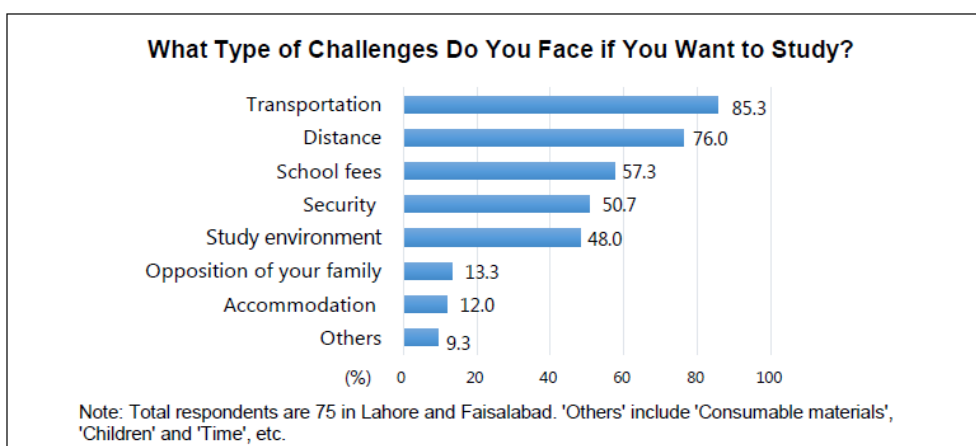
Source: Social and Gender Survey Report, JICA Project for Skills Development and Market Diversification of Garment Industry in Pakistan

Figure 3-14 Challenges for Female to Study

More than four out of five females consider transportation as a challenge. There is no data for comparison from males though, it is obviously very high.
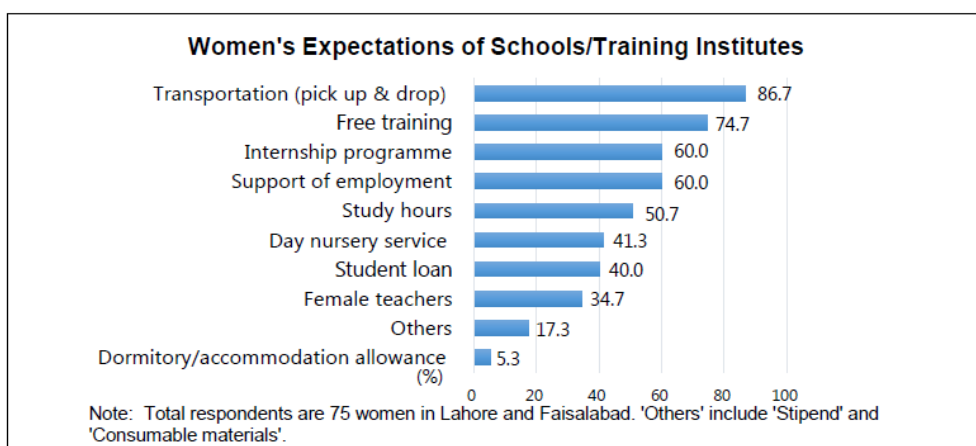
Source: Social and Gender Survey Report, JICA Project for Skills Development and Market Diversification of Garment Industry in Pakistan

Figure 3-15 Expectation from Schools/Training Institutes

Reflecting the challenge, females' expectation is the highest in provision of transportation, any other items including higher than training fees. The information suggests that access issue for females need consideration of transportation, but not only physical distance.

For comparison between male and female, a tracer study conducted by PSDF in 2012 may be indicative. It conducted two subcomponents separately, one for male and another for female. 1,500 males and 685 females were sampled respectively. One of the findings was 98.7% of the females work in the district of their residence while so do only 65% of the males. This piece of information is about access to work but not to TVET institute. Idea behind for females about preference of nearer location, however, could be assumed the same between work and training institute.

(3) Entry Requirement

Entry requirement for most of TVET courses are completion of lower secondary schools or matric. On the other hand, not more than half of age cohort complete lower secondary schools as seen in

the Table 3-6. Net enrollment rate is only 39% in lower secondary level in FY2016/2017 and only 77% even in primary level.it means that more than half of those of age group for lower secondary level completion do not have access to those TVET courses. For those who did complete primary level, they could access to the courses whose entry requirement is primary level. But for those who did not complete primary level, they hardly could access any of existing TVET courses.

(4) Motivation for TVET Participation

In addition to physical distance or entry requirement that limit access to TVET by place of residence or academic attainment that is difficult to change in short time, images of TVET, which could be considered as mental distance, of potential participants and their family or even local community are also another factor. In relation to this, PSDF conducted a set of household surveys under its flagship programmme *"Punjab Economic Opportunities Programme"* as baseline data collection. The result was compiled into a report titled *"Designing Active Labour Market, Policies in Southern Punjab"*. 10,946 households were randomly sampled from four programme districts, namely Bahawalnagar, Bahawalpur, Lodhran and Muzaffargarh. One of the questions was about skills related to occupations that family members would like to acquire. The result is shown in the following table.

Table 3-22 Skills would like to Acquire by Gender

(Unit: %)

Skills would like to acquire	Male		Female	
	Top	Second	Top	Second
Financing, accounting and banking	1.58	1.88	0.26	0.50
Agriculture, poultry and fish (includes tractor driving)	14.46	14.67	0.48	0.62
Livestock rearing	13.45	11.72	4.14	4.30
Veterinary	0.48	0.56	0.01	0.00
Auto electrician/ mechanic	9.75	9.51	0.01	0.00
Computer skill	12.59	13.54	4.65	5.89
Construction work	3.96	3.14	0.03	0.00
Metal works	3.20	2.61	0.00	0.06
Driving	10.11	7.26	0.09	0.12
Education related	1.86	3.73	3.91	6.61
Food related	0.92	0.95	0.58	0.72
Leather, glass and wood	1.51	1.60	1.10	1.40
Make-up & jewelry	0.82	0.76	7.45	6.89
Garments/ textiles	4.16	3.70	74.02	68.31
Medical	1.91	3.14	1.75	2.99
Office related	0.70	1.04	0.02	0.16
Engineering & electrician (including home appliances)	12.44	13.15	0.02	0.06
Sales related	2.40	2.08	0.14	0.19
Other	3.69	4.96	1.33	1.18
Number of valid responses	8973	4146	9219	3761

Note: Table includes all respondents of age 10 years or above (only the infra-marginal population)
Source: Designing Active Labour Market, Policies in Southern Punjab 2012, PSDF

In the male samples, the sum of two agriculture related skills, namely Agriculture, Poultry & Fish (includes tractor driving) and Livestock Rearing is larger than the sum of three engineering related skills, namely Engineering & Electrician (including home appliances), Auto Electrician/Mechanic and Metal Works. Interests in engineering related skills is not so high where the country is gradually expanding industry sector. This may lead to a scenario that interests in trades specific skills depends on extent of exposure to those trades considering that many of these households make their livelihood by agriculture, because mixed crop farming is the highest response in the currently possessed skills of the same sample presented in this report. In the female sample, interests in garment/textile skills is significantly high while interests in agriculture related skills are much lower, even lower than male samples.

3.2.2 Quality

There are several factors to assure quality of TVET courses such as curriculum, training facility and equipment, instructors.

(1) Curriculum

Under the ongoing TVET Reform, curriculum development and accreditation are standardized with Competency Based Training (CBT) and National Vocational Qualifications Framework (NVQF). Firstly, CBT curricula in 60 trades are developed and accredited, then piloted in 142 TVET institutes for more than 20,000 participants under TRSP with assistance from GIZ for implementation[142]. Under TSSP, the succeeding phase, 72 new CBT curricula are planned to be developed in five years duration. By the end of 2019 after three years of activities, 42 new CBT curricula have been developed and 36 of them are being implemented[143]. 187 CBT curricula are also available in the website of reform initiative. The following table shows breakdown of those.

Table 3-23 Number of CBT Curricula

Sector	Courses	Courses (samples)	By level of NVQF				
			Level 1	Level 2	Level 3	Level 4	Level 5
Agriculture	8	Crop Production (Cotton Picking)Agriculture (Cotton Processing) Dairy (Farm Supervisor) Dairy (Livestock Supervisor)	1	5	-	2	-
Energy	9	Electro Mechanical Technology Electrical Equipment Installation and Repair Micro Hydro Power Plant Technology Industrial Electricity	7	9	5	1	-
IT	14	Computer Graphics -Motion Call Centre Agent Marketing and Advertising (E-Commerce) Web Designing and Development Computer Operator Android Applications Developers Robotics Technology	3	9	9	8	-
Services	30	Fine Arts (Painting) Hospitality (Waiter) Chef Textiles (CADCAM Operator) Textiles (Fashion Designing) Textiles (Knitting Machine Operator) Freight Forwarding & Shipping Hair & Beauty Services Motorcycle Mechanic Offset Printing Machine Operator Post Press Operations – (Publishing) Retail Sales Operations Management	11	31	21	17	3
Manufacturing	14	Automotive Mechatronics Automotive Parts Production Machine Operator Gem and Jewelry Making Mechanical Technology (Machinist) Welder Leather Processing Technologist	1	12	14	12	-
Construction	2	Electrician Pipe Fitter	-	2	2	2	-
		Total	23	68	51	42	3

Source: Developed by Survey Team based on Pakistan Technical and Vocational Education and Training Reform
https://tvetreform.org.pk/national-vocational-qualifications-2017-to-date/

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[142] Fact Sheet, TVET Reform Support Programme, https://tvetreform.org.pk/factsheet-tvet-ssp/

[143] Fact Sheet, TVET Sector Support Programme (2017-2019), https://tvetreform.org.pk/factsheet-2017-2019/

As development of CBT curricula under the reform, without accredited curriculum, quality is not assured by authority then qualification issued have less value, if not valueless. Outdated obsolete curriculum won't assure quality at all. It is hoped that after revision and accreditation of curriculum, quality of curriculum is assured. The ongoing reform promotes involvement of industries so that implementation of CBT curricula in full scale is expected with provision of competency standards from industry where industry will admit value of TVET and pass-outs.

(2) Training facilities and equipment

Quality curriculum alone, however, does not assure the quality of training course. When the quality curriculum is delivered in classrooms and workshops appropriately, quality of training may be assured. It is actually verified through interview sessions of this study. Almost all stakeholder refers to this challenge. Procurement of those equipment needs funding. When they get those equipment, system and human resources for appropriate maintenance and equipment (asset) management are also necessary.

Indicators related equipment is in the NSIS. Each institute page has information about *'Equipment Status'* where evaluation statement such as *'Satisfactory' or 'Partially satisfactory'* are provided. Table 3-24 shows summary of that data.

Table 3-24 Building Condition of TVET Institutes by Province

Province	Satisfactory	Partially Satisfactory	Not Satisfactory
Punjab	78.7	18.4	2.9
Sindh	56.1	28.0	15.9
KP	62.3	23.1	14.7
Balochistan	51.0	40.8	8.2
GB	58.3	36.6	5.1
AJ&K	56.1	28.0	15.9
FATA	54.9	40.8	4.2
Islamabad	46.5	42.5	10.9

Source: Comparative Analysis of TVET Sector in Pakistan, 2017, NAVTTC

Punjab Province is showing better figures here again although there still is room for improvement. In strict CBT training, if one specific equipment is missing then particular course is difficult to deliver. They are forced to borrow equipment from other institutes or travel to those other institutes to ask for letting them to use the facility for the training.

PSDF actually conducted sector skills study in auto parts, electric fan, furniture, food processing, meat and dairy processing, cutlery and surgical instruments, garments, footwear and sports goods in past 10 years in Punjab. When TVET institutes were asked about training infrastructure in questionnaire survey, more than half of sample TVET institutes in garment sector (25 in total) responded as "not sufficient". Majority of them specifies insufficiency of training equipment; four organizations out of five in footwear sector responded as "not satisfied", 12 TVET institutes out of 21 in auto parts industry responded as "not sufficient", etc. more than half of institutes are not satisfied with the facilities.

(3) Instructors

As for instructors, quantitative and qualitative factors, i.e. numbers and capabilities affect quality of TVET courses. Firstly, statistics of number of teaching staff is shown below.

Table 3-25 Number of Instructors in Vocational TVET Institutes

Province	Capacity	Teaching staff	Enrollment	Student teacher Ratio
Pakistan	314,706	13,330	232,340	17
Punjab	118,587	8,248	85,790	10
Sindh	49,450	836	37,292	45

KP	88,387	1,512	73,912	49
Balochistan	2,972	207	3,695	18
GB	14,446	626	12,890	21
AJ&K	12,161	611	5,227	9
FATA	7,248	341	2,230	7
Islamabad	21,455	949	11,304	12

Source: Survey Team prepared based on Comparative Analysis of TVET Sector in Pakistan, 2017, NAVTTC

Table 3-26 Number of Instructors in Technical TVET Institutes

Province	Capacity	Teaching staff	Enrollment	Student teacher Ratio
Pakistan	110,184	2,984	81,836	27
Punjab	51,250	796	24,104	30
Sindh	20,800	556	25,998	47
KP	25,580	870	25,580	29
Balochistan	560	96	187	2
GB	1,949	88	1,786	20
AJ&K	6,290	126	1,927	15
FATA	765	52	600	12
Islamabad	2,990	400	1,654	4

Source: Survey Team prepared based on Comparative Analysis of TVET Sector in Pakistan, 2017, NAVTTC

Secondly, where appropriate equipment is available fortunately, next challenge in quality may be quality of instructors. Without quality instructor, training session fails to realize quality curriculum and appropriate use of quality equipment. Same as in equipment, challenge of quality instructor is basically its costs. Skilled person who could be quality instructor often opts to find position in industry where income is better than that of TVET instructor. When projects assisted by development partners provide training for instructors to update and upgrade their skills, some of them, if not many, leave after the project for finding position in industry where the upgraded skills are in demand for better wages. This factor is general in all over the world, but more critical in developing countries such as Pakistan. This was also confirmed through interview session. Indicators to show the skilled level of instructors don't seem to be collected systematically by anyone, therefore they are not available.

Under TRSP, in-service training for instructors were conducted to improve their skills. 8,500 instructors out of approximately 15,000 in-service instructors in total participated in training for pedagogical skills[144]. Adopted modality is cascading model. 100 master trainers were trained, then they trained other instructors using 18 e-learning facilities established for this purpose. And for the first time for Pakistan, a post-graduate study Programme, Bachelor of Education in Technical Education was introduced in 2014. This programme was launched jointly by the University of Punjab, the Virtual University and the German Technical University of Kaiserslautern[145].

In the next phase, 40 Chief Master Trainers are trained, then they trained 110 Master Trainers, finally they trained 2,511 by the end of 2019. 4,000 more instructors are to be trained in the remaining two years.

(4) Instructor Development

According to the policy document in the area of HRD in TVET[146], there is no national TVET instructor development system. Instructors/teachers for general subject such as mathematics and other natural science subject are supposed to follow existing system in which they need to take and pass subject content matters and pedagogy, while no such system exist for instructors for

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[144] https://tvetreform.org.pk/factsheet-tvet-ssp/
[145] ibid.
[146] HRD in TVET of Pakistan, Policy Paper, 2012

skills in trades. Instead, they usually take customary trainings for less than a year after appointment. There will be regular periodic trainings and performance in the training used for staff appraisal. For instance, two main TVET organizations in Punjab, TEVTA and PVTC, have their own training institutes, namely Government Staff Training Centres (GSTC) and Staff & Teachers Training Institute (STTI) respectively which conduct training for their own staff including instructors independently but there is no common standard. TEVTA has five GSTC while PVTC does have only one STTI. Payroll system is also not standardized having different status such as regular Government employees, independent organization employee (e.g. TEVTA employees) or renewable contract employees and salary and benefits are different even though their actual responsibilities as instructors are the same. This is discouraging, so that they feel that TVET instructors are the last resort for skilled tradesmen.

The policy document points out the lack of standardized national instructor development system for both pre-service and in-service and necessity of clearly stipulated requirement for instructor qualification for each level of courses to be responsible as well as government employee recruitment and employment system equivalent to other Government agencies in place. It is noted that this document argues TVET instructor in the context of Government employees, but no consideration is given for relation with industry that is critically important in TVET. In some other countries, there are systems for instructors to visit industry regularly to update today's situation in the actual field and reflect into instruction at institutes. But consideration for such system was not heard from the stakeholders in the ongoing TVET reform. The document proposes to make clear academic qualifications such as university degrees as requirement depending on the level of courses, while it is silent about evaluation of field experience in industry.

(5) Finance

Key quality aspects discussed above are all addressed in the National Skills for All Strategy. The cost estimates of the proposed measures for quality enhancement of TVET sector in the Strategy, 500 million for curricula development and PKR 1,080 million for capacity building of teachers/instructors are included in PKR 2,897 million in total for quality only. As to facility and equipment, I) optimum utilization of existing facilities and II) TVET sector capacity enhancement under Enhancing TVET Capacity are proposed with the estimated cost of PKR 77 billion. It is common understanding that quality assurance requires funding. Where government fund is limited, fund from donors and private sectors may also necessary, who will demand assurance that provided fund will be effectively and efficiently utilized in order to produce expected outcomes. It should be reminded funding itself does not lead to success but management of fund with monitoring and evaluation mechanism is the key to success.

Currently, EU, the Government of Norway and Germany fund TSSP with assistance for implementation by GIZ while World Bank funds project for TVET development in Punjab Province. The total assistance for the former is EUR 62.5 million[147] of which a share of EU is EUR 45 million[148], while for the latter the World Bank provides credits amounting to USD 50 Million with USD 6.3 million from the Provincial Government[149].

(6) Evaluation

Finally, quality is assured by major factors such as curriculum, equipment and instructor, confirmation of quality assurance is done by assessment. Board of Technical Education of each province is basically responsible for assessment. Pass rates are main quality indicator. Punjab

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[147] Fact Sheet, TVET Sector Support Programme (2017-2019), https://tvetreform.org.pk/factsheet-2017-2019/
[148] https://eeas.europa.eu/sites/eeas/files/tvet_final.pdf
[149] http://documents.worldbank.org/curated/en/634231468096559464/Pakistan-Punjab-Skills-Development-Project

BTE has made pass rates available in its website by course. The table below shows result of DAE courses in 2019.

Table 3-27 Results of DAE Assessment by PBTE, 2019

Name of Cource/Degree		2019 Annual or 2019 First			2019 Second		
		Candidates Appeared	Candidates Passed	Pass rate	Candidates Appeared	Candidates Passed	Pass rate
Diploma of Associate Engineer	First Year	52825	10086	19.09%	36928	10373	28.09%
	Second Year	52909	11113	21.00%	37207	12144	32.64%
	Third Year	42219	25478	60.35%	13827	5868	42.44%

Source: prepared by the survey team based on PBTE Website

Trend of decreasing candidates and increasing pass rates could possibly be observed as grade of participants become higher. This may indicate that some may drop out in the course of three years programme who could not catch up with. PBTE assesses courses funded by PSDF that are all short courses from three months up to 12 months. Pass rates of those courses are all above 90% except for one out of 17 courses. Information on short courses run by TEVTA is also available pass rates of which are over 80% except for three out of 15 courses. It is observed that pass rates of DAE are generally lower than those of short courses. JICA expert told that weights on paper test subjects such as mathematics or English are higher than those for practical subjects so that those who are good enough in practical skills to pass still fail if they are not very good in mathematics or English.

(7) Employment rate of graduates

CBT curricula and NVQF are introduced to enhance more skills demand driven TVET. It is expected for improve employment of graduates. To understand recent employment rate of graduates of TVET institutes, tracer study is common methodology. There was no access to such data on NSIS at the time of this survey although NSIS has the objective to compile the relevant information. In Punjab Province, PSDF with assistance from UK conducted a pair of tracer studies of TVET graduates, i.e., one for male and another for female. One for male sampled 1,500 TVET graduates in Punjab from the one of its scheme operated from September 2012 to December 2013 titled *Skills for Job 2012*[150], in which 40 TVET institutes conducted 121 courses under 26 categories. About one third of participants took short courses for the duration of three months or less, while the rest participated in longer courses than those. Target areas are set at four districts[151] considered to be poverty areas in Punjab Province. Actual courses are chosen from the list of available courses respecting participants wish. Interviews to the 1,500 samples were conducted in 2014 after completion of courses. Out of total sample population, 553 samples were in further education or training so that they are not employed. 947 samples, the rest of samples, were population to calculate the employment rates. Table 2-18 shows employment rates of trade of which numbers of samples were greater than 40.

Table 3-28 Employment Rates from PSDF Tracer Study SFJ 2012 (male, sample > 40)

Target Group	Employment Rate (%)	No. samples
Automobile	65.75	73
Commerce	70.77	65
Computer & IT	58.11	74

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[150] Tracer Study of Skills for Job (SFJ) 2012, PSDF
[151] Bahawalpur, Bahawalnagar, Lodhran and Muzaf-fargarh

Construction	64.42	104
Construction Machine Operator	72.31	130
Electrical	58.62	116
Services	70.19	161
Welding	73.17	41

Source: Tracer Study of Skills for Job (SFJ) 2012, PSDF

They are all greater than 50%. Welding and Construction Machine Operator both of which are construction related trades are two highest followed by commerce.

Another tracer study for female sampled 685 samples from same scheme, i.e. SFJ2012. Interview survey was conducted in 2015. Out of total sample population, 239 samples were in further education or training so that they are not employed. 446 samples, the rest of samples, were population to calculate the employment rates. The following table shows employment rates. Garment trades show moderate employment rates but is the highest in actual number of employments, i.e. 82 persons, because of much larger number of samples.

Table 3-29 Employment Rates from PSDF Tracer Study SFJ 2012 (female)

Target Group	Employment Rate (%)	No. samples
Garments	28.2	291
Services	31	87
Computer & IT	15.4	26
Hospitality	45.5	11
Textiles	33.3	9
Food	50	8
Art & Design	57.1	7
Health	25	4
Electric Media	33.3	3

Source: Tracer Study of Skills for Job (SFJ) 2012, PSDF

Firstly, it is significant that employment rates of females are much lower than those of males. Among those, Art & Design, Food and Hospitality are the three highest trades greater than 40% although number of samples are small as 7, 8 and 11 respectively. Hospitality trade was training in professional cooking. Garments was about domestic tailoring and dress making.

Punjab TEVTA with assistance from World Bank also conducted a tracer study sampling graduates from TEVTA institutes in 2010. Diploma (postsecondary level) and the certificate level (vocational and technical secondary education) with valid mobile telephone number was sampled. The population of that samples is 7,840. Unique approach of this survey was adoption of mobile phone as communication tool which is much less expensive than visit and interview survey with paper questionnaires. SMS questions were sent to all 7,840 samples receiving 1,312 responses. Response rate was as low as 16.7% which could be disadvantage in SMS survey compared to face-to-face survey. But having 1,312 samples with minimum cost is considered to be reasonable. It may be noted that the report admits possible bias caused by possession of mobile phones and willingness to participate in the survey by responding.

262 samples were in further education or training. After excluding those, allover employment rate was 39%. 93% of those who responded as *"unemployed"* also responded *"seeking employment"*. The report concluded that "only 39% of graduates are in employment", and "The findings seem to suggest that more needs to be done to improve the employment outcomes of trainees and meeting industry demand for skilled labour such as employment facilitation guidance and enhancement of access to labour market information." Among those 104 trades in total surveyed, top 10 trades with more than or equal to 15 responses (samples) are shown in Table 3-30.

Table 3-30 Top 10 Employment Rates from Punjab TEVTA Graduates in 2010

Trades and Courses	Employment Rate (%)	No. of Responses (Samples)
Electrical (DAE)	51	51
Civil (DAE)	50	36
Welder	44	18
Diploma in Commerce (Diploma 2 years)	44	70
Certificate in Computer Applications	44	75
Electrician	38	24
Mechanical (DAE)	37	60
Electrical (G-III)	29	17
Diploma in Vocational Girls (Diploma 2)	28	18
Draftsman Civil (G-III)	20	15

Source: Labour Market Outcomes of Punjab TEVTA Graduates, World Bank

Three electrical engineering courses are in top 10. It may be presenting better demand in that trade area.

3.2.3   Governance

As to institute governance, TSSP promotes standardized management system with increased involvement of industry. *National "Skills for All" Strategy* states "Increasing and systemizing employer/private sector led TVET Institute Management Committees (IMCs) and District Boards of Management (DBoM)" as one of recommendations. Accordingly, GIZ assisted NAVTTC to prepare *"The Manual on Functioning of Institute Management Committees and District Board of Management 2018"* with the objective to support IMC / DBoM in carrying out their roles and responsibilities effectively. It is a manual to guide how IMC and DBoM should be managed. Since it is a relatively new initiative, numbers of establishment of IMC and DBoM are first indicators for institute governance.

147 IMC were established in 2013 in Sindh Province with assistance from ILO to strengthen involvement of industry [152]. ILO conducted survey regarding IMC. Questionnaires were distributed to 134 TVET institutes in the Province, receiving responses from 51 principals and 23 Chairperson. Since Chairpersons are selected from local industry, there is a possibility that only 23 IMCs out of 134 are operating as expected considering that the objective of IMC is strengthening industry involvement. And according to the above Manual developed in 2018, although two hundred IMCs were formed under Sindh Skills Development Project (SSDP), however, at least 60-70% were only on paper without expected activities.

On the other hand, through KP-TEVTA Act, in 2015 the TEVTA board made regulations which fortify the importance of IMCs. KP-TEVTA is so far the most successful in forming and running IMCs. The number of established IMC is not presented. Punjab TEVTA established District Board of Management (DBoM) in 2000 in all districts. The number of IMC established is not presented.

TSSP aims to establish 550 IMCs under the Programme. The Manual stipulates that the Committee shall comprise preferably of 5 to 10 members (including its Chairperson and the Secretary) of which 50% are recommended to be selected from local industry including its Chairperson; at least 10% from civil society, communities and 40% government representatives. The Manual advises that Chairperson of IMC should be selected from private sector, preferably top management in industry or services sector while Secretary is a principal of the institute. Half of the members are supposed be from industry. According to the latest document prepared by TSSP with assistance of GIZ for implementation, 244 TVET institutes have established IMC as

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[152] https://www.ilo.org/islamabad/info/public/pr/WCMS_212116/lang--en/index.htm

of December 2019[153].

It could be imagined it may be difficult for some institutes where industry is not very well developed. IMCs' responsibilities include preparation of annual plan, quarterly meeting and annual financial audit conducted by a registered chartered accounting firm. Therefore, number of annual plans approved by IMC, records of IMC meetings and audit reports are important indicators for governance status though figures were not obtained in this study.

Apart from IMC, teaching staff data and number of participants per one instructor shown in Table 3-25 and 3-26 are available as indicators for institute management. It is observed that figures differ largely from one province to another. However, appropriate number of participants per one instructor varies depending on training contents so that the figures themselves are not considered as issues unless they are extra ordinally large or small. TSSP also conducts principal training who are responsible for institute management. As of December 2019, 666 principals have been trained against their original plan to train 600 principals at the beginning in 2017[154]. Some information related to institute management observed during visit to institutes are described below.

From the visit to GCT RR, not only the principal but all department heads and some IMC members from private sector participated in interview session so that effective operation of IMC is confirmed.

From the visit to Construction Technology Training Institute (CTTI), involvement of industry through IMC functionality was not confirmed. According to a report prepared by the completed JICA Project, many counterpart instructors left the institute. When inquired about the resignation of instructors, some staff admitted that it is true to some extent that some instructors are looking for better occupation and they are not satisfied to be an instructor at CTTI. Some of the reasons are salary and benefit which are not very attractive, according to interview to the staff. In CTTI, every new recruit starts as a contract staff at least for two years, and then only when a new vacancy for a permanent staff is open, they could apply. As to pension, they could be eligible only after 25 years of services as permanent staff, which seems to be a very high condition. they Some said instructors would prefer being an instructor at GCT because of benefit.

One of Vocational Training Institute[155] under PVTC was also visited during field survey. The principal received mission team alone. He explained about IMC as management system of an institute and DBoM as supervisory system for matters such as staff procurement. As far as this institute is concerned, it is observed that IMC and DBoM system is well accepted.

3.2.4   Domestic Skills Demand in Pakistan

Prior to describe domestic skills demand market needs, national accounts and domestic industry in recent years is outlined in order to overview the environment for labour market to provide employment needs of TVET graduates.

(1)   National Accounts

Growth rate of Gross Domestic Product (GDP) by sectors for the past decade is shown in the following table.

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[153] https://tvetreform.org.pk/factsheet-2017-2019/
[154] https://tvetreform.org.pk/factsheet-2017-2019/
[155] Vocational Training Institute, Walton, Lahore

Table 3-31 GDP Growth Rate 2009-2019

(Unit: %)

	Total	**Agriculture Sector**	**Manufacture Sector**	**Commodity Producing Sector**	**Services Sector**
2009-2010	2.58	0.23	1.37	1.76	3.21
2010-2011	3.62	1.96	2.5	3.21	3.94
2011-2012	3.84	3.62	2.08	3.09	4.4
2012-2013	3.68	2.68	4.85	1.73	5.13
2013-2014	4.05	2.5	5.65	3.49	4.46
2014-2015	4.06	2.13	3.88	3.63	4.36
2015-2016	4.56	0.15	3.69	2.92	5.72
2016-2017	5.22	2.18	5.83	3.4	6.47
2017-2018	5.53	3.94	5.43	4.45	6.25
2018-2019	3.29	0.85	-0.27	1.13	4.71

Source: Pakistan Bureau of Statistics
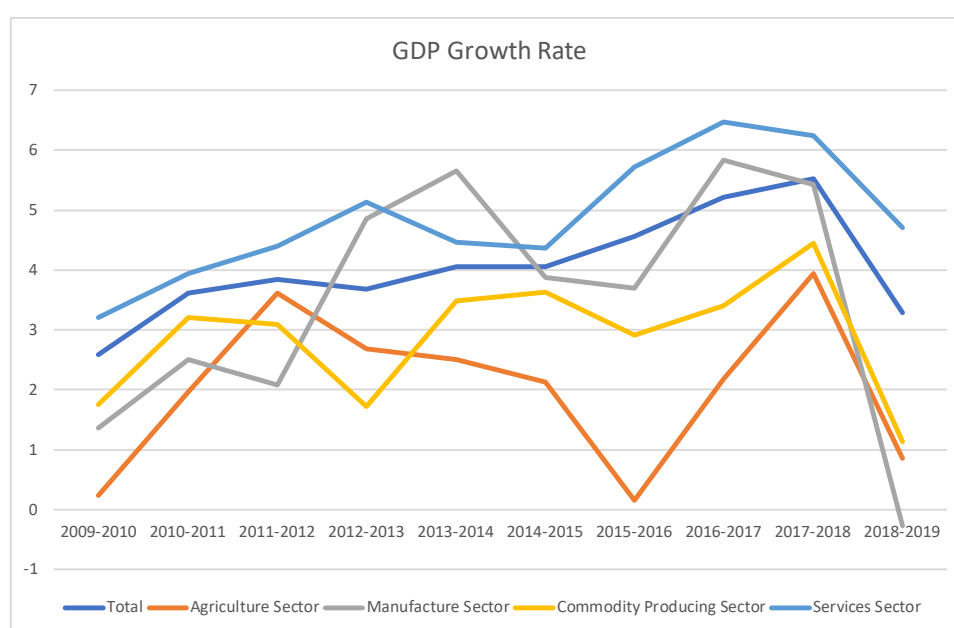
Source: Pakistan Bureau of Statistics
Figure 3-16 GDP Growth Rate (%)

As seen in the table and the figure, GDP growth rate has been increasing steadily from FY2009/2010 to FY2017/2018 with exception of FY2012/2013 showing slight decrease, however, that for FY2018/2019 turned out to be the second lowest in the past decade. It should be noted that growth rate of manufacturing sector was negative, i.e., it did not really grow but did decline. Breakdown of this statistics reveals that it declined only in large-scale manufacturing while small-scale and slaughtering manufacturing still did grow. Some of exports by manufacturers dropped including some textile products. It may partially explain the decline.

This needs due attention since large-scale manufacturers could be the ones that creates large number of employments because of their largeness. This may lead labour market to unwelcome scenario in which less opportunities are offered for the larger number of youths who are willing to join manufacturing sector. They may include TVET graduates if TVET institutions succeed in enrolling and training that large number of youths.
Table 3-32 and Figure 3-17 show major exports by commodity group.

Table 3-32 Major Exports by Commodity Group

YearMonth	FY2014/15	FY2015/16	% increase	FY2016/17	% increase	FY2017/18	% increase	FY2018/19	% increase
Raw Cotton	14,932.7	7,948.1	-47%	4,559.0	-43%	6,183.6	36%	2,709.0	-56%
Cotton Fabrics	248,430.9	230,757.3	-7%	223,675.4	-3%	242,374.4	8%	285,625.2	18%
Cotton Yarn and Thread	188,615.4	134,027.9	-29%	131,813.2	-2%	151,203.3	15%	153,004.9	1%
Knitwear	243,718.7	246,267.3	1%	247,242.0	0%	298,374.2	21%	394,748.4	32%
Bed-wear	213,017.9	210,543.5	-1%	223,811.6	6%	248,537.7	11%	307,202.3	24%
Woolen carpet & Rugs	11,772.5	9,896.6	-16%	8,053.9	-19%	8,188.7	2%	8,980.3	10%
Leather	49,582.8	37,802.9	-24%	36,182.8	-4%	36,329.9	0%	34,269.3	-6%
Rice	206,266.3	194,245.6	-6%	168,244.0	-13%	224,739.5	34%	285,031.5	27%
Fish & Fish preparations	35,429.4	33,918.4	-4%	41,213.9	22%	49,755.5	21%	60,404.6	21%
Fruits & Vegetables	67,864.3	66,839.5	-2%	59,241.8	-11%	70,562.2	19%	88,469.3	25%
Sports goods	34,293.6	33,861.6	-1%	32,285.1	-5%	37,710.2	17%	41,994.7	11%
Total	1,313,924.5	1,206,108.7	-8%	1,176,322.7	-2%	1,373,959.2	17%	1,662,439.5	21%

Source: prepared by survey team based on 14.02 Exports by Commodity of last 5 years, External Trade Statistics, Pakistan Bureau of Statistics
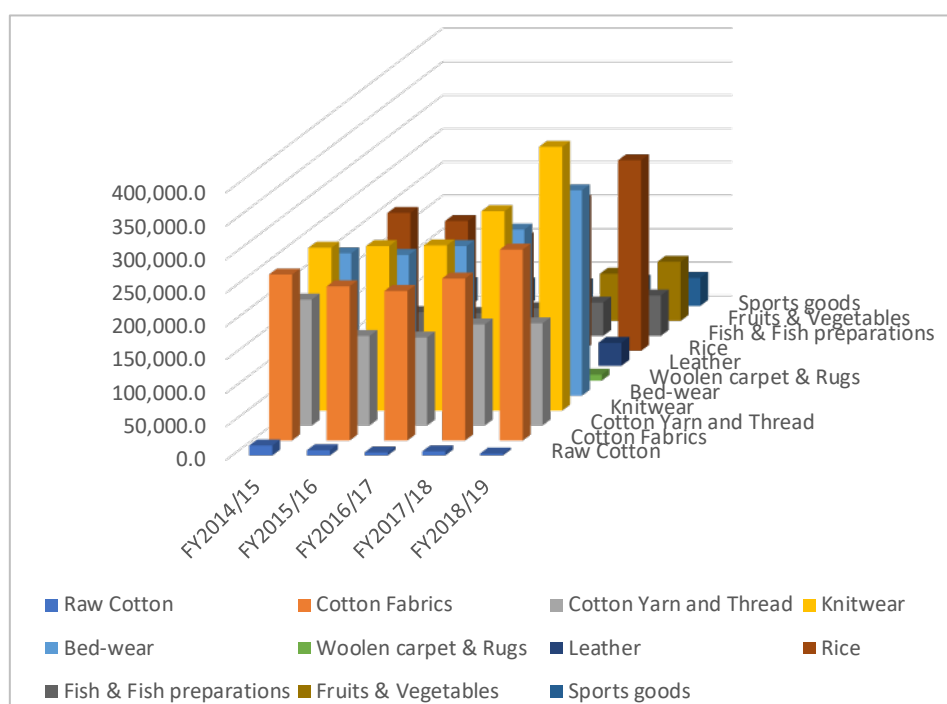
Source: Pakistan Bureau of Statistics

Figure 3-17 Major Exports by Commodity Group

Although GDP in manufacturing declined in FY 2018/19, textile industry in general show good increase except for raw cotton. It could be interpreted that more values were added to raw cotton to contribute exports in other forms made from raw cotton. Knitwear export shows the highest both in total export amount and growth rate from previous year. International export market has a large potential comparing to domestic market in general. If competitiveness of export products improves further, it is reasonable to expect keeping up same or higher growth rate.

(2) Labour Market

In the previous part, GDP of agriculture, industrial sector and service sector are outlined. Share of the three sectors in GDP are 18.53%, 20.27% and 61.21% respectively. Distribution of labourers, however, differs from that as shown in Table 3-29.

Table 3-33 Indicators of Labour Market (%)

Indicator	Gender	2017-18
Labour Force Participation Rate	Both sex	51.9
	Male	81.8
	Female	22.8
Employment-to population ratio	Both sex	48.9
	Male	77.2
	Female	20.9
Unemployment rate	Both sex	5.7
	Male	4.9
	Female	8.5
Share of Industry in total employment	Both sex	24.0
	Male	26.0
	Female	16.6
Share of Agriculture in total employment	Both sex	37.4
	Male	29.6
	Female	66.1
Share of Services in total employment	Both sex	38.6
	Male	44.4
	Female	17.3

Source: Pakistan Bureau of Statistics

As seen in the above table, shares of labourers the above-mentioned three sectors are 37.4%, 24.0% and 38.6% respectively according to the *Employment Trends 2018* published by PBS.
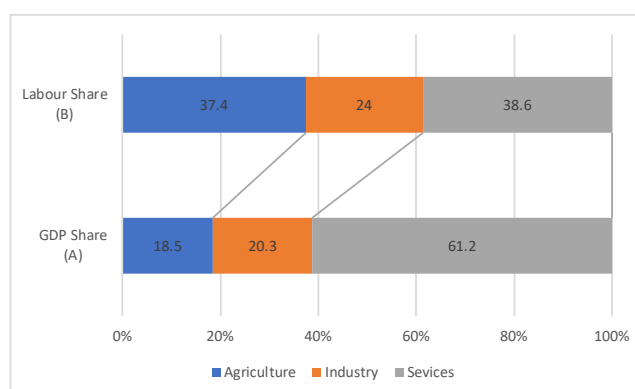
Source: Pakistan Bureau of Statistics
Figure 3-18 GDP and Labour Share (%)

More labours are producing less GDP in agriculture than in industry and services. Let us calculate very rough productivity index with calculation of "GDP Share"/ "Labour Share" x 100 (it indicates fictional GDP if all labour was concentrated in one single sector only for discussion purpose on the table).

Table 3-34 GDP and Labour Share and Fictional Productivity by Sector

Sector	GDP Share (A)	Labour Share (B)	Productivity in terms of contribution to GDP (A) / (B) x100
Agriculture	18.5	37.4	49.5
Industry	20.3	24	84.5
Services	61.2	38.6	158.6

Source: Study Team based on data from Pakistan Bureau of Statistics

From this discussion, it could be interpreted that contribution to GDP per person is highest in services sector followed by industry sector, then lowest in agriculture sector.

In perusal of this data, special attention needs to be paid to the gender differences. In the three sectors, female shares are 66.1%, 16.6% and 17.3% respectively while 29.6%, 26.0% and 44.4% respectively male shares are as shown in the following figure.
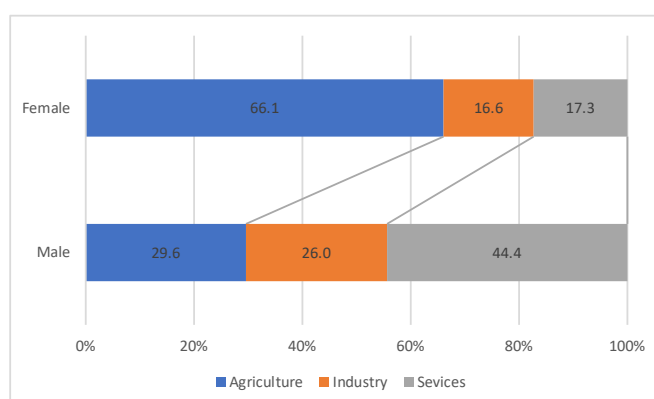
Source: Pakistan Bureau of Statistics

Figure 3-19 Labour Share by Gender

These statuses may lead to a scenario in which shift of labour force from agriculture sectors to industry and services sector would enhance economic activities in terms of GDP, especially female since two thirds of female labours are in agriculture currently. To do so, skills development for them in the skills in demand and investment to expand those sectors are necessary.

One of the possible sub-sectors that absorbs large number of employees is manufacturing, especially labour intensive industry. Largest in more exporting-oriented manufacturing is textile as shown in previous section. Pakistan's superiority is clear that very raw material, i.e. raw cotton is locally produced. Sector Skills Study conducted by PSDF in 2015 provides detailed information related to skills demand by breakdown of skill for specific task. Figure 3-20 shows limiting factors of manufacturers. Lack of skilled workforce is much higher than lack of funds. This may be interpreted that some of those manufacturers would provide fund to train and recruit skilled workers.
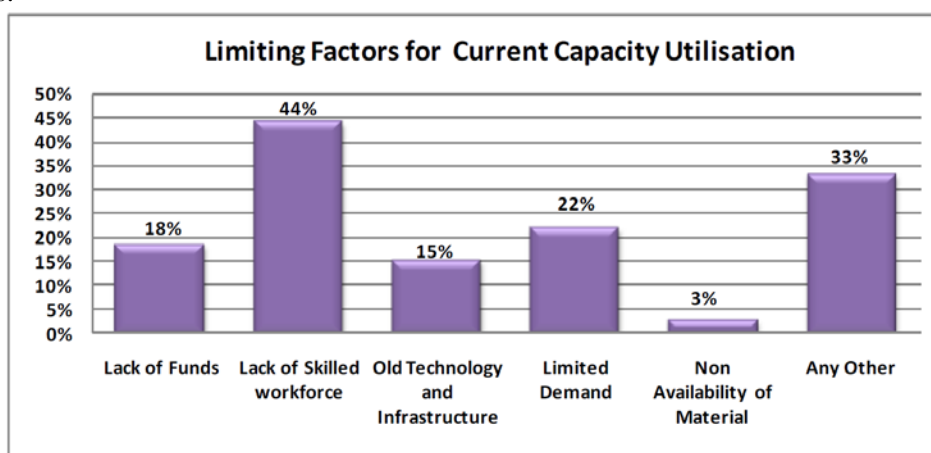
Source: Sector Skills Study-Garments Sector 2015, PSDF

Figure 3-20 Limiting Factors of Garment Manufacturers

Figure 3-21 shows number of employees by different department under sampled manufacturers.

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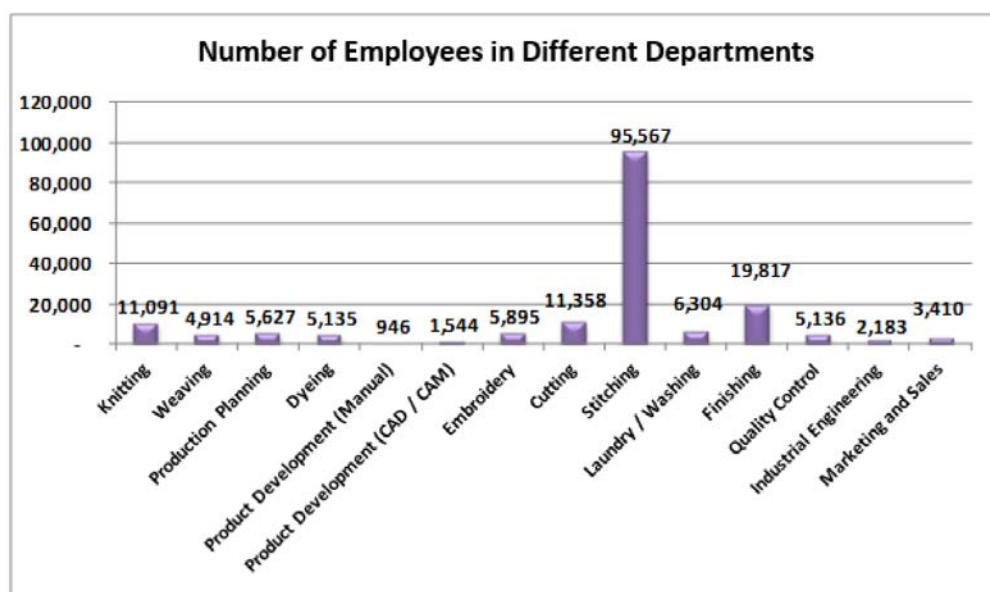
Source: Sector Skills Study – Garments Sector 2015, PSDF
Figure 3-21 Number of Employees in Garment Sectors by Company Department

This typically demonstrates the potential of capacity to absorb employees in stitching. The report states, "The key reason for stitching to be a labour intensive function is that unlike other departments, one individual operator is required to operate one sewing machine."

According to the interview with JICA Experts of the Project for Skills Development and Market Diversification (PSDMD) of Garment Industry, manufacturers exporting to Europe and USA are given conditions of certain percentage of employment of females by some of buyers which leave not many options other than recruitment of females.

Furthermore, there is a research by a scholar Dr. Momoe Makino (Institute of Development Economy) that analyzes knitwear sub-sector of Pakistan after expiry of Multi-fibre Agreement [156] that secured export quota for Pakistan without competition by the end of 2004 [157]. Some stakeholders in textile sector confirmed that after 2005 knitwear exporters struggled and some gave up their trade business. The research presents the possibility of reasons for those who survived is human resources management capacity to accommodate salaried female stitchers replacing piece-rated male stitchers. This research encourages garment sector development by training and taking in female stitchers.

(3) Industry Organization

Overview of skills demand from industry was outlined in previous section. It is repeatedly emphasized in the ongoing reform. Industry organizations are the ones that already have the information or functions to gather the information. Accordingly, industry organization in Pakistan is briefed below.

Generally speaking, a group of companies that have common interest form an industry

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[156] Agreement arranged by World Trade Organization (WTO) imposing quotas on the amount of textile trade developing countries to export to developed countries.
[157] Makino, M. (2014). Chapter 5 Pakistan: Challenges for Women's Labor Force Participation. In *The Garment Industry in Low-Income Countries*.(pp. 132-176). IDE-JETRO.

organization. There are two major interests of companies usually, one is corporative activities in the economy in geographical and administrative areas and another is those in particular industry sector and modality of business. The former interests lead them to form a Chamber of Commerce and Industry that is established in district level[158]. The latter interests lead them to form a trade association in particular industry sector and sub-sector. C/P organizations of JICA Project for Skills Development and Market Diversification of Garment Industry are in the latter type of organization. Both types are required to be registered under the Ministry of Commerce, which is the sole regulatory authority of industry organizations in Pakistan, in order to be officially recognized. The Federation of Pakistan Chambers of Commerce and Industry was established as an apex body of all of those organizations registered under the Federal Government.

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[158] Lahore Chamber of Commerce and Industry was visited during field survey. It was established before Pakistan became independent and its office building and staff give idea of a highly established organization. It was noticed that President and two Vice Presidents are all in commercial sector but not in manufacturing sector, which gave the Chamber may represent more commercial entities than manufacturers. It also should be noted that there is no mechanism to represent at Provincial level. When collaborating with the Chambers, there is a need to coordinate with all chambers of the district level.

4. Priority Issues and Solutions in Education and Training Sector in Pakistan

4.1 Issues and solutions for basic education

### 4.1.1 Priority issues of basic education

Pakistan has not achieved universal primary education not only in NER (77%), but also in GER (97%), lagged behind most of neighboring countries in South Asia and many developing countries in the world. Thus, the most urgent and critical challenge faced by basic education in Pakistan should be to enroll a total number of 22.8 million out-of-school children, representing 44% of the total population at the ages 5 to 16 years, in any system of education. Out of 22.8 million, 5.1 million are at the ages of 5 to 9 who are supposed to go to primary school. This is because even enrolled children in primary school are not necessarily able to complete primary education and many of them drop out of school in the middle. In this light, what basic education in Pakistan has to do is not only to reach out to the OOSC and encourage them to go to primary school, but also to keep enrolled children at school, let them complete primary education without dropping out, and let them successfully transit to the middle-school level.

To address those objectives in an effective and efficient way, it is significant to first identify who is the OOSC and who is more vulnerable to a risk of drop-out and help them by targeting completion. Based on the analysis of existing data above, out-of-school children are concentrated more among girls than boys. Within girls in Pakistan, those in rural area, specifically in Balochistan, Sindh, and KP, are lagged far behind than girls in urban in those 3 provinces, girls in both urban and rural areas of ICT and Punjab, and boys in both urban and rural areas across the country.

Figure 4-1 represents the dropout rate of each grade distributed by province and area[159]. One of the tendencies which could be read through is that dropout rate is relatively high in the earliest grade (Grade 1 in Sindh and Balochistan, and Kachi in Punjab and KP) except for ICT[160]. Dropout starts from either Kachi or Grade 1 might depend on the starting point of substantial school education. Regardless of that difference, one can understand the critical importance of effective intervention in the earliest stage of schooling to improve the retention of students at school.

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[159] Dropout rate is defined as "proportion of pupils from a cohort enrolled in a given grade at a given school year who are no longer enrolled in the following school year." (UNESCO Institute of Statistics). In the present survey, the dropout rate by grade for the school year 2015-16 was calculated by the following formula: DRg = ((Number of students in Grade g in 2015-16) – (Number of repeaters in Grade g in 2016-17) – ((Number of students in Grade $g+1$ in 2016-17) – (Number of repeaters in Grade $g+1$ in 2016-17))) / (Number of students in Grade g in 2015-16). Negative figures may reflect the migration of new students from out of the investigated area.

[160] In ICT, the number of students in Grade 1 in 2016-17 was considerably larger than that of Kachi class in 2015-16. Therefore, it is understood that there were a lot of children who started their study from Grade 1 without passing Kachi class. So, the concept of dropout from Kachi to Grade 1 could not be applied and the dropout rate of Kachi was not calculated for ICT in this survey.
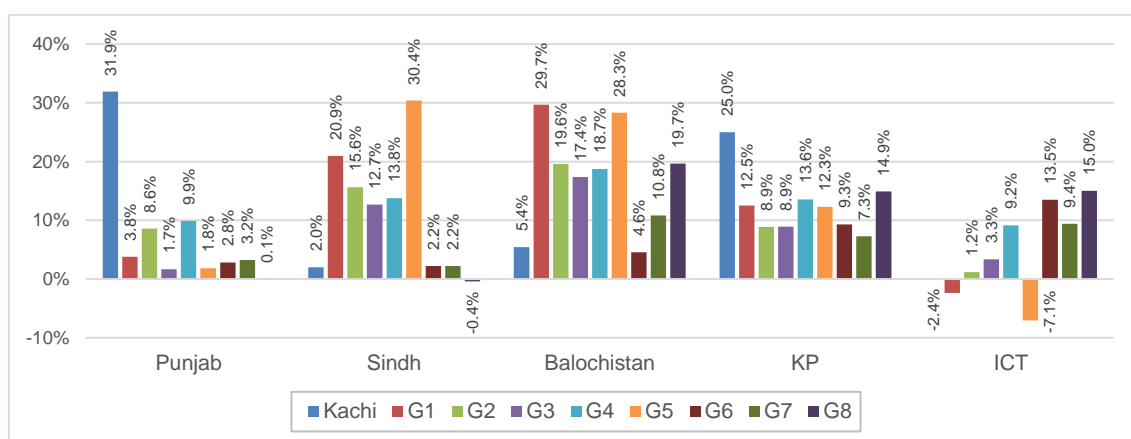
Source: Constructed by the survey team based on the data from Pakistan Education Statistics 2015-16 and Pakistan Education Statistics 2016-17, AEPAM

Figure 4-1 Dropout Rate by Province and Grade (2015/2016)

Another finding through the graphic could be high dropout rate for Grade 5 in Sindh and Balochistan. It might be at least partially explained by the physically limited availability of middle schools in those provinces; there are 4.07 functional government middle schools every 100 square kilometers in Punjab Province, 1.53 in Sindh, 0.36 in Balochistan, 3.49 in KP and 6.62 in ICT. Punjab Province has a policy to reduce dropout rate by eliminating the obstacles to student promotion from a grade to another. Since the school year 2019/2020, examination for the primary education completion has been left out and the automatic promotion from middle to secondary education is also under consideration. Relatively low dropout rates of Punjab might reflect that policy for student retention.

Even though the Government of Pakistan has been making efforts to reduce the number of OOSC, if the pace of reduction remains the same as the present one, the provision for the entire population of the age group from 5 to 16 years could be hardly realized in a few decades. Figure 4-2 represents a simulation about the reduction of number of OOSC. During four years from 2012/2013 to 2016/17, Pakistan succeeded to reduce about 3 million of OOSC. Annual average decrease rate was 3.1%. However, the pace of reduction was not same from an age and sex group to another: For 5 to 9-year-old boys (corresponding to the primary school age), 9.0% fewer children were out of school than in the previous year. Likewise, 5.4% for 5 to 9-year-old girls, 0.7% and 1.0% for 10 to 12-year-old boys and girls (middle school age), and 2.2% and 2.8% for 13 to 16-year-old boys and girls (high and higher secondary school age) respectively[161]. Though further investigation is required to know the reason for the lower pace of reduction of the middle school aged OOSC, it would be highlighted that stronger support is needed for this age bracket (10 to12 years old).

If Pakistan keeps the same pace of OOSC reduction as realized from 2012/2013 to 2016/2017, there will remain about 15.6 million OOSC in 2030. Taking account of the population projection based on the result of the national census 1989, it requires an annual increase of capacity of educational institutions (either formal or non-formal) or decrease of dropouts in by 855 thousand constantly. Assuming that one classroom accommodates 40 students, more than 20,000 new classes must be opened every year to realize it only by increase of capacity. However, 885 thousand is only 3% of the presently enrolled children of 5-16 years old and 5% of the enrolled children of primary school age. Meanwhile, the current survival rate to Grade 5 is less than 70%,

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[161] Calculated by the survey team using the data about the number of OOSC for each segment given in Pakistan Education Statistics 2016-17.

which means more than 30% of primary students drop out before achieving to Grade 5. Thus, it can be logically understood that prevention of dropout should be the top priority to reduce OOSC while preparing larger capacity of institutions. (Those increased number of children who remain at school, otherwise dropped out, need places to learn. But it is more realistic to open a great number of new classes.)

Furthermore, as an ideal scenario in conformity with the constitutional requirement, in order to eliminate the OOSC by 2030, annual increase of capacity and/or reduction of dropouts by 2 million is required. Nevertheless, 2 million is still less than 10% of enrolled children, among whom much more than that drop out every year.

(Unit: Thousand)
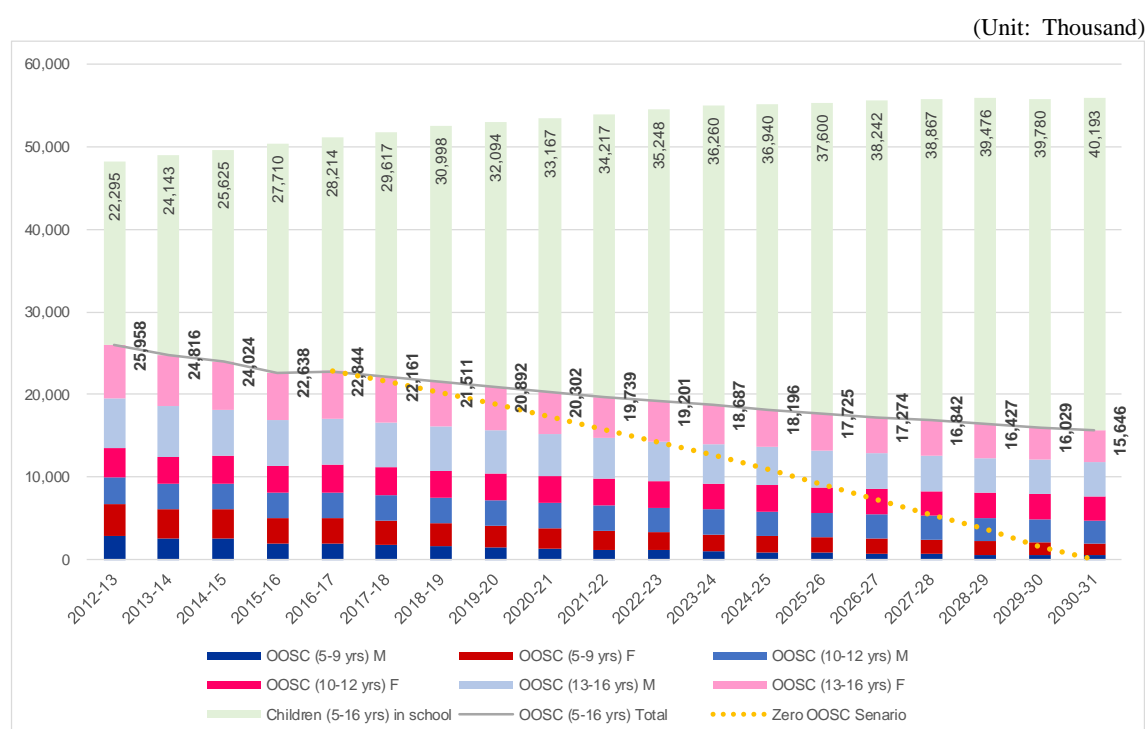
Source: Constructed by the survey team according to the data in Pakistan Education Statistics 2016-17 and Population Projection made by the National Institute of Population Studies

Figure 4-2 Simulation of Reduction of OOSC by 2030

4.1.2   Reasons for dropout

As claimed in the previous subsection, prevention of school dropout is effective to reduce OOSC. In this regard, the Academy of Educational Planning and Management (AEPAM) which is a subordinate office of the MoFEPT carried out a study about the causes of dropout at the primary level. The study sample was 208 education managers at the district administration office and 291 teachers including headmasters from 96 primary schools. The study was carried out in 12 districts of 6 provinces and regions throughout the country, namely Punjab (4 districts), Sindh (2 districts), Balochistan (2 districts), KP (2 districts), AJ&K (1 district), and GB (1 district). Eight (8) schools were randomly selected from each district, reflecting proportion of number of schools for boys and girls, and that of schools' location in urban and rural areas. In each school, while 3 to 5 teachers were supposed to be interviewed, all the available teachers were targeted in case a smaller number of teachers are available in rural areas. The respondents were requested to fill the questionnaires prepared and pilot tested by AEPAM. They were asked their opinion about the importance of each of the selected factors categorized into socio-economic, physical, geographical, teachers related, family related, teaching learning material related, and

administrative factors, and child related problems, in terms of level of its influential power to cause student dropout. The questionnaire was constructed so that the respondents should select one option from "very important", "important", "undecided", "less important", and "not important" for each possible factor of dropout.

The results are presented from Figure 4-3 to Figure 4-9. Along with the causes of dropout, they were also requested to provide their ideas about methods to increase student retention. Five possibly effective methods to retain the students at school were presented, and the respondents were supposed to choose an option which fits the most their perception about the effectiveness of the respective methods to reduce dropout. Their answers in this regard were presented in Figure 4-10.
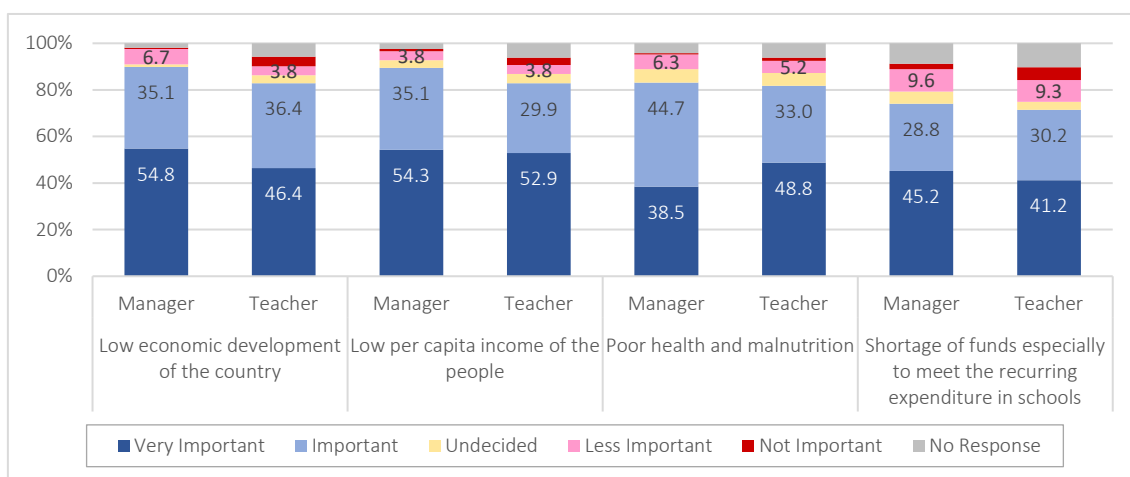
Source: Causes of Dropout Rate at Primary Level in Pakistan, AEPAM, 2018

Figure 4-3 Socio-Economic Factors of Student Dropout
Perceived by Education Managers and Teachers
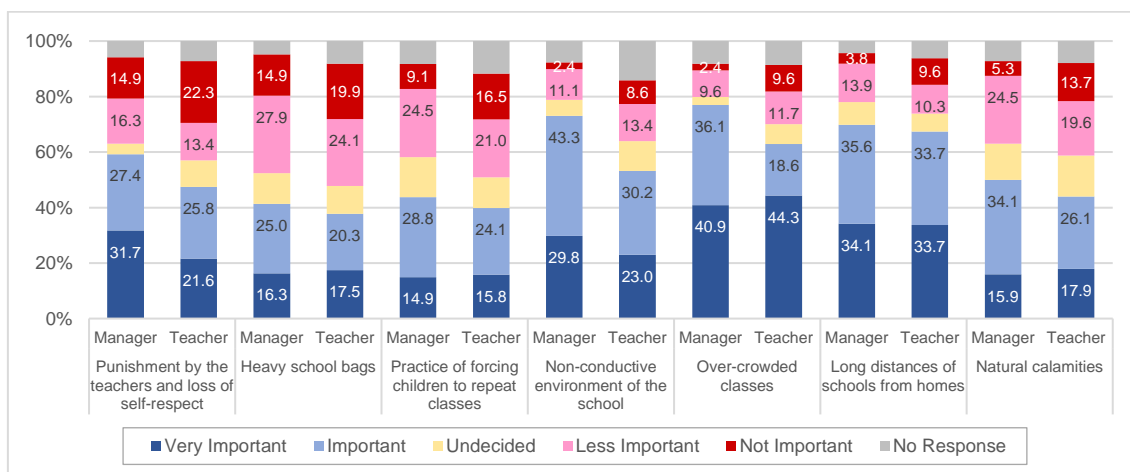
Source: Causes of Dropout Rate at Primary Level in Pakistan, AEPAM, 2018

Figure 4-4Physical and Geographical Factors of Student Dropout
Perceived by Education managers and Teachers
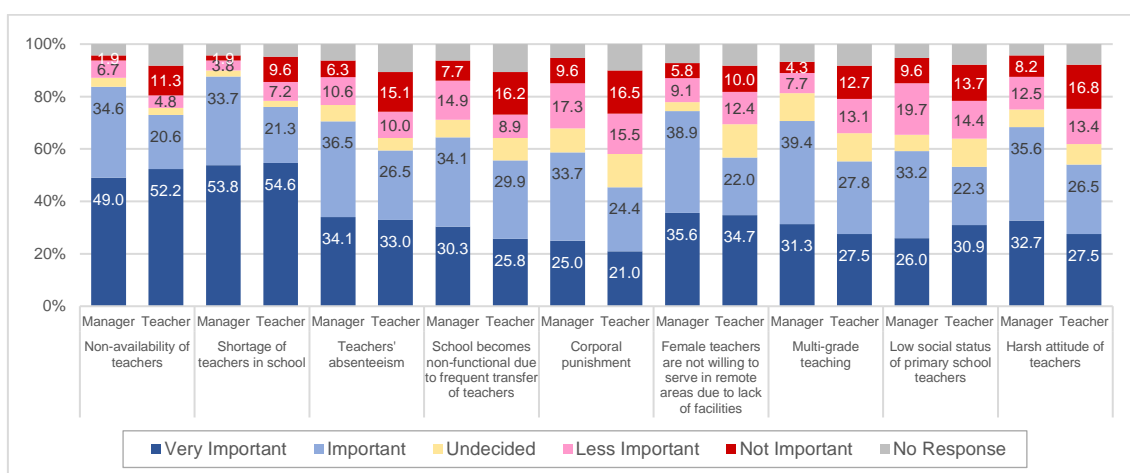
Source: Causes of Dropout Rate at Primary Level in Pakistan, AEPAM, 2018

**Figure 4-5 Teacher Related Factors of Student Dropout
Perceived by Education Managers and Teachers**
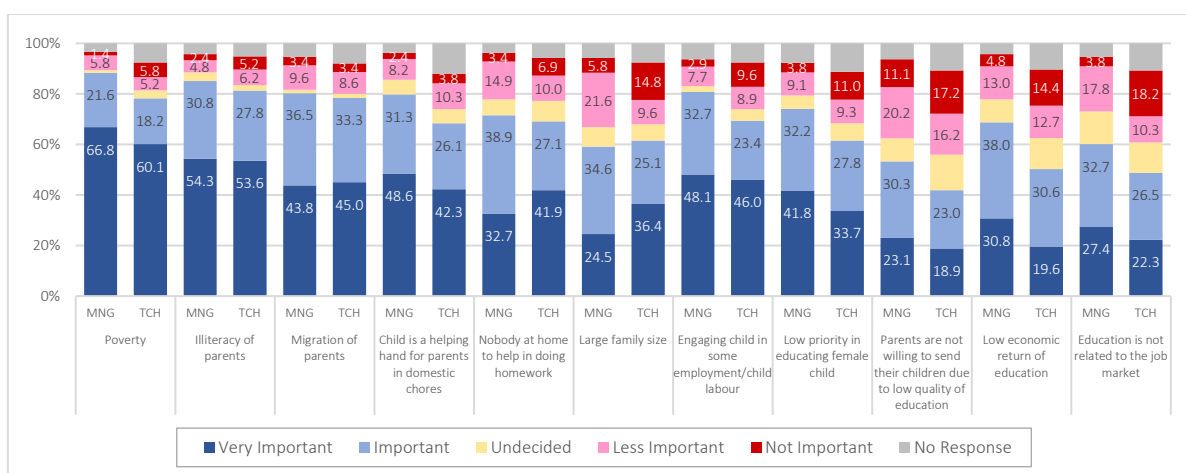
Source: Causes of Dropout Rate at Primary Level in Pakistan, AEPAM, 2018

**Figure 4-6 Family Related Factors of Student Dropout
Perceived by Education Managers and Teachers**
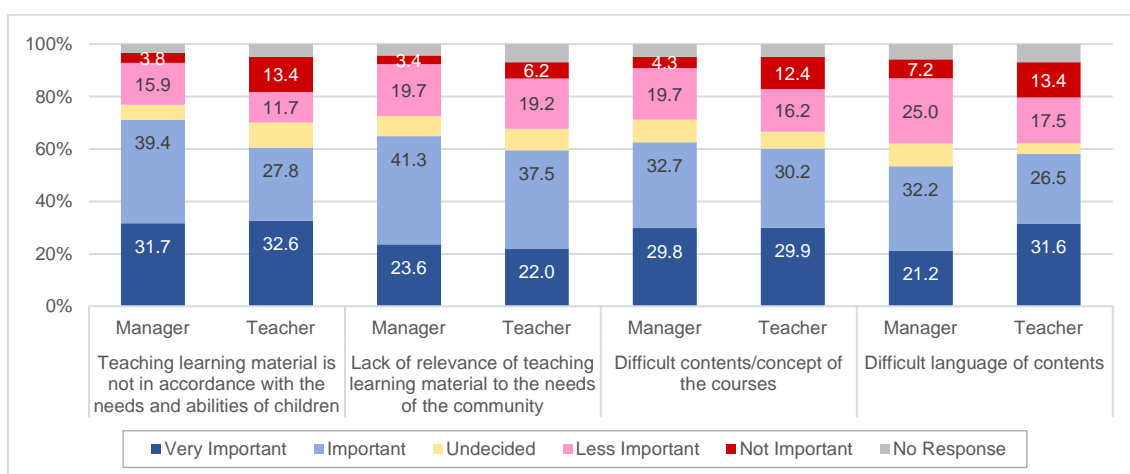
Source: Causes of Dropout Rate at Primary Level in Pakistan, AEPAM, 2018

**Figure 4-7 Teaching Learning Material Related Factors of Student Dropout
Perceived by Education managers and Teachers**

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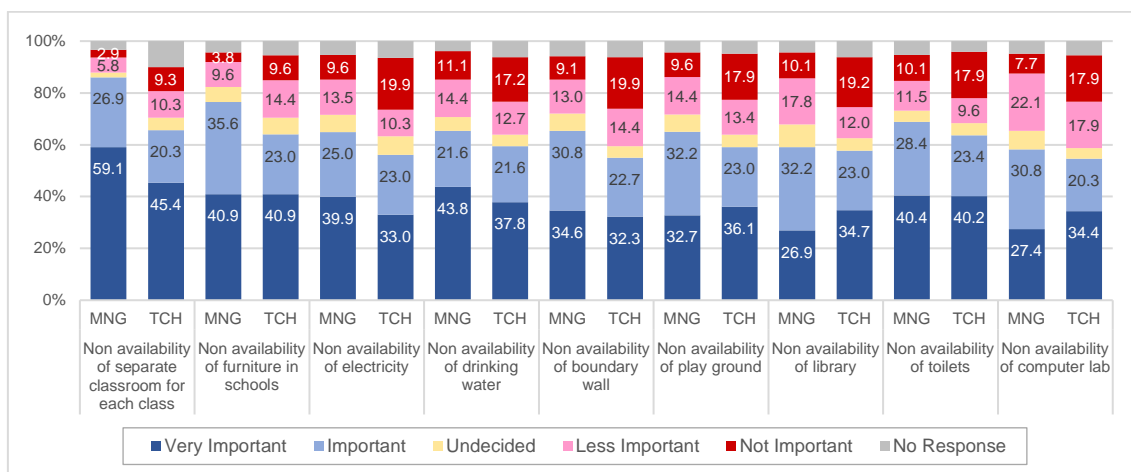
Source: Causes of Dropout Rate at Primary Level in Pakistan, AEPAM, 2018

**Figure 4-8 Factors of Student Dropout Related to Facilities in Schools
Perceived by Education Managers and Teachers**
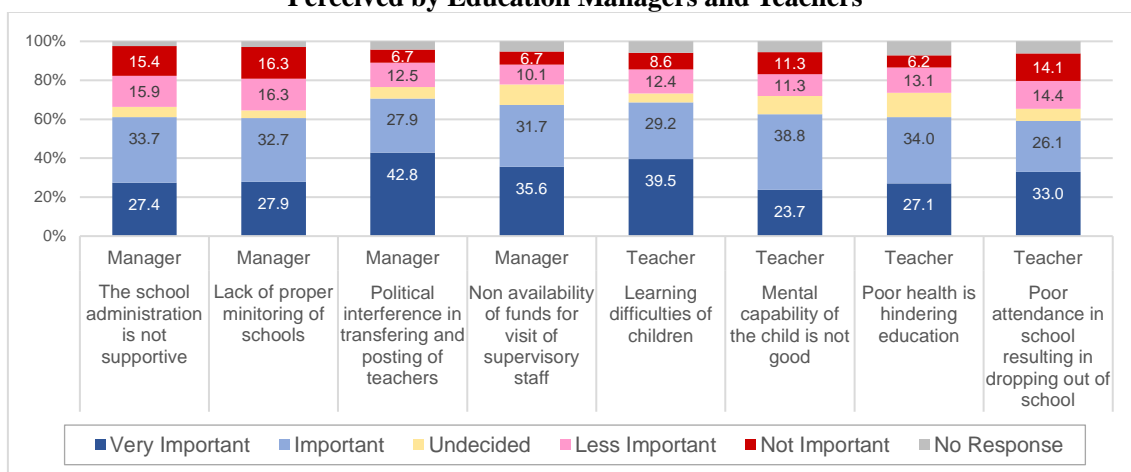
Source: Causes of Dropout Rate at Primary Level in Pakistan, AEPAM, 2018

**Figure 4-9 Administrative Factors of Student Dropout Perceived by Education Managers
and Child Related Problems as Causes of Dropout Perceived by Teachers**
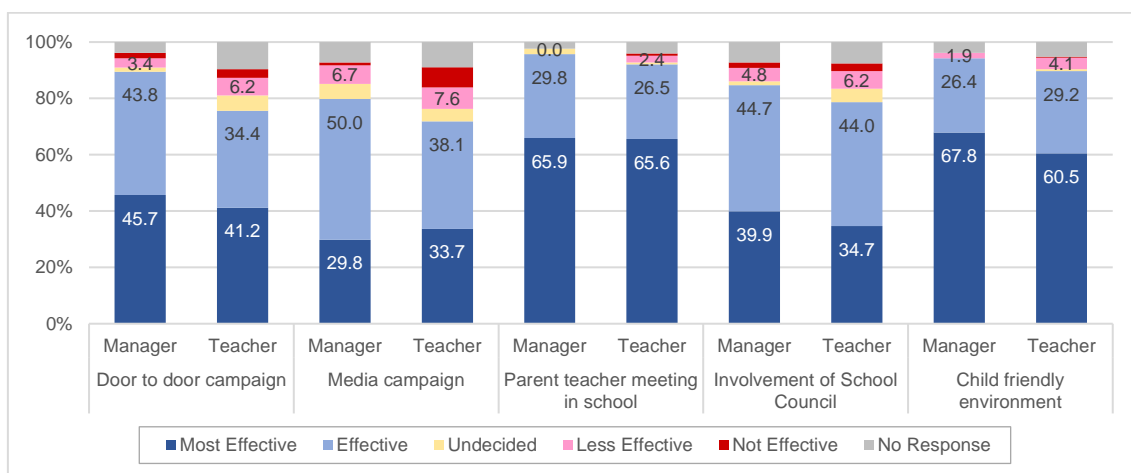
Source: Causes of Dropout Rate at Primary Level in Pakistan, AEPAM, 2018

**Figure 4-10 Method of Increasing Retention Rate Perceived by Education Managers and
Teachers**

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The study revealed multidimensional and complex phenomena of student dropout. Though the reasons for dropout differ from one student to another, education managers and teachers tend to attribute importance to the factors related to economy and teacher's availability. Following are the factors that more than 80% of managers and/or teachers considered to be either "very important" or "important":

- Low economic development of the country: Manager 89.9% Teacher 82.8%

- Low per capita income of the people: Manager 89.4% Teacher 82.8%

- Poor health and malnutrition: Manager 83.2% Teacher 81.8%

- Non-availability of teachers: Manager 83.6% Teacher 72.8%

- Shortage of teachers in school: Manager 87.5% Teacher 75.9%

- Poverty (of student's family): Manager 88.4% Teacher 78.3%

- Illiteracy of parents: Manager 85.1% Teacher 81.4%

- Migration of parents: Manager 80.3% Teacher 78.3%

- Engaging child in some employment/child labour: Manager 80.8% Teacher 69.4%

- Non availability of separate classroom for each class: Manager 86.0% Teacher 65.7%

By contrast, factors related to teaching and learning are not considered to be important as causes of student dropout. In addition, one exception (70.3% of managers answered that teaching-learning material not in accordance with the needs and ability of children is a very important or important factor of dropout), less than 65% of managers and teachers give importance to the factors related to teaching and learning materials. 53.4% of managers and 41.9% of teachers found it to be very important or important as a reason of student dropout that parents are not willing to send their children due to low quality of education. 68.7% of teachers thought that learning difficulties of children (though the definition of "learning difficulties are not clear) was a very important or important factor of dropout. Moreover, teacher's teaching capacity was not explored as a possible factor of student dropout in this study.

As far as the effective methods to increase retention rate are concerned, both education managers and teachers has given greater importance than the others to "parent teacher meeting in school" and "child friendly environment". 89.5% of managers considered "door to door campaign" to be the most effective or effective.

While the citation above is about reasons and solutions for school dropout from the perspective of education managers and teachers, AEPAM collected opinions of students' parents and community members including SMC and school council members by means of group discussion in the same study. However, the results are not analyzed quantitatively but presented as a summary of major opinions presented in the discussions. The following are the summarized main reasons for school dropout:

[Socio-economic factors]

- In many cases, dropouts live in socio-economically disadvantaged areas and their parents are daily-wage workers.

- Parents make children drop out of school and send them to madrassa or labour market.

- Mare exemption of tuition fee and free textbooks are not enough.

[Physical and geographical factors]

- While parents want to send children to a private school because of overclouded classrooms and non-conducive environment for learning in public schools but they cannot afford it.

- Long distance from home to school is a major cause for dropout, related to unaffordability for transportation and security issues on the way to school especially for girls.

[Teacher related factors]

- Shortage and non-availability of teachers in schools are the major causes (especially in the schools with a single teacher whose absence makes automatically the schools closed.)

[Family related factors]

- Parents' poverty, illiteracy and migration in search of job are major causes for dropout, and schools sometimes refuse enrollment of children of frequent migrants.

[Teaching learning material related factors]

- Some textbooks are too difficult for teachers to teach, especially in English and mathematics, and students drop out consequently.

[Factors related to facilities in schools]

- Lack of basic facilities especially in rural areas contributes towards high dropout.

Their perception of linkage between poverty and dropout from different aspects (socio-economic, physical, geographical, and family-related) is identical with those of education managers and teachers. However, it is notable that they pointed out teachers' inability to teach by using textbooks. Only half of education managers and teachers related education quality and dropout while parents and community members do not ignore that causality. The study report shows the researchers' surprise by writing, "It was very interesting to note that community members were fully aware about difficulty of contents of textbooks[162]", which could be interpreted that children tell the adults around them what happens at school without education managers' and teachers' awareness. Furthermore, they pointed out the probability to send children to madrassa, besides workplace, after the latter's dropping out. According to an interview at a madrassa school during the present survey[163], there are parents who enthusiastically want their children receive religious education while others wish to reduce child-rearing expenses by sending them to a boarding madrassa school. Nevertheless, the fact that one of the directions for the children having left primary school is madrassa implies a possibility to keep them in the education system without making them completely drop out if madrassa has been well organized institutionally and pedagogically as a basic education institution.

According to the result of PSLM 2013-14, the most common reason for dropout was that children are not willing to go to school. However, another research 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."[164] Yet again, the complex phenomenon of dropout is illustrated. Particularly, quality of education, which was not much highlighted in AEPAM's study, is identified as a reason for dropout. It can be understood

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[162] AEPAM. (2018). *Causes of Dropout Rate at Primary Level in Pakistan*, p.44.

[163] The research team visited a madrassa named Maraf ul Quran Wal Sunnah and interviewed the headmaster and others. It was explained that their madrassa accepts many children of poor family from KP and other provinces.

[164] Alif Ailaan. *The Quality of Education in Pakistan*. cited in ADB. 2019. *School Education in Pakistan: A Sector Assessment*. Manila: ADB.

that difficulty in learning because of poor quality of teaching leads children to lose their interest in coming to school.
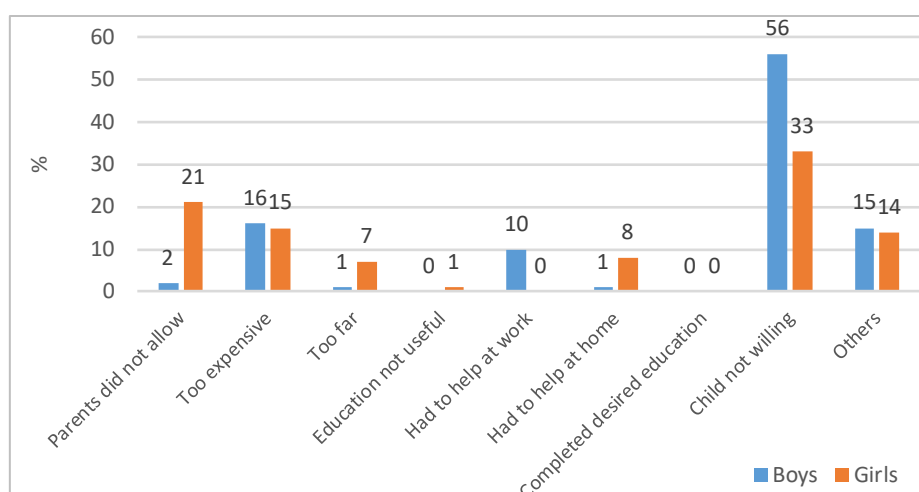
Source: PSLSM Survey 2013-14
Figure 4-11 Reasons for Drop-out of Primary School by Gender

In the figure above, the most predominant girl-specific reasons for dropout are "Parents did not allow" (21% for girls, compared to 2% for boys) and "Too far". These indicate that girls' parents would be worried about the security risk of daughters, including sexual harassment and rape by unknown men on the way to and from school or by male teachers at school, and unfavorable interactions with male peers. In addition, girls are usually supposed to help their mother doing household chores and taking care of their younger siblings at home and due to such an opportunity cost, their parents tend to force them to stay at home and do household chores there. Similarly, boys would be forced to drop out of school due to opportunity cost of not earning money elsewhere. Commonly, both boys (16%) and girls (15%) point out an economic reason. Despite the principle of the government that basic education is free for children at ages of 5 to 16 years, education costs are still high in Pakistan, especially for poor families in rural area. Middle schools and high schools are usually located very far, so that poor families cannot afford to send their children to school by taking the opportunity cost and bearing additional transportation cost.

4.1.3 Solutions for identified issues

In order to deal with those complex factors, there is no "one-size-fits-all" solution and flexibility to meet the ground needs of students is required. In this subsection, applying the framework for analysis of factors used in the AEPAM's study, solutions will be proposed for the key factors respectively. To deal with the issue of OOSC, provision of educational opportunities for those children who have never been to school or already left school should be involved in addition to the prevention of dropout. Nevertheless, the factors for those two phenomena have similarities as seen in the PSLM Survey. Therefore, this subsector will use the same framework for both problems. (In addition, there should be attention to issues related to literacy education for adult and youth, but it is considered to be beyond the scope of this survey and is not searched intensely.)

(1) Socio-economic factors

As mentioned above, while factors for school dropout or non-schooling in relation with "poverty" are pointed out from different perspectives, these paragraphs will discuss socio-economic problems of community which is a larger unit of society than family whose poverty issue will be dealt with later in "(6) Family related factors and child related problems." As far as community is concerned, though the study of AEPAM focuses on the economic factors, there are indeed more

cultural issues, such as opinions of community members and parents about "sending children to madrassa after their dropout" as well as traditional value against girls' education.

In this regard, a research entitled "The Acceptance of Primary Education System in Rural Areas of Bangladesh[165]" is highly suggestive. Kusakabe, its author, analyzed how the modern primary education system has been accepted in rural areas by means of analytical framework with two variables, namely mixture of religions (strong/weak interactions between Islam and another religion [mainly Hindu]) and penetration of the industrial economy (strongly/hardly influenced by the industrial economy of urban area). As a result of the study, he showed that "the linkage with industrial society stimulated villagers' desire to enhance education system internally and established the norm of sending children to school[166]" in the villages where every child normally goes to primary school. However, the strength of influence of Islam does not affect the enrollment rate in primary education but creates differences in manner of coexistence of public schools and madrassa. The author suggests that "it is important either to wait for a linkage spontaneously established with the industrial economy, or to invite factories needing educated workers, calling for cooperation with ODA in economic sector for example, to stimulate internal desire for school education[167]" in a village where primary school system has been barely constructed by the promotion policy of the government.

Relationship between educational and economic development becomes more dynamic, from such a viewpoint on socio-economic factors; "Parents do not find significance to send children to school because of lack of economy relating directly schooling to the improvement of life in their vicinity" rather than just "Poverty hinders from sending children to school." In fact, it makes possible to add human development aspects to industrial development, even though an "education project" cannot solve the problem of poverty in the community. Schooling would not be anything impossible because of the poverty if one expected increase of enrollment rate after construction of factories.

Nevertheless, it is necessary to understand that the issue of OOSC cannot be solved only by efforts of education sector. Therefore, one of the solutions for socio-economic factors for OOSC is comprehensive development of the local society including industrial strengthening.

(2) Physical and geographical factors

Long distance from home to school is a common cause for dropout, and it is one of the major barriers hindering particularly girls from schooling. When school is located very far, many parents are worried about a security risk on the way to and from school, and they do not allow their daughters to go to school. To remove such constraints, physical existence of a school near the residence is the most effective solution. Provision of new school buildings, re-opening of non-functional schools, upgradation of primary school to middle school, and middle school to high school can be effective strategies to improve their access to education. Construction of classrooms or extension of school facilities are needed to establish a new school or upgrade an existing one, which requires necessary funds. There might be non-functional schools possible to be reopened without construction works because absence of teacher(s) is the sole reason for dysfunction. Nevertheless, lack of facilities is generally an important reason for school closure[168].

In addition, construction and upgradation of formal schools are not the only solution to provide

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[165] Kusakabe, T. (2007). *The Acceptance of Primary Education System in Rural Areas of Bangladesh*, Toshindo.
[166] ibid. p.175
[167] ibid. p.177
[168] According to an example of a reopened school visited in the Consultative Mission for the Advancing Quality Alternative Learning Project.

educational opportunities near the residence of learners. As mentioned in the National Policy Framework 2018, provision of education through non-formal approach should be an effective and reasonable solution. In fact, provision of non-formal education does not require construction of a new school building which may become a considerable burden for the governments and thus takes too often a long time to be realized. Especially, in the areas where widely scattered residences cause a problem of transportation, such as Balochistan, establishing sufficient number of schools to accommodate all school-aged children cannot be an immediate solution. In addition, teacher of non-formal education is a member of the community in most of the cases, so that parents, especially those of girls can send their children without anxiety. Therefore, further expansion of non-formal education in terms of area as well as education level (from primary to middle and more) is an important strategy to address the issue of OOSC.

(3) Teacher related factors

In Pakistan, nepotism and absenteeism of teachers have been pointed out as serious problems. Regarding the former, as mentioned earlier, there is a gradual improvement by introduction of merit-based recruitment system, including outsourcing of selection process to a third-party organization. As for the latter, too, confirming the teachers' presence by means of biometrics and introducing rigorous monitoring system have achieved a certain level of improvement [169]. Therefore, it is very desirable to continue those measures.

Concerning quality of education strongly influenced by teaching capacity of teachers, as reported from different practices of learning assessment, there is a serious problem of student achievement. For example, 44% of class 5 children could not read a class 2 level story in Urdu/Sindhi/Pashto [170]. As mentioned earlier, parents and community members revealed that students' dropout was caused partially by the fact that teachers could not properly teach because of too difficult textbooks, which urges capacity enhancement of teachers.

In this regard, as described in the subsection "2.3.3 Teacher", cluster-cased CPD is currently promoted with priority in several provinces as a method to materialize teacher education. Therefore, enhancement of cluster-based CPD should be an effective option to put the proposed interventions into practice. According to the needs identified by the interviewed stakeholders in the present survey, urgently needed topics of teacher training should include the following:

- Pedagogy in mathematics, science, English, Urdu and local languages (including knowledge base of subject matter)

- Preparation of child-friendly learning environment (including skills for communication with children)

- Pedagogy of multiple-grade teaching

It should be noticed that those topics are important not only for in-service teacher training through CPD but also for pre-service training for those who become teachers later. Thus, USAID has provided a significant example in which pre-service training curricula were revised in addition to the provision of in-service training through cluster-based CPD to promote Phonics method for improving early-grade children's reading (see the subsection "5.2.9 United States Agency for International Development). Furthermore, pre-service and in-service teacher training institutions are expected to provide resource persons and play leading roles for cluster-based CPD, such as

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[169] ADB. (2019). *School Education in Pakistan: A Sector Assessment*.
[170] ASER 2018

organization of training for guide teachers and individual consultation (including use of information and communication technology)[171].

Meanwhile, many pointed out that non-availability and shortage of teachers are important causes of dropout. Thus, besides improvement of pre-service teacher training in terms of contents, quantitative expansion of preparing new teachers should take place. Especially, as confirmed in the subsection "2.3.3 Teachers", lack of female teachers in rural areas causes dropout and non-schooling of girls, so that improvement is urged. As a matter of fact, the current number of teacher training institutions is no more than 157 for public sector (50 institutions for boys, 40 for girls and 67 for co-education) and 56 for private sector (1 for girls and 55 for co-education). Taking into account the number of districts in Pakistan, which is around 150, there are districts with no teacher training institution because the majority of public institutions are either for boys or girls. As it is a district education office that recruits and deploys teachers, shortage of teacher training institutions is evident to make it possible to recruit teachers in local area, especially to increase the number of female teachers.

(4) Teaching and learning material related factors

Many factors promoting or hindering student learning were researched in those assessment surveys such as NAT and ASER. However, less attention was given to the actual level of learning achievement of students and interaction between teacher and students in the classroom, which should be nevertheless the central concern for education. Although those large-scaled assessments may provide relevant implications for high-level decision making, such as curriculum revision, development or adoption of new teaching strategies, etc., the results are not well utilized in reality because of the lack of coordination between the federal body, NEAS, and the provincial administrations after the devolution[172]. Besides the national level assessments, Pakistan participated in Trends in International Mathematics and Science Study (TIMSS) in 2019. Analysis of the results have not been completed at the time of the present survey. However, it is expected that the results will be published shortly and shared by stakeholders so that lots of implications will be given for the sake of educational improvement.

It is favorable to develop, on the basis of those implications from the educational assessment practices, curricula and textbooks which are easy for teachers to teach and easy for students to understand. The actual ground reality is however that too difficult textbooks hinder teachers from teaching well, which may partially cause children's dropout according to the aforementioned group discussions with community members and students' parents. At the time of the present survey, as mentioned in subsection "2.3.2 Curriculum, textbooks and evaluation", the Single National Curriculum was being developed with several uncertainties about its implementation. So, it is not the right time to start developing another new curriculum and textbooks. Meantime, improvement of curricula and textbooks is crucial for students' learning achievement, which should be realized at an opportune time.

Also, the assessment results and other witnesses make it evident that there are presently many children suffering from low level of understanding of learning contents, most probably because of teacher's limited quality of teaching. These are children with a high risk of dropout. It has been explained earlier that prevention of dropout is a more efficient measure to reduce the number of OOSC than creation of new educational opportunities for those children having already left school or those never been enrolled. Thus, to take care of existing high-risk children, it is important to address immediately and directly the children's learning difficulties by means of supplementary

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[171] According to different documents of education policy and plans as well as interviews during the present survey
[172] According to the interview at NEAS on February 3, 2020.

learning materials and teaching aids.

According to the results of the assessments already carried out, there is a high probability that many children have not mastered very elementary knowledge and skills, and thus they cannot advance their learning, which implies the need for support in their retention of basics. However, in order to fix the concrete interventions needed, more detailed and systematic assessment should be carried out and identify exactly the levels at which and the contents in which students faces difficulties in classroom. The well designed tool of diagnostic evaluation for that purpose should be a test in which items are distributed very systematically in order of complexity of relevant teaching contents, of which the development requires high expertise. Afterwards, it is necessary to develop and disseminate the evident-based teaching methodology and tools. The accumulated know-how in Japan's international cooperation for education especially in mathematics[173] can be applied effectively.

(5) Administrative factors and factors related to facilities in school

The study of AEPAM described mainly, as administrative factors, on the relationship between educational administration and schools such as cooperation with headteachers, monitoring of schools, appointment of teachers, and so forth. Dealing with those issues, as mentioned in "(3) Teacher related factors", introduction of rigorous monitoring system is producing good effects. In Punjab for example, new monitoring and evaluation assistants have been hired within the framework of Punjab Education Sector Reforms Programme, and their monthly school visit allows to grasp current situation of schools through analyzing the data inputted timely on tablet devices. As a consequence, the percentage of teachers committing absenteeism has reduced from 24% in 2009 to 8-12% at the time of the study[174].

Furthermore, administrative improvement is expected through school-based management mechanism by means of SMC in Sindh and School Council in Punjab as mentioned in subsector "3.1.3. School management". In Sindh province where the SMC system is scheduled to be reviewed, this mechanism is not an immediate solution for issues of school management. On the other hand, dealing with the issue of OOSC and dropouts caused by complex factors, much flexibility is required to respond to students' practical needs at their own places. Because a top-down type of management can hardly have such flexibility, school-based management would be a viable solution for improving the school according to their own plan. In addition, being in charge of small-scale repairs of school facilities, SMC is expected to contribute to the creation of an attractive school which may increase students' motivation for schooling.

Besides the above, further strengthening of educational administration at the provincial and federal levels is indispensable to solve the problem of OOSC despite lack of emphasis given by the AEPAM's study which basically focused on the factors at the local level, such as school, family and district administration. Indeed, it is quite necessary to elaborate and firmly implement evidence-based policy and plans through a sophisticated predictive simulation with more variables than those used in the subsection "4.1.1 Priority issues of basic education" as well as on the basis of analyzed results of assessment programmes and school monitoring. To realize it, availability of accurate data is indispensable. As mentioned in Chapter 2, however, the data on private schools and madrassa are not sufficiently collected and their statistics are barely estimated according to the past trends. In that situation, it is evident that planning based on simulation cannot be accurate, either. Therefore, intervention for data collection is as much important as that for data

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[173] For example, supplementary learning materials in mathematics were and are being used in Project for Promoting Education with Equity and Quality in Morocco and in the projects "School for All" in Africa. And in the former, systematic diagnostic tests were also carried out.
[174] ADB. (2019). *School Education in Pakistan: A Sector Assessment*.

analysis.

(6) Family related factors and child related problems

The family related factors and child related problems identified here are all considered to originate from users of education service rather than its providers (in fact, they must include providers' problems). Among those factors, "poverty of family" was the most frequently pointed out in the interviews and discussions during the present survey. One education department officer accompanying the survey team claimed that poverty should not be the reason because the government provides all free of charge[175]. Indeed many people may attribute the issue of OOSC to the poverty too easily, but it would be also true that burden of opportunity costs or transportation fees does not allow the users feel education "completely free of charge".

The measures largely taken to address the issue of costs involve stipends and vouchers to encourage girls' enrollment and conditional cash transfer for primary education (see "1.3 Provincial Policy and Plans"). It is pointed out that decision to continue or expand those measures should be made after comprehensive assessment on their effects[176].

The "child related problems" identified in the AEPAM's study include "learning difficulties", "mental capability" and "poor health" of children. It is however not very certain whether "learning difficulties" means here what is often called learning disability or merely what children find difficult in their learning. In any case, the problem is whether education meets individual learning needs, so that it must be resolved principally by service providers. While every provincial education policy includes promotion of inclusive education (see "1.3 Provincial Policy and Plans"), many issues to address for its implementation are pointed out in terms of facilities, contents and methodologies.

Thus far, factors causing dropout and non-schooling are categorized into 6 groups and relative solutions are proposed. Table 4-1 summarizes them.

Table 4-1 Key Factors and Proposed Solutions for OOSC and Dropout

Category	Key Factor	Proposed Solution
Socio-economic	• Poverty of community	• Implementation of projects for industrial development incorporating a perspective of human development
Physical and geographical	• Lack of schools • Long distance from home to school • Security risk on the way to school	• Establishment of new schools, reopen of non-functional schools, upgradation to higher-level schools • Enhancement of NFE
Teacher related	• Nepotism • Absenteeism • Poor teaching capacity • Shortage of number of teachers	• Merit-based recruitment including outsourcing to a third-party • Biometric recognition, rigorous monitoring • Capacity enhancement mainly through cluster-based CPD (in-service training) and pre-service training • Strengthening of pre-service training (especially female teachers in rural areas)
Teaching and learning material related	• Textbooks difficult to teach and learn	• Revision of curriculum and textbooks • Development and introduction of supplementary learning materials and teaching aids based on the results of diagnostic evaluation

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[175] During the visit to Government Boys' Secondary School of Bihroo Village, Karachi on March 9, 2020.
[176] ADB. ibid.

Administrative and related to facilities in school	• Poor relationship between educational administration bodies and schools • Lack of flexible school management to address complex issues • Lack of basic facilities in schools • Poor capacity of educational administration for planning and implementation	• Introduction of rigorous monitoring system • Well-designed improvement of school through school-based management • Improvement of school facilities through community participation • Capacity enhancement of educational administration
Family and child related	• Poverty of student's family • Lack of measures to meet student's special learning needs	• Stipends, vouchers, conditional cash transfer • Promotion of inclusive education (Reasonable accommodation in terms of facilities and learning contents and methods)

Source: Constructed by Survey Team

4.2 Issues and solutions for TVET

4.2.1 Priority issues of TVET

According to the policies, plans, systems, and current status of TVET described from Chapter 1 to 3, comprehensive reform is being implemented at a rapid pace to improve organizations, institutions, contents, methods, and employment as exit of training. As explained in the National Strategy "Skills for All", the reform aims at constructing demand-driven TVET, which is training based on the needs of enterprises wishing to use trained workforce rather than the preference of training providers. Therefore, today's most important issue of TVET would be, in brief, effective implementation of the ongoing reform. Against the background of the reform, there are different problems discussed until the previous chapter. The above-cited national strategy identifies the following 8 areas as priority issues that Pakistani TVET must address:

1) Governance – Roles clearly defined

2) Multi-Source Funding

3) Capacity Enhancement

4) Improving Quality Assurance

5) Greater Access and Equity

6) Increased Industry Engagement

7) Focused Skill Development for International Labour Market

8) Viable Communication Plan for TVET Image Building

In this chapter, while taking those 8 areas into consideration, 6 areas will be used as analytical framework because "3. Capacity" (in terms of accommodatable amount) and "5. Access and Equity" are closely interrelated and thus should be treated as one area, and "6. Industry Engagement" is overarching and to be treated particularly in "2. Funding Sources" and "4. Quality Assurance". With regard to the 6 areas, the following paragraphs will discuss issues to be addressed, factors causing them, and proposed solutions to them.

(1) Governance

As described in subsection "2.2.4 Other governmental organizations related to TVET sector besides the Ministry of Federal Education and Professional Training", there are multiple TVET sector players at the same level but with different backgrounds and lines, which creates overlapping of roles. At Federal level, NAVTTC established under MoFEPT as apex body of whole TVET and National Training Board originally coming from Labour Ministry were once to

be merged but are now finding a way to work together. In Punjab, the Provincial Government tries to put one supervisory organization named PSDA above TEVTA, PVTC and PSDF. Other provinces have also issues related to governance, such as inconsistency of departments supervising TEVTA among provinces, limited functionality of TEVTA, etc.

In general, TVET, of which objective is to develop occupational skills, attracts innately concerns of multiple sectors; not only education and training, but also industry, labour, agriculture, fisheries, health, and so forth. As a consequence, it is related to many governmental bodies such as ministries and departments[177]. Therefore, overlapping of functions among multiple organizations may easily occur unless legal and administrative coordination takes place properly. In Pakistan, even judicial power was needed as seen in the case of NAVTTC and NTB.

At the time of the survey, clear demarcation of the functions between federal and provincial governments for the period of the post reform is also in process. In contrast to the education sector where responsibilities for policy making and implementation were devolved from the federal to the provincial governments according to the 18th constitutional amendment, the Constitution does not stipulate devolution in the domain of TVET which is therefore the subject of the federal government, according to the National Strategy "Skills for All". The responsibilities of federal and provincial bodies are being demarcated clearly through the establishment of NAVTTC and development of NVQF. Such organizational arrangement seems to be accepted by both parties since no disharmony was heard regarding this during field survey.

(2) Funding sources

As described in Section "3.2 Current Status of Education and Training" especially with relation to the "Quality" matters, there exists actual shortage of funds to ensure quality of training. So, it is obvious that TVET needs more finance, but the question as to how to finance and by what organization is not easy at all to answer. The above-mentioned national strategy proposes five sources, namely government, donors, industry, trainees' fee, and welfare schemes, and points out the necessity to diversify the sources. These are reasonable sources and deserve enhancing further financing. However, they all have various limitations.

The government funds have limitation in terms of the national budget size due to limited tax revenue from small economy. Limited capacity of tax collection is also considered to be a problem as many economic activities are beyond control of the financial authorities. Donor funding has restrictions due to each donor's aid strategy and its targets to be achieved.

Industry may finance training on the condition that it has the benefit, but training institutions and administrative bodies have limited capacity to produce such benefit.

Implementation of training depending only on the fees from trainees must be too difficult, considering the high probability of financial loss, so that mixture with other funding sources should be sought. However, in the context that training is considered to be individual investment for trainee, there could be participants or their family willing to pay for it if it is affordable.

The restrictions of welfare schemes may include the condition that participants are limited to those who are particularly targeted by a funding organization according to the objectives related to its working domain. PVTC in Punjab adopts that funding model, and its participants are limited to the people under the poverty line who take not more than 2,350 kilo calories per day.

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[177] ADB. (2014). *Innovative Strategies in Technical and Vocational Education and Training for Accelerated Human Resource Development in South Asia*

Meanwhile, those disadvantaged people often have low or no academic qualifications, which hinder them from participating any training courses as they want (see "3.2.1 (3) Required qualifications). Looking at this from a perspective of funding sources, using funds of a welfare scheme impose constraint as to training programmes to be provided, such as one for the financial disadvantaged with low academic qualifications, depending on the objective of the funds[178].

(3) Capacity, assess and equity

In order that Pakistan can fully exploit the demographic dividend, besides 1.8 million new labour market entrants from the school education per year, it is estimated that additional 4.4 million youth need to be trained anywhere out of school[179]. Nevertheless, the capacity of TVET institutes is no more than 425 thousand, including 315 thousand in vocational institutions and 110 thousand in technical ones (2017)[180]. The current capacity is very limited compared to the potential target population even though all of them may not necessarily participate TVET.

Moreover, the top priority issue for basic education in Pakistan is the provision of educational opportunities for over 22 million OOSC as described earlier, but it should not be the problem of basic education alone. If they do not receive adequate education or acquire skills needed in labour market before becoming adults, they cannot be capable workforce. That may affect adversely the national economic growth as well as the individual steady income. However, if TVET wishes to contribute to the solution for the problem of OOSC, obviously, its capacity is too small to accommodate over 22 million youth.

In fact, according to the result of the present survey, very few TVET personnel consider OOSC as their own issue[181]. Meanwhile, TVET must play the role of safety net for those who are out of school with low qualifications and thus have no access to a decent work through their family's good offices. I should make difference by technics and increase the income of the underprivileged. Nevertheless, as many TVET courses require G8 or G10 completion for admission in Pakistan where too many children and youth are out of school or have low qualifications and low income, TVET sector cannot be seen as functional safety net.

As mentioned above, there are more female OOSC than male. That means that less women have access to TVET because of their qualifications. Consequently, their path to a job with cash income is also narrower than that for their male counterparts. According to the labour statistics, women's labour participation rate is about 20% and two third of the working women are engaged in the agriculture sector (see Table 3-19). In addition, existence of many TVET courses with limited accessibility for women is one of the particularities of Pakistani TVET. For example, in other countries, many women participate in stitching courses while male participants are predominant in Pakistan. There is a social and cultural barrier which hinders women from entering to the labour market. Furthermore, gender disparity is aggravated by limited accessibility to relevant information, such as career guidance, and lack of opportunities of training on the trades in which employers are seeking female workforce[182]. Therefore, the gender disparity is one of the serious issues of TVET sector in Pakistan.

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[178] It should be mentioned however that in case of PVTC, TVET programmes are provided for the same purpose of the funding agency, so that use of the funds is not considered as "constraint" for the training provider.

[179] MoFEPT. (2015). *National "Skills for All" Strategy: A Roadmap for Skill Development in Pakistan.*

[180] NAVTTC. (2017). *Comparative Analysis of TVET Sector in Pakistan.*

[181] For example, no one was against the survey team's idea, "If a person with no literacy nor numeracy become car mechanic, he/she cannot read gauges or manipulate a bolt accordingly." However very few had asked themselves, "What should I do?"

[182] MoFEPT. ibid.

Meanwhile, as mentioned earlier, number of actual participants in TVET programmes is smaller than their capacity in average. The unemployment rate is more than 5%, so that there must be many who want to get training to find a job. But many TVET institutions do not meet their admission quota. It should be interpreted by demand-supply gap, which means TVET sector actually cannot produce human resources required by the labour market. Therefore, it is quite important to search the trades and the size of workforce needed by industry to decide capacity of institutions unlike basic education sector which has to deliver service to all the nation according to the fixed curriculum.

(4) Quality Assurance

All the documents on the current TVET reform referred to in the present survey point out the gap between the contents of TVET courses and the skills actually required by industry. Chapter 3 has already explained the numerous influencing factors including outdated curricula not revised for long time, decrepit facilities and equipment for education and training, poor capacity of instructors, and so forth.

For example, as mentioned in the paragraph "3.2.2 (6) Evaluation", JICA project experts pointed out low pass rates in the final examination of DAE courses in GCT because marks in written tests in mathematics and English are weighted more heavily than those for evaluation on practical skills. According to the experts, even though an examinee's technical skills achieve the satisfactory level, he/she cannot pass the examination if they are weak in mathematics or English. Such a tendency might be referred to as "overemphasize on academic knowledge" and is observed in curriculum, too. Nonetheless, the industrial sector is concerned centrally with acquisition of skills necessary for specific tasks. Thus, this is a typical issue of demand-supply gap between industry and TVET sector.

To solve the demand-supply gap, CBT is introduced in the TVET reform as explained in the subsector "2.4.3 Curriculum and qualifications resulted from TEVET reform". By means of CBT, the contents of TVET courses must become more consistent with the skills required by industry because CBT "places emphasis on what a person can do in the workplace[183]" and "IAG (Industry Advisory Group) endorsed competency standards will provide the basis for the development of competency based curricula[184]." Development of CBT curricula are being accelerated in Pakistan as shown in Table 3-23, and the number of them is approaching to 200. It should be a great achievement of the recent TVET reform. Meanwhile, the number of NVQF Level 5 curricula which is at the same level as the aforementioned DAE remains three[185]. Further efforts are required.

On the other hand, in the Project for Strengthening DAE in Mechanical Technology at Government College of Technology in Punjab Province which JICA assisted, the curriculum of DAE curriculum in mechanical technology was revised and approved at the federal level, but it is not accredited as a CBT curriculum[186]. As three NVQF Level 5 curricula mentioned above are not DAE, either. Thus, compatibility of DAE conventionally implemented in GCT with NVQF should be examined further.

In order to lessen the gap between the training contents and the skills required by industry, it is

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[183] UNESCO-UNEVOC International Centre. https://unevoc.unesco.org/home/Competency-Based+Training
[184] NAVTEC. (2009). *National Skills Strategy 2009-2013*
[185] The three trades of the Level-5 curricula already developed involve Post Press Operations (Packaging), Post Press Operations (Publishing), Retail Operations Management. However, in the interview on February 4, 2020, NAVTTC explained that 57 courses at NVQF Level 5 is ready to introduce, but the details are uncertain.
[186] According to the interview with NAVTTC on February 4, 2020.

quite important to engage industry more. The purpose of TVET is to produce human resources required by industry and to support their participation in economic activities, so that linkage with industry absorbing training graduates as labour is vitally important. However, in general, industry is not mature in rural areas. In an environment where competition within the local industry is not quite active, individual enterprises are hardly motivated to cooperate with TVET sector. Cooperation with industry in such a condition is an issue to be recognized.

(5) International labour market

Considering the importance of foreign remittance to the economy of Pakistan, Pakistani workers' limited competitiveness in the international labour market is an issue to be addressed. The table below shows the comparison of amount of foreign remittance from emigrant workers with neighboring countries.

Table 4-2 Comparative Statistics of Workforce and Remittances

Country	Emigrant workers	Remittances (USD in Billion)					Average Remittances per worker	Remittance Compared with Philippines (%)	Female Participation (%)
		OECD	Non-OECD Asia	GCC	Total (2016)	2017			
Philippines	5,970,193	25.1	0.16	6.97	31.15	32.81	5495.26	100.0	65
India	16,444,830	3.38	0.81	55.6	62.70	68.97	4193.91	76.32	16
Sri Lanka	1,728,372	1.03	0.34	5.40	7.26	7.19	4159.91	75.70	35
Pakistan	6,098,502	3.85	8.5	5.06	19.76	16.97	3224.50	58.68	1
Bangladesh	7,796,958	0.57	10.2	3.15	13.54	13.47	1727.53	31.44	37

Source: MoFEPT. (2015). *National "Skills for All" Strategy: A Roadmap for Skill Development in Pakistan*

According to the above table, Pakistani emigrant workers' average remittances per head are about three fourths of those of Indian and Sri Lankan while being higher than those of Bangladeshi. Based on the principle that higher skilled worker can gain higher income, the limited amount results from the emigration of many untrained and unskilled workers. Another particularity of Pakistan is very low percentage of female participation in foreign labour market. As well as the low labour participation rate of women in the country, it shows the limited opportunities for women to participate in economic activities.

(6) TVET Image

As detailed in "(4) Motivation" in the section "3.2 Current Status of TVET", negative perception of TVET or skills sector in society is an issue to be addressed. It can be called mental distance. The cited document reveals, "A number of negative perceptions are associated with opting for TVET as career choice.[187]" It points out that TVET is widely considered to be something for the academically weak, the socially disadvantaged, the poor people impossible to afford private school education, and not for the general public. It also mentions that many people take skill workers for not educated, having lower social status, and poorly paid and even in an intermittent manner. Others, especially in the informal sector, question the viability of formal TVET thinking that skills should be acquired in more informal way by means of an apprentice for example. As a result of accumulation of negative images, Pakistani youth believe that TVET is an option of the lowest career.

It is probably not only perception but facts to some extent. For many skill workers, wage standard is lower and intermittent, income is not satisfying and stable, social welfare benefit is not well provided, etc. One weakness could be inexistence of tradesman association that could negotiate with employers and relevant government authorities to insist what good tradesmen should deserve.

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[187] MoFEPT. (2015). *National "Skills for All" Strategy: A Roadmap for Skill Development in Pakistan*, p.6.

If decent and stable income is promised, it should encourage those who are struggling with poverty.

4.2.2 Solutions for identified issues

Accordingly, in order to deal with identified issues as stated above, solutions are discussed below.

(1) Governance

Solutions to identified issues in previous section is steady advancement of rationalization of organization and system in terms of regulation and implementation of TVET programmes, i.e. elimination of duplication and clarification of roles and functions, in both Federal and Provincial level as well as in relation between them. It needs to be executed in strict manner such as setting up legal framework. The direction is presented in National "Skills for All" Strategy. The reform is under implementation through TVET Sector Support Programme (TSSP) with assistances from a few development partners. Demarcation of roles and functions between Federal and Provincial Government is clarified by the above national strategy as in Table 1-5 presented in Chapter 1 and reorganization and adjustment are being executed.

As to the duplication of roles and functions among different stakeholders, improvements are observed under the reform. It is still midway, however, so that further efforts are necessary. To maximize the use of limited resources, it is important to constitute rationalized organization and system, then maintain with stability.

(2) Multi-source Funding

In the current reality of limited Government funding, development partners could be funding source if the Government could successfully propose to them of realistic intervention plan that will match their cooperation policy and achieve target indicators set by each partner. For instance, for those donors who prioritize economic development, incorporation of TVET as human resources development services into integrated economic development project such as Special Economic Zone (SEZ) or Industrial Park may appeal to donors.

As to promotion of funding from industry, TVET providers must present what return industry as investor could expect meeting the investment as well as assurance of capacity to execute expected activities. PSDF may be referred to as a one model of this. Strictly managed with performance-based funding is enforcing production of human resources and finding pass-outs jobs. Investment to PSDF is one possible assistance, while learning from its funding modality to draw own mechanism may expand funding sources.

As a good practice using social welfare scheme, collaborative activities by PVTC and Literacy Department of Punjab government called Punjab Literacy and Livelihood Programme, Pakistan, which developed and implemented highbred programme combining literacy course and TVET course. This programme used Zakat fund so that target population were all below poverty line.

On the other hand, where public funding is limited, it should also be noted that some of private companies have capacity to conduct own training. In such case, provision of training may not be necessary, however, value addition such as certification by recognized authority to those who completed company internal training may be still a possibility for stakeholders to be a part of human resources development. Or outsourcing those internal training to outside TVET institutes may be also a solution. Outsourcing could be justified if it yields better return on investment (ROI). Speaking further, some occupations don't need any prior skills training but require only minimum literacy. In such view, thorough implementation and further enrichment of basic education become most important part of human development.

(3) Capacity Enhancement & Greater Access and Equity

Capacity enhancement by improving physical and geographical access basically relies on financing issue stated above basically. National "Skills for All" Strategy estimates PKR 77 billion as shown in Table 4-3 for expansion of capacity by 1 million with different interventions.

Table 4-3 TVET Optimization and Capacity Maximization Matrix with Costs

Proposed Interventions	Capacity Increase	Estimated Cost (PKR in billions)
Double shift in existing institutions	150,000	9.0
Involving private schooling systems in TVET	100,000	6.0
Engaging Universities into TVET system for High-end Technologies	30,000	4.0
Apprenticeship Schemes	200,000	10.0
Implementation of Recognition of Prior Learning (RPL)	200,000	1.0
Distance/Online Learning System	150,000	8.0
Public Private Partnership – handing over of non-operational institute to private sector	50,000	2.0
Setting-up of vocational workshops/ institutes in selected Madaris	100,000	10.0
Capacity Building and Quality Improvement of existing institutes		25.0
Advocacy and Social marketing of TVET		
Total Estimated Cost	1,000,000	77.0

Source: MoFEPT. (2015). *National "Skills for All" Strategy: A Roadmap for Skill Development in Pakistan*

Solutions to gender gap in access are awareness raising to gradually change mindset of general public, provision of transport such as buses for female to move, both hard and soft work environment comfortable for female employees, e.g., appointment of female supervisors or exclusive female toilet room.

Issues of access attributed educational attainment as entry requirement are recognized by obviously recognized by PVTC that targets only poor family. They insisted that PVTC still offers courses for primary leaver although the number of courses is not so many. Collaboration with Literacy department stated earlier was also explained in this context.

Solutions to entry requirement issues must start with thorough enforcement of completion of lower secondary education. Even for those missed chances for enrollment or dropped in the middle of schooling for various reasons, there must be measures and options such as NFE to bring them back on the trail prepared to assure equivalent qualifications at all costs. That is the only way to pursue economic activities with high value addition by quality workforce.

Possible review and lowering the entry requirement could be done, but should be done very carefully. If such review is necessary, one approach is to examine and list up what is concretely required as prerequisite for someone to be able to understand and perform well in the course instead of roughly rounded requirement of completion of certain level of school. For instance, "can write names of work tools in Urdu" or "can perform four operations of decimals with use of simple calculator[188]". If this approach could work in a particular course, that course may be managed by administering entry examination (written, practical, interview, etc.) to judge if someone is capable of taking the course or not.

When there is an even acute necessity to open TVET courses to low academic qualification holders, another option is let them participate without entry requirement, but conduct diagnostic test at entry. Capability of each participant is assessed by the diagnostic test so that list of missing

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[188] Note: those who have not acquired concepts of numbers and operations fail to find mistakes even with calculator.

prerequisites of each of them are prepared. Based on that, individual training menu should be developed and followed. In this approach, it is possible to package, e.g., courses with relatively less prerequisite and literacy programme.

When planning expansion of entry capacity, it will be reasonable to consider occupation whose potential is higher in terms of labour absorption into industry.

(4) Quality Assurance

Solutions to improvement of quality assurance is already included in TVET Reform. Policy of shift to CBT curriculum, which adopts skills demand from industry as competency, accelerates updating old curriculum. This could be done efficiently by referring to CBT curricula already developed in leading countries in CBT development. However, issues of slow development of CBT in level 5 in NVQF and still dominating DAE curricula may need to be addressed by coordination between NAVTTC and TVET institutes to have clearer common direction as a nation.

And National "Skills for All" Strategy shows strategic direction to establish Centre of Excellence (CoE) which are considered as a good model of TVET institute for others to follow where quality courses are delivered. Those followers make efforts to catch up with CoE, then TVET sector as a whole improves in quality. TSSP with assistance of GIZ in implementation plans to establish five CoEs, one in each Province and another for ICT by the end of 2021. Furthermore, ADB intervention in Punjab Province in TVET sector, planning of which is almost completed, plans to 20 CoEs including three PVTC institutes[189]. 20 CoE are much larger than five CoEs by TSSP, however, CoE to be established by ADB assistance will have limited number of trades, i.e. from two to five. JICA also provided assistances to establish model TVET institutes, namely mechanical departments of GCT RR and Faisalabad. Another was done at Construction Technology Training Centre directly under Ministry of Communication located in Islamabad as well. NAVTTC recognizes these as JICA CoE establishment assistances[190].

In establishment of CoE, capacity development of instructors is necessary. To realize that, a certain number of capable trainers are needed, who will be upgraded to master trainers. To develop required capacity for master trainers, the trainers need to go through special training with emphasis on practical skills, which are crucially important in CBT, then need to acquire skills necessary for model training at CoE. After all of these, they become master trainers to extend model practices in CoE to their colleague instructors and instructors in other institutes as well. However, instructor development is even more difficult than development of curriculum or procurement of equipment, which could be referred from leading countries or purchased and imported from overseas. But trainers for capacity development is usually purely domestic human resources in Pakistan. That means that it needs a certain duration for inputs and investment before a trainer could demonstrate model practices of CoE.

Licensing of TVET graduates is also recommended in National "Skills for All Strategy" for quality assurance of the acquired skills. If the licenses are given gravities by regulating authorities of each industry, value of quality skills and TVET services would be recognized and appreciated. It could be said that export industry is more sensitive about quality if importers are in developed countries. Such export industry may agree to work together with TVET for better quality human resources.

As to involvement of industry in order to improve quality of training, some of TVET institutes

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[189] Aide-Memoire for the Pre Fact-Finding Mission for the Proposed PAK: Improving Workforce Readiness in Punjab Project
[190] 4 March 2020, hearing to GIZ

may find it difficult specially those located in rural areas where industry is not really developed. Solutions to this issue is activating Chamber of Commerce and Industry or industry organizations established by companies and businessman in the same industry sub-sector. Those kinds of organizations should be the best one to identify the latest skills demand in their particular industry and may have concrete and urgent requests to TVET.

(5) International Labour Market

International labour market is an area to be strategically targeted considering domestic labour market is limited in many senses, so that TVET may contribute to find value added skills market with higher wages. The Government of Japan and the Government of Pakistan signed Memorandum of Cooperation for Specified Skilled Worker in December 2019. Through field survey, it was found that stakeholders in Pakistan are aware of this new development and interested in possible new destination for international labour market.[191]

(6) Negative Perception towards TVET

To improve negative perception towards TVET, awareness campaign may have some impact. But it would much more effective if status of TVET pass-out truly improves economically and socially. It is very important that those who complete TVET programmes receive decent and stable incomes with safety assured in workplace using acquired skills, furthermore career paths ahead are open, if they wish to pursue, for more attractive remuneration from recognized employers but more challenging to reach due to high competition. When these are all satisfied, negative perception towards TVET in the society will change to improve for itself.

As stated above, solutions to priority issues in TVET sector with six categories are proposed. they are summarized below as in Table 4-4.

Table 4-4 Key Issues and Proposed Solutions for TVET

Category	Key Issue	Proposed Solution
Governance	• TVET is a multiple sectors' concern, and overlapping occurs due to lack of coordination • Unstable relationship between federal and provincial governments after the 18th governments.	• Organizational restructuring of the entire TVET sector around NAVTT as responsible body of the federal government • Coordination of the relationship between federal and provincial governments according to the Constitution
Funding	• Lack of financial resources for enhancing TVET sector • Expected constraints of each funding source	• Proposition with due consideration of donor's cooperation policy and indicators to be achieved • Results-oriented management taking account of benefit to industry and directly related to employment • Appropriate selection of beneficiaries to utilize social welfare funds • Cost reduction through linkage with in-house training
Capacity, Access and Equity	• Too small capacity to accept new entrants in the labour market • No function of safety net for OOSC with lower qualifications than admission requirements • Gender disparity (cultural aspects, transportation, etc.) • Courses with less participants than capacity	• Optimization of existing facilities and schemes • Establishment of new institutions • Development and implementation of TVET programmes for OOSC and people with low qualifications • Awareness raising on gender equality • Arrangement of transportation, preparation of gender-sensitive environment

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[191] 6 February 2020, hearing to P-TEVTA

		• Selection of courses for capacity enlargement according to the labour market trends
Quality Assurance	• Gap between training contents and needs of the industry • Limited number of programmes at NVQF Level 5; No recognition of DAE as CBT programme • Immaturity of industry while promoting industry engagement	• Transition to CBT curricula • Coordination between existing DAE programmes and NVQF Level 5 programmes • Establishment of CoE • Enhancement of linkage with industry trough skills development of technical workers • Construction of licensing system • Strengthening of industry organizations
International Market	• Limited competitiveness in foreign labour market	• Development of TVET programmes with due consideration for foreign labour market
TVET Image	• Unfavorable image of TVET	• Public information • Improvement of economic and social status of TVET graduates

Source: Constructed by Survey Team

5. Development Partners' Cooperation for Education in Pakistan

5.1 Overview of interventions of major development partners for education sector

In this chapter, contribution by development partners shown in Table 5-1 is compiled with information from their website. Table 5-1 shows in which area and educational stage the donors are supporting.

Table 5-1 Area and Educational Stage of Development Partners

Name of Partners	Area		Educational Stage			
	Federal	Province/Area	Primary Education	Secondary Education	NFE	TVET
World Bank	-	Balochistan, Sindh, Punjab	✓	✓		✓
ADB	-	Sindh, Punjab		✓		✓
EU	✓	Sindh, Balochistan	✓	✓		✓
UNICEF	-	Balochistan, KP, Punjab, Sindh	✓		✓	
UNESCO	✓	KP, EX-FATA, GB, Punjab, Sindh, Balochistan, and ICT	✓	✓	✓	
UNHCR	-	KP, Balochistan, Punjab	✓	✓		✓
ILO	✓	-				
WFP	-	KP, Sindh, Balochistan	✓	✓		
USAID	-	Sindh, KP	✓	✓	✓	✓
DFID	-	Punjab, KP	✓	✓		✓
GIZ	✓	-				✓
NORAD	✓	-				✓
CIDA	-	AJK, GB, Sindh, Balochistan	✓	✓		✓
AusAID	-	KP, Balochistan	✓	✓		✓

Source: Constructed by Survey Team

The table below summarizes the goals, main approaches and main target areas of each development partners. All partners except ILO, GIZ, and NORAD support Basic Education. The features include the improvement of education through utilizing PPP and innovative technologies as seen in the support by World Bank, ADB and USAID, and the support through the promotion of non-formal education as seen in the support by UNICEF and USAID. While Sindh and Punjab are supported by multiple development partners, support for AJK and GB is limited. Support for ICT is also limited. Regarding TVET, the introduction of competency-based training and assessment (CBTA), vocational training according to the needs of industry, and strengthening cooperation with the private sector are being carried out. In addition to support for provincial governments like the World Bank and ADB, there are contributions to institution building through interventions at the federal level like ILO and GIZ.

Table 5-2 Goal, Main Approach and Area of Development Partners

Partner	Sector	Goal	Main Approach	Area
World Bank	Basic Education	Improvement of enrollment rate Improvement of learning outcomes	➢ Grant aid through Global Partnership for Education ➢ Result-based approach ➢ School management by community ➢ Utilization of PPP ➢ Utilization of innovative technology	Sindh Punjab Balochistan
	TVET	Improvement of employment rate	➢ Introduction of CBTA ➢ Strengthening collaboration between TVET institutions and industry	Sindh Punjab

ADB	Basic Education	Contribution to Sindh Education Sector Plan (SESP) Improvement of inclusiveness of secondary education system	➢ Expansion of education through E-learning ➢ Construction of secondary school blocks and school operation by private partners ➢ Teacher Training ➢ Strengthening examination system and content of examination	Sindh
	TVET	Strengthening the TVET sector's ability to support economic growth and job creation in priority sectors and clusters, including export-oriented ones	➢ Introduction of CBTA ➢ Enhancement of Centres of excellence ➢ Strengthening collaboration between TVET institutions and industry	Punjab
EU	Basic Education	Improvement of governance, quality, and access of education system	➢ Implementation support of Sindh Education Sector Plan ➢ Improvement of access to and quality education and completion rate ➢ Support to private educational institutes ➢ Better lesson practice, teaching materials, learning outcomes, assessment system and school management	Sindh Balochistan
	TVET		➢ Promotion of TVET based on needs ➢ Promotion of participation of private sector	Nationwide
UNICEF	Basic Education	Investment in quality early learning/pre-primary education Reduce OSSC	➢ Focusing on Early Childhood Education (ECE) to improve school readiness ➢ Broadening ALPs within education systems to bring OOSC into primary education, with a specific focus on adolescent girls ➢ Strengthening School-Community Linkages ➢ Support to most disadvantaged girls and boys	Sindh KP Balochistan Punjab
UNESCO	Basic Education	Mobilizing for Education: so that every child, boy or girl, has access to quality education as a fundamental human right and as a prerequisite for human development Right to Free Education	➢ Integrated policy support ➢ Capacity building and technical assistance at national and subnational levels ➢ Coordination ➢ Advocacy and awareness raising ➢ Multi-stakeholder convening ➢ Improvement of STEM education ➢ Promoting women's participation in STEM	KP Punjab Sindh Balochistan ICT EX-FATA GB
UNHCR	Basic Education	Enhancing quality of and access to primary education for children, especially for girls Enhancing the quality of education and learning achievements	➢ Mainstream Afghan children at scale into nearby state-run schools ➢ Support access to secondary and tertiary education whether in Pakistan or Afghanistan ➢ Implement innovative education solutions such as use of distance learning, ICT, etc.	KP Balochistan Punjab
	TVET	Pursuing youth empowerment, skills training and stronger linkages with education pathways	➢ Pursue youth employment by aligning with and amplifying access to existing programmes of ILO, UNESCO and UNICEF	
ILO	TVET	Improvement towards Job creation and decent work	➢ Introduce training material for business start-up education ➢ Employment needs assessment ➢ Industry sector survey ➢ Strengthening capacity of TVET institutions	Nationwide
WFP	Basic Education	Ensure populations most in need, especially women, girls and children access to safe, nutritious and sufficient food Reduce disaster risk at community	➢ Provide technical assistance on school meals to provincial governments and implement school meals programmes as appropriate ➢ Strengthen the government's and communities' capacity for disaster risk reduction	KP Sindh Balochistan
USAID	Basic Education	Improvement access to basic education Improvement quality of basic education	➢ Support to adolescent girls through PPP ➢ School construction, upgrading ➢ Promoting Reading	Nationwide Sindh KP

	TVET	Promoting peace and resilience for youth	➢ Provide vocational training to youth including adolescent girls	Sindh
DFID	Basic Education	Improving access to and quality basic/secondary education	➢ Financial support to provincial government ➢ Scholorship ➢ School construction and upgrading ➢ Technical assistance	Punjab KP
	TVET	Improving income and employment opportunities	➢ Provide vocational training to poor and vulnerable people ➢ Technical assistance to Punjab Skills Development Fund ➢ Strengthen capacity of private TVET institutions	Punjab
GIZ	TVET	Improve governance and private sector participation in the technical vocational education and training sector (TVET), with a view to raising the quality of skills development in line with labour market demands	➢ Implementation of a national TVET policy and facilitating cooperation agreements between the public and private sectors ➢ Assisting partner organisations to increase the level of private sector representation in decision-making bodies and promoting systematic stakeholder dialogue ➢ Supporting the provision of demand-oriented vocational training to youth throughout Pakistan ➢ Implementation of the National Vocational Qualifications Framework (NVQF) and the delivery of demand-driven vocational courses through Competency Based Training & Assessment (CBT&A)	Nationwide
NORAD	TVET	Promoting gender equity	➢ Providing vocational training to women through UN Women	Nationwide
CIDA	Basic Education	Reconstruction of education sector in conflict area Improve quality of education Promote participation in education	➢ School construction, provision of equipment ➢ Strengthening capacity of teacher training university ➢ Introducing child friendly learning approaches	Nationwide AJK Sindh GB Balochistan
	TVET	Promote employment for youth Prevent Child, Early and Forced Marriage	➢ Support to federal and provincial government to ensure income-earning opportunities and employment especially for women ➢ Provide women with skills for employment	Nationwide GB
AusAID	Basic Education	Provide quality education	➢ Strengthen Provincial Government capacity ➢ Support girl's education through KP Education Sector Programme ➢ Support school infrastructure	KP
	TVET	Promote women's economic empowerment Humanitarian assistance for refugees and immigrants	➢ Provide basic skills for productive life ➢ Provide skills training to Afghan refugees	KP

Source: Constructed by Survey Team

Detail information of each organization are described in next section.

5.2 Programmes and projects of major development partners

5.2.1 World Bank (WB)

(1) Strategy of Partnership

World Bank sets four strategic pillars (result areas) under Country Partnership Strategy (CPS) 2015-19: Energy, Private Sector Development, Inclusion and Service Delivery which anchored in the Government's framework of 4Es: Energy, Economy, Extremism and Education. Based on lessons learned from previous CPS 2010-14 and Stakeholder Feedback, above four result areas have been selected. Outcomes of each result areas are shown in the below table.

Table 5-3 Outcomes of Each Result Area (WB)

No.	Result Area	Strategy	Outcomes
1	Energy	➢ Address energy security, particularly power sector needs, as the top priority and necessary condition for growth. ➢ Interventions at both the policy and investment levels, with an ➢ increased focus on hydropower and other renewable energy. ➢ Mobilize substantial equity investment with international investors for the establishment of a platform company to develop hydro, thermal, and wind power over the next five years.	Reduced Load Shedding Reduced Cost of Electricity Production Improved Financial Sustainability of the Electric Power Sector
2	Private Sector Development	➢ Focus on policy reforms at the federal and province levels to enhance the enabling environment, including legal framework and unlock constraints on the private sector participation.	Improved Business Environment for Private Sector Increased Productivity in Farms in Selected Irrigation Schemes Improved Youth's Skills for Business Improved Trade Tariff and Ports / Borders Logistics
3	Inclusion	➢ Support inclusive growth by reducing inequities for vulnerable groups, including women and youth, and those in poor or conflict-affected areas including Balochistan, KPK and FATA.	Increased Financial Inclusion for Micro, Small, and Medium Enterprise Reduced Vulnerability for Groups at Risk Increased Resilience to Disasters in Targeted Regions
4	Service Delivery	➢ Work with federal, provincial and local governments to help improve revenues and expenditures to fund services and setting more ambitious stretch targets for areas of past WBG involvement that are not producing change fast enough (such as health and education).	Improved Public Resources management Improved Access to Maternal and Child Health Services Increased School Enrollment and Adoption of Education Quality Assessment Adoption of Performance and Transparency Mechanisms in Selected Institutions

Source: World Bank Group "Country Partnership Strategy for The Islamic Republic of Pakistan for the Period FY2015-19" April 2014

Among the outcomes in the table above, "Improved Youth's Skills for Business" related to TVET provides training, employment support, internship, entrepreneurship support for small businesses, etc. through TVET project in Sindh and Business Edge skills programme by International Finance Corporation (IFC). Under the "Increased School Enrollment and Adoption of Education Quality Assessment" related to basic education, it focuses on ensuring access to primary and secondary education and improving quality of education and learning outcomes in Sindh, Punjab, Balochistan. It also focused on improving standard of higher education at federal level. In addition, IFC has included Pakistan in the E4E (Education for Employment) Initiatives implemented in the Middle East countries and aims to improve better private secondary education that meets the needs of the labour market.

The World Bank in collaboration with DFID, Australian, and the government launched the report as "Pakistan@100" in 2019. "Pakistan@100: Shaping the Future 2047" is the flagship report based on seven policy notes that were prepared in parallel. The report highlights the issues from health, education, women empowerment, environmental sustainability to investment and recommended solutions to the government to become an upper-middle-income country by 2047. Main points of each policy note are follows.

Table 5-4 Main Points of Policy Notes

No.	Title of Policy Notes	Main Points of Policy Notes
1	Regional Connectivity	The policy note puts forth a vision of Pakistan at 100 years, in which the country exploits its geostrategic position, both contributing to and benefitting from a more connected, peaceful, and economically prosperous region without necessarily incurring the strategic costs that have traditionally held Pakistani planners back from taking a proactive approach to regional integration
2	Environmental Sustainability	The policy note is structured around three sections that centre on a triple sustainability message: (i) urbanization will grow, but it is possible to live in healthy cities; (ii) water demand will grow, but it is possible to have enough water for food security and other uses; and (iii) as Pakistan's population and assets grow, so will economic exposure to disasters, but it is possible to build resilience.
3	Governance and Institutions	The policy note identifies several governance failures organized around three main challenges: inefficient public administration system; incomplete devolution; and the dominance of the state in the market and offers key recommendations to improve quality and performance of its governance institutions.
4	Growth and Investment	The policy note suggests that Pakistan needs to focus on increasing investment by attaining macroeconomic stability, enhancing the business environment by removing infrastructure bottlenecks, simplifying and making tax laws more transparent, reforming institutions, developing financial markets, increasing technological readiness and market access, as well as facilitating business development to encourage entrepreneurial activity and maintaining consistency in policies.
5	Human Capital	The policy note highlights that Pakistan can invest in its young generations by giving them medical attention, improved education system, and higher wages to increase their productivity and focuses on basic levels of education and skills.
6	Structural Transformation	The policy note suggests ideas on how to build the capacity for independent analysis and oversight, the capacity to implement and coordinate reforms, and the mechanisms to balance influence in the policy arena.
7	From Poverty and Equity	Despite the significant progress to reduce poverty ratio, poverty gap between urban and rural areas increased. The policy note highlights that besides a higher poverty risk, rural households also face a disadvantage on all aspects of service delivery, from education and health to access to key utilities, water and sanitation, and infrastructure, with severe consequences in terms of human capital accumulation and long-term poverty reduction.

Source: World Bank Group Policy Notes of Pakistan@100, March 2019

(2) Collaboration in Education Sector

World Bank is one of the major partners in education sector in Sindh, Punjab and Balochistan. Their key outcomes of this sector are 1) to increase gross enrollment rates at primary school by at least 10%, 2) have at least three provinces carry out annual student achievement tests, 3) showing positive trend in learning outcomes[192]. In "Pakistan@100 Shaping the Future 2047", World Bank puts emphasis on investing human capital and its utilization to stimulating country's growth. Four critical pillars are pointed out to help policymakers design and implement key policy measures to boost human capital and labour productivity: "Informed Decisions on Parenthood"; "Strong Start through Early Childhood Development"; "Education and Learning for All"; and "Labour Productivity".

Table 5-5 WB's Projects in Education Sector

No.	Name of the Project	Means of Cooperation	Duration	Amount (million USD)	Sub sector	Project Goal
1	Balochistan Education Project	Grant	2019 July~	10.49	Basic Education	To increase school enrollment and retention in project supported schools, with a special focus on girls' participation, and to develop mechanisms for information collection and use for improved management of education.
	Global Partnership for Education - Balochistan Education Project	GPE Grant	2015 March~ 2020 April	34	Basic Education	

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[192] World Bank Group "Country Partnership Strategy for The Islamic Republic of Pakistan for the Period FY2015-19" April 2014

2	Third Punjab Education Sector Project	Loan	2016 June~ 2021 December	300	Early Childhood Education, Basic Education	To support Punjab province to improve school participation, completion, and teaching-learning practices with a particular focus on low-performing districts.
3	Punjab Skills Development	Loan	2015 April~ 2020 June	56.30	TVET	To improve the quality, labour market relevance of, and access to skills training programmes in priority sectors in the Punjab.
4	Sindh Global Partnership for Education Project	Grant	2015 April~ 2017 December	66 (Grant) 3,706.4 (Borrower's Contribution)	Basic Education	To strengthen the institutional capacity to generate, disseminate and use information to support the implementation of key reforms under Sindh Education Sector Plan
5	Second Sindh Education Sector Project	Loan T/A	2013 March~2018 December	400 (Loan) 7 (T/A)	Basic Education	To raise school participation by improving sector governance and accountability and strengthening administrative systems, and measure student achievement
6	Sindh Skills Development Project	Loan	2011 May~ 2018 May	26	TVET	To support the Government of Sindh in strengthening its training programmes to improve the skills set and employability of trainees.

Source: Data compiled from World Bank Project List (https://projects.worldbank.org/en/projects-operations/projects-list)

Punjab Skills Development Project started in 2015 is the project which formulated based on the result of diagnostic study in 2014 of TVET sector in Punjab conducted by the Punjab Government with the support from World Bank. The Project has three strategic areas and indicators and related organizations are designated to each area. Three strategic areas and partner institutions are shown in Table 5-6 and achievement of main indicators are shown in Table 5-7.

Table 5-6 Strategic Areas and partner institutions of Punjab Skills Development Project

	Strategic Areas	Partner Institutions
1	Strengthening the skills training system that will support institutional reforms in the skills sector through: Developing a single agency responsible for accreditation registration and certification for all training providers and graduates in the province, Addressing institutional constraints in TEVTA	➢ Trade Testing Board (TTB) ➢ Punjab Board of Technical Education (PBTE) ➢ Technical Education & Vocational Training Authority (TEVTA) ➢ Punjab Vocational Training Council (PVTC)
2	Raise the quality of skilled graduates through: Introduction of Competency Based Training and Assessment, Improve collaboration between Employers and Training providers	➢ Technical Education & Vocational Training Authority (TEVTA) ➢ Trade Testing Board (TTB) ➢ National Vocational & Technical Training Commission (NAVTTC) ➢ PBTE (Punjab Board of Technical Education)
3	Increase enrolment in technical and vocational training courses to produce skills that are needed in priority economic sectors identified in growth strategy.	➢ Punjab Skills Development Fund (PSDF) ➢ Private Training Providers

Source: Constructed by Survey Team based on Project's website   https://psdp.punjab.gov.pk/increasing_access

Table 5-7Achievement of main indicators of Punjab Skills Development Project

Indicators	Baseline	Achievement	Targets
Project Development Objective Indicators			
Established and functioning PSA	PSA does not exist at the Moment (2014/12/31)	Standard Operating Procedures has been drafted (2019/8/23)	Testing quality standards Established (2020/6/30)
Percentage of graduates employed 6 months after completing training in market relevant courses	Male 42, Female 28 (2014/12/31)	Follow-up survey is on-going (2019/8/23)	Male 46, Female 32 (2020/12/31)
Number of students	None (2014/7/31)	30,664 (2019/6/2)	40,000 (2020/6/30)

passed out from market-relevant courses			
Intermediate Results Indicators			
P-TEVTA Institutional Development Plan Targets approved	Plan does not exist (2014/12/31)	Plan has been drafted (2019/8/23)	P-TEVTA Institutional Development Plan Approved (2020/12/31)
Number of CBTA curricula introduced	None (2014/12/31)	16courses (2019/8/23)	30courses (2020/12/31)
Number of institutions offering CBTA courses	None (2014/12/31)	39institutions (2019/8/23)	80institutions (2020/12/31)
Number of students passed-out from CBTA courses	None (2014/12/31)	1,138 (2019/8/23)	6,800 (2020/12/31)
Number of industry Partnership Agreements signed	None (2014/12/31)	12 (2019/8/23)	52 (2020/12/31)
Number of students benefited from industry partnership agreement	None (2014/12/31)	1,197 (2019/8/23)	2,000 (2020/12/31)
Employment rate of students benefited from industry partnership agreement (after 6 months)	None (2014/12/31)	50.30% (2018/7/16)	55% (2020/6/30)
Employer satisfaction with graduates from programmes which benefitted from CBTA packages and Partnership Agreements	None (2014/12/31)	Satisfied (2019/8/23)	Satisfied (2020/12/31)
Number of students enrolled in market-relevant courses	None (2014/12/31)	38,183 (2018/7/16)	51,000 (2020/6/30)

Source: Constructed by Survey Team based on World Bank's website
https://projects.worldbank.org/en/projects-operations/project-detail/P130193?lang=en#results

This project contributes to establish single testing agency, introduce CBTA, produce skilled workforce through collaboration with high priority industry and TVET institutions. Above mid-term achievement shows the progress towards the goals has been made.

In addition, this project has been affected in significant organizational structure changes in Punjab Province which may need special attention for intervention by development partners. The original design was establishment of a single independent testing agency, the Punjab Skills Agency (PSA) by merging the PBTE and PTTB. However, Punjab Skills Development Authority (PSDA) was established by PSDA Act passed by Provincial Assembly of the Punjab in February 2019 instead of PSA designed in the project. There is no information about whether or not development of these two organization had any complications to each other.

With the newly establishment of PSDA, restructure of the design was proposed in July 2019 (only proposal is available in WB website). In the proposal, the indicator of establishment of PSA was changed to *testing quality standards established*. The document refers to initiative by Provincial Government to establish Punjab Skills Testing Agency (PSTA) which would require more technical and policy-level background work so that it is not reflected in proposed design restructure.

(3) Global Partnership for Education

World Bank has been supporting education sector in Sindh and Balochistan through Global Partnership for Education (GPE). GPE is a multi-stakeholder partnership and funding platform. By providing technical and financial support during the planning cycle, GPE promotes quality education sector plans in partner countries. The Local Education Group (LEG) is formulated at the national level of each partner country and it improves the coordination of technical and financial support and promotes an inclusive sector dialogue, allowing all partners to contribute to a country's education policies and their implementation. Pakistan became a partner country of GPE in 2012. The World Bank Group supports the partnership as a Board Member, a host of the GPE Secretariat, and a Trustee and as Grant Agent for the majority of GPE grants[193]. Below table shows GPE's track record in the support of education in Pakistan.

Table 5-8 GPE's cooperation in Pakistan

Grant Type	Years	Allocations (USD)	Disbursements (USD)	Grant Agent
Sector plan development (Sindh)	2012	250,000	249,717	UNICEF
Programme development (Sindh)	2013	190,000	188,092	World Bank
Programme implementation (Balochistan)	2014-19	34,000,000	34,000,000	World Bank
Sector plan development (Balochistan)	2018	460,350	-	UNICEF
Programme implementation (Sindh)	2015-17	65,730,921	65,730,921	World Bank
Sector plan development (Sindh)	2017	499,400	-	World Bank
Programme development (Sindh)	2019	200,000	-	World Bank

Source: Global Partnership for Education Website https://www.globalpartnership.org/where-we-work/pakistan

According to the report from Summative Evaluation of GPE's Country-level Support to Education conducted in 2018[194], the following contributions have been made at Sindh and Balochistan.

1) State of sector planning in Pakistan, 2013-2018

- The prospect of obtaining direct financial support for education reform/renewal through the ESPIGs was a key driver for developing ESPs in both Balochistan and Sindh.

- Sindh province received an Education Sector Plan Development Grants (ESPDG) which provided for consulting services and the development of a situation analysis to inform the development of the SESP.

- Quality assurance through the GPE Secretariat to strengthen the draft ESPs as well as for each province's Education Sector Programme Implementation Grants (ESPIG) application.

- Technical assistance and facilitation of consultative processes related to ESP development by UNICEF as the coordinating agency in both provinces, in terms of facilitating LEG meetings and compiling ESP appraisal reports.

2) State of sector dialogue and monitoring in Pakistan

- Providing an incentive for inclusive and participatory sector dialogue through ESPIG funding requirements and providing guidance, through the Secretariat country lead, on implications of these requirements;

- Active participation in Joint Education Sector Reviews (JESRs) of both provinces by the

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[193] World Bank "The Global Partnership for Education and the World Bank Group: The Facts" January 2018. Retrieved from https://www.worldbank.org/en/topic/education/brief/the-global-partnership-for-education-and-the-world-bank-group-the-facts

[194] Universalia Management Group. (2018) *Summative Evaluation of GPE's Country-level Support to Education-Batch 2, Country 5: Pakistan (Balochistan and Sindh Provinces), Final Report.*

Secretariat country lead and the coordinating agency;

- Providing technical assistance for preparing and conducting LEG meetings in both provinces, and in developing the dashboard for monitoring SESP implementation;

- The Secretariat country lead provided advice on means to increase the effectiveness of LEGs, notably through reduction in membership and the creation of technical working groups on thematic issues.

3) State of sector financing in Pakistan, 2013-2017

- During the period under review, GPE contributed modestly to increases in international education sector financing.

4) State of sector plan implementation in Pakistan, 2013-2018

- GPE contributed to the implementation of the BESP and SESP through financial support in the form of ESPIGs of USD66 million and USD34 million in Sindh and Balochistan respectively.

- GPE contributed to the establishment of monitoring systems (both provinces), and to implementing activities aimed at expanding education access and Early Childhood Education in Balochistan.

- GPE non-financial support indirectly contributed to implementation of the ESPs in both provinces through the country lead's and the CA's promotion and facilitation of sector dialogue and ESP implementation monitoring via the LEGs.

Based on the lessons learnt from the implementation of ESP 2013-2018, Education Sector Plan 2019-2024 of each province were developed with the support of GPE.

GPE also promotes the use of innovative technologies. Under the programme implementation in Balochistan, GPE supported the recruitment and training of qualified teachers (especially female teachers) to help increase the enrollment of girls. WhatsApp group for teachers was created to promote their knowledge-sharing and peer learning. In addition, an Android application was developed for school monitoring system[195].

5.2.2 Asian Development Bank (ADB)

According to "ADB Strategy 2030", Education is one of the key pillars of support to developing member countries[196]. Interventions in social sector such as education, health, and social protection will be expanded to promote sustainable development.

ADB issued Country Partnership Strategy for Pakistan (2015-2019) which is in line with ADB's Midterm Review of Strategy 2020. Their main focusing sectors are six sectors[197]:
1) energy;
2) transport;
3) agriculture, natural resources, and rural development;
4) water and other urban infrastructure and services;

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[195] World Bank "Pakistan: Using technology to bring education to the most remote areas" April 2019, Retrieved from https://www.globalpartnership.org/content/pakistan-using-technology-bring-education-most-remote-areas
[196] ADB "Strategy 2030-Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific" July 2018
[197] ADB "Country Partnership Strategy Pakistan 2015-2019" August 2015

5) public sector management;
6) finance.

ADB is supporting e-learning services which could be utilized to provide education countrywide through its private sector operations. ADB also takes initiatives to strengthen vocational skills in its support to Benazir Income Support Programme (BISP). BISP is Pakistan's flagship social protection programme, targeted at the poorest households and provides cash transfer to especially female head family.

ADB's Country Operations Business Plan, 2019-2021 for Pakistan is in aligned with Country Partnership Strategy for Pakistan (2015-2019). According to this document, below projects have been implemented in education sector.

Table 5-9 ADB's Projects in Education Sector

No.	Name of the Project	Means of Cooperation	Duration	Amount (million USD)	Sub sector	Project Goal
1	Sindh Secondary Education Improvement Project	Loan	2019-2026	75	Secondary Education	➢ Construct about 160 secondary school blocks within existing School Education and Literacy Department (SELD) school compounds, largely in 10 districts in southern Sindh and schools will be operated by private partners. [198] ➢ Improve teacher capacity in five key subjects (English, mathematics, biology, chemistry and physics) Under this output, project will (i) assess teacher availability and training requirements, (ii) develop teacher training modules, (iii) provide classroom training and in-class mentoring by subject specialist master trainers by using ICT, and (iv) provide laboratory equipment to some existing secondary schools. ➢ Strengthen the secondary education examination system. Under this output, project will support the development of a uniform examination syllabus and specifications for grades 9-12 for the Sindh boards of intermediate and secondary education, redesign of the content of these examinations, and the provision of optical mark recognition systems to improve the transparency, accuracy, and efficiency of examination grading.
2	Improving Workforce Readiness in Punjab	T/A	2019-2021	0.8	TVET	➢ Expand existing programmes and reforms, such as competency-based training and assessment (CBTA), centres of excellence (COEs) and sector skills councils, and work-based training ➢ Strengthen industry-TVET linkages, increase female participation in TVET, and expand entrepreneurship programmes for TVET graduates ➢ Introduce private management of public TVET institutes

Source: ADB "Report and Recommendation of the President to the Board of Directors, Proposed Loan, Islamic Republic of Pakistan: Sindh Secondary Education Improvement Project" October 2019, Retrieved from https://www.adb.org/sites/default/files/project-documents/51126/51126-002-rrp-en.pdf
ADB "Project Data Sheet, Improving Workforce Readiness in Punjab" updated on May 2019, Retrieved from https://www.adb.org/projects/52069-001/main#project-pds

As to T/A titled Improving Workforce Readiness in Punjab currently implemented, 19 individual

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[198] Private partners operate secondary blocks under the SELD's Education Management Organization programme. EMO operators which were selected by SELD are responsible for all aspects of school management and are paid based on performance.

consultants in total (7 international and 12 national) have been contracted to engage in respective specialty area starting in April 2019 according to ADB website. There is no consultancy firm engaged. ADB Project Officer in charge of social sector in central Asia is managing them directly. According to the officer, the TA is about to conclude and Aid Memoir that outlines the expected loan project is soon prepared. The Aid Memoir was provided through JICA Pakistan Office on 1st April. Below is outline of the project[199].

<u>Project Impact</u>: Increased access to quality employment for workers in Punjab

<u>Project Outcome</u>: Market-driven and inclusive skills development system

<u>Output 1</u>: Quality and relevance of TVET in priority economic sectors improved

- Upgrade 17 TEVTA institutes into COEs (10-12 to operate under new governance arrangements and 5-7 to be contracted out to private operators) in 7 priority economic sectors

- Upgrade 3 PVTC institutes into COEs among 7 priority economic sectors

- Strengthen 4 existing SSCs (Construction, Tourism and Hospitality, Textile and Energy and support 4 newly established SSCs (Automobile, Food Processing, ICT and Light engineering) in priority economic sectors

<u>Output 2</u>: Equitable access to TVET increased

- Provide USD 25 million in additional financing to the PSDF

- Establish a challenge fund to design and pilot innovative mechanisms for improving the performance of the TVET sector – to be implemented by PSDF

<u>Output 3</u>: TVET sector institutional framework strengthened

- Support implementation of the PSDP reforms – capacity building, etc

- Build capacity and develop regulatory framework for PSDA and PSTA

- Finance a research agenda to analyze key issues in the TVET sector

- Establish a strategy, policy and analytical unit within PSDA

- Develop a comprehensive TVET MIS (Management Information System) and LMIS (Labour Market Information System)

Seven priority economic sectors and number of CoEs mentioned in Output 1 are follows.

- Tourism and Hospitality: 4 CoEs

- Automobile and Motorbike Assembly, Parts, and Repair: 2 CoEs

- Construction: 2 CoEs

- Textiles and Garments: 2 CoEs

- Food Processing (including agriculture, dairy and livestock products): 2 CoEs

- Light Engineering (Renewable Energy, Surgical Instruments, Farm Machinery and General): 5 CoEs

- ICT: 3 CoEs

The project is estimated to cost USD110 million. USD 100 million will be covered by ADB Loan

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[199] Aid-Memoir for the Pre Fact-Finding Mission For the Proposed PAK: Improving Workforce Readiness in Punjab Project

and USD 10 million will be covered by the Government of Punjab. ADB is seeking $2 million to finance the transaction technical assistance (TRTA) from the Japan Fund for Poverty Reduction (JFPR).

- Develop a TVET sector strategy, action plan and medium-term expenditure framework;
- Develop a revised TVET funding and revenue generation framework;
- Undertake a skill mapping exercise and tracer studies of the Punjab economy.

ADB staff met with a Counsellor from the Japan Embassy in Pakistan as well as a representative of JICA to outline the proposed TRTA. On 2 March 2020, the Mission submitted the Initial Title and Description Form for the TRTA, the first step in the JFPR application process.

5.2.3 European Union (EU)

The European Union (EU) has approved seven-year budget plan called "Multi Annual Financial Framework 2014-2020". The expenditure is divided into six headings. Expenditure for development assistance is categorized under "Global Europe" heading. Based on this plan, "EU-Pakistan Multi-Annual Indicative Programme (MIP) 2014-2020" was published for supporting Pakistan. They provide funding for a broad range of projects and programmes in Pakistan. Their key sectors are i) Rural Development, ii) Education, and iii) Good governance, Human Rights and Rule of Law[200]. In line with the ongoing decentralization process, their interventions at federal level will be reduced and direct cooperation with the provincial government will be increased.

According to "EU-Pakistan Multi-Annual Indicative Programme (MIP) 2014-2020", 210million EUR (32% of total budget for Pakistan) is dedicated to education sector. Their Objectives of education sector in Pakistan are shown in below table.

Table 5-10 EU's Objectives of Education Sector in Pakistan

Overall objective	To accelerate human development and achieve related Millennium Development Goals by improving access, quality and governance of the education system
Specific objectives	➢ Improve equitable access to and completion of quality basic and secondary education for children, including reducing gender and regional disparities and supporting the potential of non-state providers, to deliver effective services and promote learning for all ➢ Improve quality of education through better teaching practices and materials, learning outcomes, assessment systems and school management ➢ Improve productive capacity and employability of workers through demand-driven TVET

Source: European Commission "EU-Pakistan Multi-Annual Indicative Programme (MIP) 2014-2020" December 2014

EU's support to Pakistan is mainly Technical Assistance Grant. Main programmes in education sector are shown in Table 5-11.

Table 5-11 EU's Programmes in Education Sector.

No.	Name of the Programme	Means of Cooperation	Duration	Amount (million EUR)	Sub sector	Objective
1	Development through Enhanced Education Programme (Sindh Province)	Grant	2018-2022	50	Early Childhood Education, Basic Education	To contribute towards universal access to quality education in Sindh, enabling young people to progress and engage in productive employment of higher/ vocational education.

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[200] European Commission "EU-Pakistan Multi-Annual Indicative Programme (MIP) 2014-2020" December 2014

2	Balochistan Basic Education Programme[201]	Grant	2014-2022	18.4	Basic Education	To accelerate and further increase the number of children (especially girls) enrolling and completing quality elementary education in Balochistan
3	Support to the Technical and Vocational Education and Training Sector in Pakistan (TVETIII)[202]	Grant	2017-2021	45	TVET	To improve governance and private sector participation in the TVET sector to enhance access to quality skills development that meets demand of the labour market

Source: EU, Presentation on EU's Development Cooperation with Pakistan, November 2019. Retrieved from https://eeas.europa.eu/delegations/pakistan/71734/presentation-eus-development-cooperation-pakistan_en

5.2.4   United Nations Children's Fund (UNICEF)

UNICEF has been supporting Pakistan to promote and protect the rights and wellbeing of children and women since 1948. One of the great efforts of UNICEF is eradicating polio in Pakistan. As country programmes for Pakistan, they focus on advocacy for strengthened and child-focused systems, shifting from project approach to programme approach, deepening the continuum and balance between development and humanitarian work on disaster risk management and emergency response, expanding strategic government partnerships, support communication for development for positive behavioural and social change, and developing partnerships with the private sector[203]. Health, nutrition, education, protection, and WASH (Water, Sanitation and Hygiene) are UNICEF's main focus sector to achieve the SDGs in Pakistan.

"Support communication for development (C4D) for positive behavioural and social change" is one of the pillars of UNICEF's programme in Pakistan. C4D also referred as Social and Behaviour Change Communication (SBCC) is "an evidence-based process that is an integral part of programmes and utilizes a mix of engagement with children, families, communities, networks for positive social and behaviour change in both development and humanitarian contexts.[204]" In Pakistan, UNICEF supported National Disaster Management Authority to develop a C4D strategy for its School Safety Programme in KP, Sindh and Balochistan. Efforts on social mobilization to enroll children from tribal areas are also being made.[205]

UNICEF's priority in education sector is early learning and out-of-school children (OOSC). UNICEF is the coordinating agency for the GPE in the provinces of Sindh and Balochistan. UNICEF supported to develop and emphasize Non-Formal Education Policy in Sindh, Punjab, and KP. UNICEF also provided support for developing/implementing Education Sector Plan in Sindh, Panjab, Balochistan, and KP. Their strategies in education sector are[206]:

- Investment in quality early learning/pre-primary education to build school readiness on primary school enrolment.

- Decreasing the number of OOSC, with a focus on girls through alternative learning programmes by involving local community leaders in marginalized communities.

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[201] UNICEF is an implementing organization.
[202] GIZ is an implementing organization of the multi-donor programme titled TVET Sector Support Programme.
[203] UNICEF "Country Programme of Cooperation between the Government of Pakistan and UNICEF 2018-2022" May 2019
[204] UNICEF "UNICEF 2017 Report on Communication for Development (C4D)- Global Progress and Country Level Highlights Across Programme Areas" April 2018
[205] UNESCO "UNESCO Pakistan Country Strategic Document 2018-2022" 2019
[206] UNICEF "Every Child Learns-Country Programme of Cooperation between the Government of Pakistan and UNICEF 2018-2022" May 2019

- Building best practices on bringing children, especially girls, back into schools.
- Promote equity-based investments by the government in order to include the most disadvantaged girls and boys to education systems.

According to "UNICEF Pakistan annual report 2018", UNICEF's contributions to education sector in Pakistan are follows.

- Supported Balochistan government to submit an ESP Development Grant proposal (0.5million USD).
- Supported KP government to submit an ESP Development Grant Proposal as coordinating agency.
- Contributed to an expanded Performance Management System with a new Complaint Management System in Balochistan.
- Supported capacity development for the Balochistan Assessment and Examinations Commission.
- Assisted to produce a comprehensive costing model of Sindh's NFE policy implementation in collaboration with USAID.
- Supported alternative learning pathways centres in all four provinces.
- Assisted government enrollment campaigns in all provinces.
- Supported enrollment campaigns of ECE centres in Punjab.
- Formed new Technical Working Group for ECE coordination in KP.
- Assisted the development of age-appropriate supplementary reading materials for ECE in English and Urdu at pre-primary level across Pakistan.

The Government of Japan provided a grant of 393 million JPY to UNICEF for supporting UNICEF's initiative to provide Quality Alternative Education to out-of-school children and adolescents. Under this grant, 400 Alternative Learning Programme Centres (150 at Sindh, 160 at Balochistan, 90 at KP) were established by following the guidance of the Federal Ministry of Education and Professional Training and in collaboration with the provincial education departments. 13 priority districts have been selected across these three provinces for establishing the centres with the special focus on enrolling girls. This programme is composed of following outputs.

- Expand quality Alternative Learning Programme for disadvantaged OOSC and adolescents, especially girls
- Develop of scalable ECE models to improve school readiness
- Enhance of linkages between school and community to increase on-time enrollment
- Reduce drop-out and improving completion and transition to formal education
- Support provincial government to develop equity-focused sector planning and budgeting
- Strengthen data and assessment systems
- Improve evidence-based policy advocacy

Under this project, teaching materials developed by JICA's AQAL project are being provided and data-based management using NFEMIS promoted by AQAL is being disseminated.

5.2.5   United Nations Educational, Scientific and Cultural Organization (UNESCO)

UNESCO has been operating in Pakistan since 1958 and supporting in Education, Culture, Natural Sciences, and Communication & Information. UNESCO's cooperation modalities in Pakistan are 1) Integrated policy support, 2) Capacity building and technical assistance at national and subnational levels, 3) Coordination, 4) Advocacy and awareness-raising, and 5) Multi-stakeholder convening[207].

In the Education sector, UNESCO promotes international cooperation and networking through the UNESCO Chairs Programme. The purpose of the programme is to enhance institutional capacities through knowledge sharing and collaborative work. In Pakistan, three programmes has been implemented.

UNESCO supports the Government of Pakistan to implement SDG4 through below four pillars of intervention[208].

Pillar1: Sector-wide Education Policy, Planning, and Coordination.

- Support the development of national and provincial Education 2030 strategies

- Lead inter-agency coordination

- Build stakeholder's capacity to enhance girl's education

Pillar2: Increasing access to and improving the quality of education in Pakistan.
 -Conduct Girl's Right Education Programme (GREP) focuses on increasing enrolment and improving retention and quality of learning for girls in remote districts
 -Focus on Activity Based Learning, Multi-Grade Teaching, the establishment of reading corners, the revitalization of school management councils, and the provision of missing school facilities as part of GREP

Pillar3: Education for Sustainable Development (ESD) and Preventing Violent Extremism.
 -Raise awareness of ESC and Global Citizenship Education through policy revision, teacher training, curricula reforms and pedagogical support.
 -Support mainstreaming of madrassa students for the promotion of peace education, tolerance, interfaith dialogue and harmony in the society

Pillar4: Heritage Education
 -Advocate for youth about respect for cultural diversity and the promotion of cultural rights and gender equality
 -Promote heritage education by integrating culture and heritage education in national curricula, developing teaching resources and learning material for students, training teachers, improving the educational role of museums, and promoting local art and crafts

One of the pillars of Natural Sciences is Science, Technology, and Innovation. UNESCO supports the standardization of engineering education, improvement of STEM education, and promoting women's participation in STEM. UNESCO's main projects in Education Sector are shown in below table.

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[207] UNESCO "UNESCO Pakistan Country Strategic Document 2018-2022" 2019
[208] ibid.

Table 5-12 UNESCO's Projects in Education Sector

No.	Name of the Projects	Partnerships	Total Amount Needed (million USD) (2018-2022)
1	Supporting the development of national and provisional Education 2030 strategies	Ministry of Education (Federal and Provincial level)	0.15
2	Support National Capacity Building to Realize Girl's Right to Education an National level, KP, EX-FATA, Gilgit Baltistan, Punjab, PAK, Sindh, Balochistan, and ICT	Ministry of Education (Federal and Provincial level) Government of Italy KOICA	-
3	Mainstreaming out of school primary children in Pakistan	EDUCATE A CHILD	6.14
4	Support to National Capacity Building to Realize Girl's Right to Education in Punjab and Gilgit-Baltistan		3.40
5	Support to Girls' Right to Education and Safe Guarding Cultural Heritage through Education in Pakistan		1.77
6	Empowering Adolescent Girls' through Education in Pakistan (Transition from primary to secondary education)		4.00
7	Strengthening national capacity for integrating sustainable development, global citizenship into education policies, curricula, teacher education and student assessment	Ministry of Education (Federal and Provincial level) Asia Pacific Centre of Education for International Understanding	1.50
8	Prevention of violent extremism through Education in Pakistan	Wafaq-Ul-Madaris Ministry of Education (Federal and Provincial level) Asia Pacific Centre of Education for International Understanding	2.50
9	Mobilizing Youth (and other stakeholders) for integrating Safeguarding Cultural Heritage in formal and non-formal education	Department of Culture, Archaeology, Sports, Tourism&Youth affairs, KP,	0.6
10	Heritage consciousness for sustainable Development through World Heritage sites and interpretation centres: Project in South Asia	Federal Directorate of Archaeology and Museums, NGO's and Academia	0.15

Source: UNESCO "UNESCO Pakistan Country Strategic Document 2018-2022" 2019

5.2.6 Office of the United Nations High Commissioner for Refugees (UNHCR)

UNHCR has been supporting education for Afghan refugee children over 35 years in KP, Balochistan, and Punjab. UNHCR provides education to over 72,246 refugee children through 175 schools[209] in Pakistan. While voluntary repatriation of Afghan refugees are increases, a significant number of Afghan children will continue to remain in Pakistan.

UNHCR's three Strategic Objectives of Refugee Education 2030 are:

- Promote equitable and sustainable inclusion in national education systems for refugees, asylum seekers, returnees, stateless and internally displaced persons;

- Foster safe, enabling environments that support learning for all students, regardless of legal status, gender or disability;

- Enable learners to use their education toward sustainable futures[210].

In Pakistan, UNHCR supports refugee education under below strategic approaches.

- Mainstream Afghan children at scale into nearby state-run schools by engaging closely with

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[209] UNHCR "Refugee Education Strategy 2016-2018 Pakistan"
[210] UNHCR "Refugee Education2030-A Strategy for Refugee Inclusion" September 2019

provincial education departments and development partners.

- Support access to secondary and tertiary education whether in Pakistan or Afghanistan by improving the quality of primary education.

- Implement innovative education solutions such as use of distance learning, ICT, etc.

- Pursue youth employment by aligning with and amplifying access to existing programmes of ILO, UNESCO and UNICEF which targeting Pakistan youth with vulnerabilities.

5.2.7 International Labour Organization (ILO)

The ILO Country Office for Pakistan was set up in 1970. The ILO's major support in Pakistan are:

- Promotion of International Labour Standards;

- Prevention and elimination of child and bonded labour

- job creation through employable skills;

- Mainstreaming gender equality;

- Strengthened labour market governance;

- Employment and livelihoods recovery in response to conflicts and crises;

- Expansion of social security schemes and social safety nets.

ILO contributed in TVET sector through conducting workshops, researches, and projects. "Decent Work Country Programme (DWCP) has commenced from 2006. Following Phase 1 (2006-2009) and Phase 2 (2010-2015), Phase 3 (2016-2020) is currently underway. The programme is conducted by ILO, Ministry of Overseas Pakistanis and Human Resource Development, Employers Federation of Pakistan and Pakistan Workers Confederation. Promoting job creation for youth and vulnerable groups is one of the priorities, and the following three outcomes are set.

- Employment opportunities for vulnerable categories of workers (e.g. Youth, Disadvantaged women and men and persons with disabilities) created.

- Gender responsive skills, employment and enterprise development programmes developed in conventional and emerging sectors for youth and vulnerable categories of workers.

- Employability of youth and vulnerable categories of workers improved.

"Empowering Vulnerable Groups through Employment, Education & Training" was implemented from September 2010 to 2013 to ensure full and productive employment and decent work for all. The project has three main components, i.e.

- Mainstream entrepreneurship and Business Start-up Education Programme (introduce ILO's training material "Know about business") for Pakistani Youth in Secondary schools and training institutes;

- Strengthen management and operational capacity of Technical Education and Vocational Training Agencies through needs assessments and capacity building programme;

- Eliminate forced and bonded labour by focusing on enforcement of laws, strengthening the capacity of government functionaries and institutions, creation of awareness, promotion of education and literacy skills for the vulnerable children and adolescents, empowerment of

vulnerable populations and rehabilitation of bonded labourers.

5.2.8 World Food Programme (WFP)

WFP has been present in Pakistan since 1968. WFP focuses five areas to improve food security and nutrition in Pakistan: 1) Humanitarian response; 2) Nutrition; 3) Resilience; 4) Disaster preparedness; and 5) Social Protection. Women and girls are important target for WFP and it is enhanced that there is a strong correlation between girls' level of education and all forms of undernutrition. In align with Pakistan's national development plan, Vision 2025 and SDGs, WFP set five strategic outcomes as below.

- Strategic outcome 1: Affected populations in Pakistan have timely access to adequate food and nutrition during and in the aftermath of natural disasters and shocks.

- Strategic outcome 2: The social protection system at the federal and provincial levels provides the populations most in need, especially women, adolescent girls and children, with improved and sustained access to safe, nutritious and sufficient food by 2022.

- Strategic outcome 3: The entire population, especially children under 5, adolescent girls and women of reproductive age, has improved nutrition in line with national targets for 2025.

- Strategic outcome 4: Communities in disaster prone districts have more resilient food systems and development gains are better protected by disaster risk management systems at all levels by 2022.

- Strategic outcome 5: Federal and provincial systems have strengthened capabilities for providing food security and essential services by 2022[211].

In order to achieve these outcomes, there are key activities under each outcome. Below table shows activities related to education sector.

Table 5-13 WFP's key activities related to education sector

No.	Strategic outcome	Activity	Support by WFP
1	Strategic outcome 2	Activity 4: Provide technical assistance on school meals to provincial governments and implement school meals programmes as appropriate.	Related to the selection of appropriate meals, procurement and logistics modalities and food safety and quality management. WFP will implement school meal activities and provide cash transfers to girls in secondary schools in FATA.
2	Strategic outcome 4	Activity 7: Strengthen the government's and communities' capacity for disaster risk reduction	WFP will develop and share inclusive models for community-based disaster risk management including for schools.

Source: WFP "Pakistan country strategic plan (2018-2022)" February 2018

WFP launched school safety programme to help children and community better preparedness for disaster in Sindh province with the financial support by the Government of Norway. Students and School Management Committee members has been trained under the programme.

5.2.9 United States Agency for International Development (USAID)

In the regional context, USAID addresses social development issues in two neighbouring two countries, i.e., Pakistan and Afghanistan, sometime together. USAID website states; 'Afghanistan and Pakistan have both faced substantial security and governance challenges over the past decade. In countries that are critical to our national security, progress is fragile, but our continued efforts remain vital' expressing importance of assistances to the two. Education sector is considered to be one of priority areas for peace building. In Pakistan, the following interventions have been

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[211] WFP "Pakistan country strategic plan (2018-2022)" February 2018

implemented.

(1) Strategy to Empower Adolescent Girls in Pakistan

Announced in October 2015, USAID Pakistan is seeking opportunities to foster public-private partnerships and collaborate with other development partners to advance girls' education and empowerment. The programme will serve as a platform and catalyst for broader political and social commitment to strengthen adolescent girls' education and empowerment in Pakistan. Young women in Pakistan face barriers and lack of access to education opportunities from an early age due to poverty, cultural norms, and geographic isolation. Empowering girls and ensuring them access to quality education has long-term, transformational benefits for their own future, their families and communities, and for Pakistan's economic prosperity overall. The following activities are implemented.

Engage Civil Society and Communities

Provide small grants to support innovative activities to reduce barriers, improve equitable access to quality education, and build local capacity to improve adolescent girls' education and empowerment.

Build Skills for School and Beyond

Support training, scholarships, and internships for talented but financially disadvantaged adolescent girls that create paths to higher education, entrepreneurship, and employment.

Improve the Teaching and Learning Environment

Improve reading instruction and materials, supportive policies, and community mobilization to create a culture of reading. Under the Sindh Basic Education Programme (SBEP), Sindh Reading Programme was implemented, and it upgraded ten public libraries to improve access to reading materials for adolescent girls. This programme focuses on out-of-school youth, including girls, and intends to enroll 30,000 out-of-school youth in its non-formal education centres to ultimately re-enter the formal education system after completion of their courses. Sindh Community Mobilization Programme was also one branch programme under the SBEP which aimed to sustain community mobilization and school based management in Sindh province.

Bridge the Schooling Gap in Conflict and Disaster-Affected Areas

Build and rehabilitate schools, including schools in conflict and disaster-affected areas, and provide access to basic education for adolescent girls in internally displaced or conflict-affected communities.

(2) Sindh Basic Education Programme

Sindh Basic Education Programme (SBEP) is USAID-funded project which is being implemented by Government of Sindh's School Education Department. The programme is worth $ 165 million USD out of which $10 million USD will be contributed by Government of Sindh. The overall mission is to increase and sustain enrolment of young students in primary, middle and secondary schools in targeted districts in Sindh by developing a school environment favorable to teaching and learning. USAID is bridging the gender gap in education by building schools and providing access to basic education for adolescent girls in Sindh. In total, USAID will construct 106 child-friendly schools in Sindh including 18 girls' schools. As of June 2019, 65 schools stand completed. The programme also supports to Government of Sindh Reform Policy to merge, consolidate upgrade schools through construction.   SBEP's 7 major components are follows.[212]

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[212] USAID Sindh Basic Education Programme, Retrieved from http://sbep.gos.pk/what-we-do

- Construction of schools affected by 2010 floods

- Merge, consolidate & upgrade government schools by improving Govt. of Sindh policy

- Improve early grade reading in primary schools

- Community mobilization and improve nutritional status of children

- Assistance to Education Department

- Engineering, construction design and supervision

- Monitoring & Evaluation

In collaboration with JICA and UNICEF, USAID contributed to develop curriculum and textbooks of Alternative Learning Pathway.

(3) Youth Workforce Development Programme

Recognizing the importance of promoting peace and resilience among Karachi's residents, particularly the youth, USAID has partnered with Aman Institute for Vocational Training and the United Nations Development Programme (UNDP) to implement the Youth Workforce Development Programme. This programme aims to provide workforce development training to nearly 17,000 youth, including adolescent girls, from marginalized areas of Karachi. By engaging youth in productive economic activities, this programme will create employment opportunities for adolescent girls in the garment and home textiles industry in Sindh.

BOX-3 USAID-funded Pakistan Reading Project

Pakistan Reading Project is implemented in the framework of the Improving Education Quality Programme initiated in 2012 on a budget of USD 300 million. The project has been carried out in 68 districts throughout Pakistan by means of contracting with service providers such as International Rescue Committee. At the time of survey, it was at the final stage and the final evaluation was planned to be carried out in August 2020.

The pedagogical approach adopted in the project was early grade reading assessment and introduction of phonics in reading education, as USAID promotes on a global scale. The major activities carried out in the project included:
- Development and provision of student materials and teachers guides,
- Teacher continuous professional development (CPD),
- Pre-service teacher training,
- Improvement of education policies and systems, and
- Community-based support for reading such as Mobile Bus Library, etc.

The total beneficiaries reached 2 million children of G1 and G2. According to the result of an assessment with 3,300 participants, the proportion of students having achieved the benchmark increased from 17% to 26%. On the basis of the promising project outcome, they contributed also to the improvement of curriculum, scheme of study, and textbooks. What was introduced in the new textbooks was not limited to the reading methodology; learning contents to promote the value of tolerance, peace, health, and hygiene among children were also included. In cooperation with 7 universities in Punjab, 5 pre-service teacher training courses related to reading instruction was developed for 2-year Associate Degree of Education programme and 4-year Bachelor of Education (Honors) programme. They are implemented in about a hundred teacher training institutions. Not only the change of teachers' teaching practices, they also promoted creating a classroom library, increasing reading opportunities by means of Mobile Bus (moving library by vehicle), establishing good relationship with parents through Parent-

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Teacher Association (PTA), and others.

According to the USAID personnel interviewed during the present survey, new child-centered, activity-based and enjoyable teaching method and use of supplementary materials such as leveled readers sometimes met teachers' resistance especially at the beginning of the project. However, by showing the results, educational administrators and teachers have come to understand the effectiveness of the project's approach and adopted it in the official education system. The USAID personnel expressed their appreciation for expansion of similar approach, such as early grade intervention, community involvement and teachers CPD, that JICA might adopt in future in the area that the Pakistan Reading Project has not been able to cover.

5.2.10 Department for International Development (DFID)

In response to the question 'Why DFID is investing in Pakistan', DFID Website answers that 'Helping to ensure a prosperous and stable Pakistan is critical for the future of millions of poor Pakistanis, and the stability and security of both the region and the UK. There is major inequality based on geography, gender, ethnicity, disability and faith and a significant modern slavery problem amongst the poor, minorities, women and children. Pakistan carries a high risk of natural disasters; it has the second highest number of refugees in the world and continues to suffer from extremism and militancy. Consolidating the growing democracy and capacity of government institutions remains essential.'

DFID implemented Transforming Education in Pakistan (TEP) programme in Pakistan from August 2011 to November 2018. The programme aimed to mobilize demand and galvanize political will for better education outcomes and conducted strategic political communication campaign called Alif Ailaan[213]. It also conducted political advocacy campaign in collaboration with civil society and multi-media to generate to generate demand for Education for All.

Assistances in education sectors are as follows:

(1) Punjab Education Support Programme II (Feb. 2013-Mar. 2020)

To improve access, retention and the quality of education for all children in primary and secondary schools of Punjab Province in Pakistan. All government school children (6 million primary, 4 million secondary) and children attending school through the Punjab Education Foundation (around 2.2 million) will have benefited from UK support in Punjab by March 2019. The programme combines a mix of delivery mechanisms including sector budget support (SBS), financial aid, and technical assistance (TA) to the Government of Punjab. The programme is comprised of the following nine components:

- SBS to the School Education Department (SED), to improve access to and quality of education in government schools. SBS disbursements are made annually against an agreed Results and Activities Framework (RAF).

- Financial aid to the Punjab Education Foundation to increase fee-free access to and the quality of Punjab's low fee private school sector.

- Earmarked budget support to the Special Education Department (SpED) to ensure that more children with disabilities are in a range of schools, staying longer and learning more.

- Technical assistance (TA) to the SED, the SpED and PEF to underpin the delivery of the three components mentioned above.

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[213] "Education Declaration" in Urduu.

- TA to SED to support the Chief Minister's Education Reform Roadmap.

- Support to the Punjab Education Endowment Fund (PEEF) to provide scholarships to high performing secondary school students for tertiary education.

- Scholarships for high performing male and female students from poor households to study at Lahore University of Management Sciences (LUMS).

- Support for school construction and rehabilitation, providing additional classrooms and missing facilities in existing government schools.

- A performance evaluation of the programme to provide DFID with information to make course correction decisions where possible and to inform future programme design.

(2) Khyber Pakhtunkhwa Education Sector Programme (Sep. 2011-Jul. 2020)

To improve primary and secondary education in KP by providing up to £283.2million in technical assistance, financial aid and infrastructure which aims to benefit all primary and lower secondary children in the province by 2020.This programme targets primary enrolment specifically girl child enrolment and female literacy which contributes towards Sustainable Development Goals 4 and 5. The programme is directly supporting 257,808 children to gain quality education.

(3) Punjab Economic Opportunities Programme (PEOP)

To improve income earning opportunities for 145,000 poor and vulnerable people (40% will be women) in selected districts of Punjab by equipping them with market oriented vocational skills by June, 2016. This contributes towards MDG 1 and 3 which aim to eradicate poverty and hunger and promote gender equality and empowerment of women. Under the programme, Punjab Skills Development Fund was established. Sources of the fund are mainly Punjab Government and DFID.

(4) Punjab Skills Development Programme (Jan. 2015-Jun. 2022)

To deliver skill-based trainings to around 330,000 poor and vulnerable people in the Punjab district (of which 40% are women) with an aim to provide a pool of skilled workers for the private sector firms, leading to enhanced incomes and employment prospects and encouraging private sector training providers to build up their training capacity.

5.2.11 German Society for International Cooperation (GIZ)

GIZ is the implementation partner of ongoing TVET Reform Support Programme co-funded by EU, Germany, Norway and Netherland.
Phase I of the Programme commenced in 2011. It is basically implementation of National Skills Strategy, 2009, which ended in 2016. During the period, organizational restructuring placing NAVTTC in federal and TEVTA in Provincial as core bodies was executed. National Vocational Qualification Framework and Competency Based Training and Assessment are also developed and introduced. Major achievement under the Programme is summarized in the table below.

Table 5-14 Major achievement under TVET Reform Support Programme (2011 – 2015)

Area	Major Achievement
Provincial Management	Punjab, Sindh and AJK TEVTA certified for International Organization for Standardization (ISO)
National TVET Policy	Skills for Growth & Development – A Technical and Vocational Education and Training (TVET) Policy for Pakistan prepared by MoFEPT in 2015
National Skills Strategy	Implementation initiated
HRD Policy	Human Resource Development in TVET of Pakistan, Policy Paper prepared 8,500 teachers/instructors trained in pedagogy

	18 e-learning centre established
	Pre-service training newly launched
	125,000 benefitted in 36 short-term vocational training projects through Fund for Innovative Training
	1,800 benefitted in Peshawar and Swat Learning Regions
Accreditation	Accreditation Council notified
	1,127 programmes accredited
National Vocational Qualification Framework	NVQF launched
	60 trades piloted institutes with 20,000 completers
Cooperative Vocational Training (CVT)	160 teachers/instructors trained in pedagogy
	10 institutes in total in Lahore and Karachi and 143 national and multinational companies engaged in CVT
	886 trained in 10 CVT courses
TVET management	Punjab, Sindh and AJK TEVTAs awarded ISO
	880 staff of TEVTAs trained in management
	Industry-led Institute Management Committees established
Vocational Counselling & Job Placement	102 VC&JP centres established
	257 VC&JP officers trained
	31 VC&JP officers certified by German Chamber of Commerce and Industry
National Skills Information System	NSIS established
	TVET institutes, employers and skilled workers entered into National Skills Information System (NSIS)

Source: Technical & Vocational Education & Training (TVET) Reform in Pakistan 2011 - 2016

Phase II of the Programme started right after the completion of Phase I and ongoing currently for the duration of five years. It is expected to complete in the end of 2021.

Private sector engagement by establishment of Sector Skills Councils is one of major activities in this Phase. And further implementation of NVQF, Competency Based Training and Assessment (CBT&A) are also ongoing.

Almost all the initiatives related to structural arrangement and introduction of streamlined delivery arrangement of TVET courses with standardized curricula and assessment are in line with the Reform Programme driven by NAVTTC assisted by GIZ. Below table shows current status of TVET Reform Support Programme Phase 2.

Table 5-15 Current Status of TVET Reform Support Programme Phase 2

Area	Plan	Update
Policy Implementation	Implementation of TVET Policy	Skills for All Strategy was announced in 2018
Sector Skills Councils	4 SSC established	Energy, Hospitality, Construction and Textile SSC[214] established
Institute Management Committees	IMC established in 550 TVET Institutes	Ongoing
Training	40 Chief Master Trainers 110 Master Trainers 4,000 TVET teachers 1,800 Assessors 600 Principals of public and private TVET institutes 18,600 men and women through CBT&A 18,000 men and women through a fund in Sindh & Balochistan	Ongoing
Competency Based Training & Assessment (CBT&A)	70 new CBT&A development and implementation	Ongoing

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[214] NAVTTC announced the establishment of Textile SSC on 15th March 2019. The members who play core role of providing skill demands consists of main industry association (the Pakistan Readymade Garments Manufacturers and Exporters Association, All Pakistan Textile Mills Association, All Pakistan Textile Processing Mills Association and Pakistan Hosiery Manufacturers & Exporters Association). https://tvetreform.org.pk/navttc-established-textile-sector-skills-council/

Recognition of Prior Learning (RPL)	18,000 skilled persons certified through RPL	Ongoing
Centre of Excellence (CoE)	5 CoE, 4 Provinces and ICT, established	To be finalized

Source: TVET Sector Support Programme 2016 - 2021

According to interview session to GIZ, the Programme is making its efforts to achieve the plan by the end of 2021. However, RPL component may not be achieved fully. 14,000 to 16,000 RPL certification is estimated as of March 2020.

5.2.12 Norwegian Agency for Development Cooperation (NORAD)

After the year 2000, in addition to emergency assistance, Norwegian development aid was directed especially to good governance, gender equality and conflict resolution. Since 2015, Norway has supported the work of UNDP in Khyber Pakhtunkhwa Province (formerly North-West Frontier Province). This work aims to prevent youth from joining radical groups.

Pakistan scores poorly on the UN Gender Inequality Index, which measures inequality between the sexes. Since 2012, Norway has supported UN Women, which works to strengthen the economic position of women in Pakistan. UN Women has attempted to improve conditions for women who work from home. These may be women who sew clothes, weave, manufacture simple goods, or work for example as accountants. The women constitute a large share of the informal sector and may lack the rights available to other workers. The UN organization's work has provided support to occupational training or other assistance to many thousands of women, and also includes support to strengthening legal protection at provincial level.

In ongoing TVET reform, Norway is one of main donors since the begging of Phase 1 in 2011. Indirect source in interview sessions suggested, however, that Norway may withdraw from the partnership in TVET reform after completion of Phase 2 in the end of 2021. If firm information is required, it is necessary to confirm with appropriate Norwegian authority.

5.2.13 Canadian International Development Agency (CIDA)

In 2013, Canadian International Development Agency (CIDA) went through restructuring. Currently, Canada's international and humanitarian assistance is one of mandates of Global Affairs Canada. CIDA, as of then, assisted implementations of the following projects.

(1) Rebuilding Sustainable Communities - School Reconstruction (September 2007- October 2015)

The goal of the project was to support reconstruction efforts in the education sector to help rebuild communities affected by the October 2005 earthquake, specifically in the Azad Jammu and Kashmir region of Northern Pakistan. Rebuilding the education sector is the Government of Pakistan's second-highest priority, after housing, in its reconstruction efforts in the earthquake-affected area. Project activities include constructing and equipping up to forty-two seismic-resistant primary and secondary schools, including one girls' college.

(2) Enhancing Employability and Leadership for Youth (March 2011 - June 2017)

This project aimed to increase the employment and self-employment of young women and men in the Gilgit-Baltistan and Chitral regions of Northern Pakistan. It also aimed to increase the involvement of youth leaders in those regions in state and civil society institutions, to promote the betterment of youth. The project consists of two main components, youth employability and youth leadership. The youth employability component prepares youth for the labour market through improved employment skills training and services. At the same time, it prepares the

labour market for youth through reforms that increase employment and self-employment opportunities for youth, such as incentives for developing youth-centred enterprises.

(3) Promoting Employment for Women (May 2010-April 2016)

This project aimed to improve income-earning opportunities and employment conditions for women and men in Pakistan by supporting skills for employment, improved access to business start-up funds, responsible business practices, and the development of institutional arrangements that are conducive to strengthening women's role in the national economy. The project works to strengthen government mechanisms for promoting equal employment opportunities for women and men. Working with Pakistan's Ministry of Labour at the national, provincial, and district levels, the project supports the Ministry's efforts to ensure that legislation, policies, and programmes promote gender equality in employment opportunities in Pakistan. At the same time, the project works with the media and private sector to raise awareness about gender equality in the workplace, promote human resource policies that address the needs of working women, and link the private sector to career development centres.

(4) Strengthening Teachers' Education (September 2008-February 2016)

The objective of the project was to create more professionally qualified, competent and capable teachers in order to improve the quality of teaching in public primary schools in selected districts of Sindh, Balochistan, and Gilgit-Baltistan. The project aimed to achieve improved knowledge and policies on teacher education and management; improved quality of training and support to teachers; and improved community and parental engagement in ensuring quality primary education. The project strengthens training and professional development for public primary school teachers, teacher educators, and education managers. Activities include supporting a peer mentoring programme for teachers, supporting new and existing professional teachers' associations to promote professional development, building the capacity of teachers' colleges to effectively deliver their programmes, and building the capacity of district education managers to manage public education.

(5) Play for Advancement of Quality Education (April 2015 – December 2017)

This project aimed to improve educational attainment and participation of girls and boys, aged 2-15 in eight countries with a child friendly approach to learning with play. Project activities include: (1) training of teachers, coaches, district level education officials and parent-teacher associations in the use of child friendly learning approaches; (2) mobilizing child-led and youth-led clubs and sport leagues to undertake community development initiatives to address barriers to education; and (3) providing technical assistance and mentorship to civil society partners and governments on policies and practices that promote child friendly learning, and (4) public engagement activities organized in Canada. Through this initiative, teachers and community coaches are providing children with better quality education.

(6) Preventing Child, Early and Forced Marriage through Open, Distance, and Technology-based Education (October 2015 – March 2019)

This project built on Canada's advocacy and awareness-raising efforts to prevent child, early and forced marriage (CEFM) and support already married girls in the selected Commonwealth countries. Commonwealth of Learning (COL) proposes to scale up its work to increase access to secondary education and skills training for girls/women in resource-poor contexts through open, distance and technology-based learning (ODL), which helps create enabling conditions for their sustainable livelihoods. The project focuses its work in up to four Commonwealth countries (Bangladesh, Mozambique, Tanzania and Pakistan) which were selected based on the high percentage of women who were first married before the age of 18. Working with existing partners,

COL identifies priority communities with a high prevalence of CEFM and the skills needed to equip girls/women with education and skills training to enhance their livelihoods. Training is provided to partner institutions/organizations to strengthen systems, identify appropriate technologies, build staff capacity, and provide quality content such as Open Education Resources to support the development of appropriate education and training courses. Simultaneously, the process of sensitizing the community and recruiting girls/women to be educated or trained is completed. Girls/women enroll in two streams: a medium-term secondary schooling, and short-term skills training.

5.2.14 Australian Agency for International Development (AusAID)

According to Aid Investment Plan, Pakistan, 2015/16 to 2018/19, Australia's aid programme aims to contribute to sustainable, inclusive economic growth and poverty reduction in Pakistan, through two strategic objectives:
1. Generating sustainable growth and employment through increased trade and investment, and improvements to agricultural productivity, water resources management and industry; and
2. Investing in Pakistan's people through health and education.
For both objectives, women and girls are particularly focused.
In education sector under objective 2, AusAID focuses on supporting the government's capacity to deliver quality education in KP Province. Australia, in partnership with the UK, is supporting KP to increase the number of girls and boys who enroll in and successfully complete primary and secondary education. Australia is an active participant in the KP Education Development Partners Group, which aims to ensure education donors are well coordinated with the government in KP. Australia chaired the group from 2013 to 2015.

Australia's support to Pakistan is underpinned by three important cross-cutting themes;

• Women's empowerment

• Stability

• Governance

AusAID recognizes that progress in these areas is critical to Pakistan's ability to realize its development and economic objectives. Gender equity is stressed as a core policy priority, which is centred on women's economic empowerment, women in leadership and elimination of violence against women. One area of women's empowerment is economic empowerment. AusAID commits to invest in education and health to provide girls with the foundational skills for productive lives.

As to stability, it states that Pakistan's stability is critical to both economic growth and human development, and regional security. Instability undermines economic growth, discourages private sector investment and results in high unemployment rates, particularly among youth. With this priority for stability, AusAID focuses more on Pakistan's insecure border areas – KP Province, the Federally Administered Tribal Areas (FATA) and Balochistan Province by promotion of human development, economic growth and prosperity in these regions. AusAID provides technical assistance to people living in border area of KP in cooperation with International Organization for Migration (IOM).

Governance, the 3rd theme of priorities, is focused since affects virtually all aspects of a country's prosperity. AusAID highlights that delivery and implementation of appropriate policies in education is essential for building a skilled, productive and healthy workforce.

At the implementation level, AusAID in partnership with the UK is supporting provincial education reform, with a focus on girl's education, through the KP Education Sector Programme (KESP). The programme contributed to the education for over four million children (two million girls) enrolled in schools in KP with gains in students' knowledge of course content and attendance rates. However, the school infrastructure component of the programme is behind schedule. The KP Government is implementing a partnership with KESP to expand access to education, especially for girls and marginalised groups, according to AID Programme Performance Report 2018-19.

6. Japan's Cooperation for Education and Training in Pakistan

6.1 Japan's country development cooperation policy for education and training in Pakistan

Japan's policy in Official Development Assistance (ODA) for Pakistan prepared in February 2018 aims at building stabilized and sustainable society through expansion of middle class.
Three areas are focused on with priorities in assistance intervention.

1) Improvement of economic infrastructure
Economic development by facilitation of foreign direct investment is highlighted area. For further development of automotive industry, human resources development through TVET is given priority in ODA.

2) Assurance of human security and improvement of social infrastructure
Equity in society is addressed with priority, especially gender equity. Equity in education together with better access and quality of education is also a priority area.

3) building peace and stability
Peace building in Pakistan is so important not only because it is the foundation for its development but also because it contributes to the regional stability and development. Situation of human security in border area with neighbouring Afghanistan could affect negatively social status in Pakistan and regional. Equity in education services in the area plays critical role in that sense.

Among the three priority areas, the second priority concerning the human security is particularly related to the educational development. In the Rolling Plan for the Islamic Republic of Pakistan annexed to the Country Development Cooperation Policy, the Development Issue 2-5 is determined to be "Improvement of quality and access of education." The strategy for addressing the issue says, "In line with Japan's policy in promoting women participation in society, promoting education for peace and growth, and the SDG 4, GOJ will support girls' education and non-formal education in order to improve the access to and quality of education."

6.2 Results, achievements and lessons learned of the cooperation for basic education

The projects presented in Table 6-1 have been implemented with the cooperation of Japan. The implemented technical cooperation projects include four projects for NFE. In 2004, the newly established Punjab Literacy and Non-Formal Basic Education Department was assisted from the very first stage of the organizational building. Assistance for the introduction of data-driven management using a management information system was given to enable it to carry out activities effectively based on data and information. Then, improvement of quality of NFE was supported through developing curricula, teaching-learning materials, and standards of teachers and facilities, as well as establishing equivalency to formal education. Since 2015, experiences in Punjab have been disseminated to Sindh, Balochistan and ICT. Meanwhile, regarding formal education subsector, a project for promoting student-centered and inquiry-based science education was carried out for 3 years from 2009 in cooperation with the federal government at ICT. Afterward, since it was just the timing of devolution after the 18th constitutional amendment, no technical cooperation projects for formal education has been carried out.

As far as grant and loan projects are concerned, to assist mainly girls' education in Balochistan, then North-West Frontier Province, and Sindh, construction of primary schools, middle schools,

and teacher training institutions were assisted.

Table 6-1 Assisted Projects in Basic Education

Scheme	Project Title	Project Area	Period
TA	Punjab Literacy Promotion Project	Punjab	2004-2007
TA	Punjab Literacy Promotion Project Phase-II	Punjab	2007-2011
TA	Project for Student-Centered and Inquiry-Based Science Education	ICT	2009-2012
TA	Non-Formal Education Promotion Project	Punjab	2011-2015
TA	Advancing Quality Alternative Learning Project	Federal area, Balochistan, Punjab, and Sindh	2015-2020
Grant	Project for Establishment of Teachers' Training College for Female and Provision of Educational Equipment for North-West Frontier Province in Islamic Republic of Pakistan	North-West Frontier Province (then)	G/A: 1994
Grant	Project for Improvement in Primary Education for North-west Frontier Province in Islamic Republic of Pakistan	North-West Frontier Province (then)	1994-1996
Grant	Project for Upgrading Primary Girls Schools into Elementary Schools in Southern Rural Sindh	Sindh	G/A: 2014
Grant	Project for Upgrading Primary Girls Schools into Elementary Schools in Northern Rural Sindh	Sindh	G/A: 2016
Loan	Balochistan Middle Level Education Project	Balochistan	L/A: 1997

Source: Constructed by the Survey Team

The results, achievements and lessons learned of each project are given for future use.

6.2.1　Technical Cooperation Projects

(1)　Punjab Literacy Promotion Project (PLPP)

Project Period
From July 2004 to July 2007

Project Area
DG Khan, Khanewal, Khushab, and Mandi-Bahauddin Districts, Punjab Province

Target Group
Out of school children from 5 to 14 years old and 15 to 35 years youth and adult illiterates in the four districts

Implementing Agency
Punjab Literacy and Non-Formal Basic Education Department

Objectives
[Overall Goal]
In the Model districts, 1) The unified framework for Project Management (Planning, Implementation and Monitoring) integrating each administration and community level (Village-Union-District-Province) is maintained, and 2) the literacy rate will become more than Provincial EFA target.

[Project Purpose]
Literacy activities in model districts are implemented based on the unified framework for Project Management (Planning, Implementation and Monitoring) integrating each administration and community level (Village-Union-District-Province) which is built in the project.

Results and achievements

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The project developed Literacy Management Information System (LitMIS) and presented how the information should be collected, compiled, utilized in planning, and maintained. Effective process to open and maintain non-formal basic education (NFBE) schools and adult literacy centres (ALCs) was also developed.

Lessons Learned

- The aspects making LitMIS useful include 1) database based on the whole household survey, 2) database covering the whole population of the household, and 3) data converted to the visible marks spotted on geographical man.

- Availability of qualified teachers in the local areas is critical to ensure the quality of literacy class. Inductive training (15 days for NFBE school and 3 days for literacy) should be lengthened.

- NFBE programme longer than solely one cycle should be developed and provided. Coordination between formal and non-formal schools is needed.

- Linkage of life skill and income generation (livelihood), and literacy may attract adult learners.

- Coordination and consistency between Pakistani-funded project and JICA-supported project is needed.

(2) Punjab Literacy Promotion Project (PLPP) Phase-II

Project Period
From August 2007 to February 2011

Project Area
Lahore City, Districts of DG Khan, Khanewal, Khushab, and Mandi-Bahauddin, Punjab Province

Target Group
Provincial and district literacy staff and other related organizations in Punjab province (direct)
Out-of-school children aged years 5-14 old and 15 to 35 years old youth and adult illiterates in pilot areas (indirect)

Implementing Agency
Punjab Literacy and Non-Formal Basic Education Department

Objectives
[Overall Goal]
Access to and coverage of NFBE schools and ALCs managed through Modified LitMIS (NFEMIS) is expanded from pilot areas to other districts of Punjab Province.

[Project Purpose]
Strategies to utilize Modified LitMIS for literacy/NFE activities in Punjab Province are developed. *Modified LitMIS (Literacy Management Information System) indicates Census Information System and School Management Information System that have been developed as by PLPP.

Results and achievements
Provincial administrative bodies developed its capacity on data-driven management of literacy and non-formal education activities as well as project implementation. Not only 4 target districts and 1 city, all the 32 districts in the province adopted NFEMIS and initiated data driven

management.

Lessons Learned

- Lack of standards about teachers, learning environment, learner's achievement is a crucial obstacle to the quality assurance of non-formal education.

- Non-formal education should develop curriculum meeting learners' needs and curriculum equivalent to formal education so that they can be mainstreamed to formal education or vocational training pathway.

(3) Project for Student-Centered and Inquiry-Based Science Education

Project Period
From May 2009 to April 2012

Project Area
Islamabad Capita Territory (ICT)

Target Group
National Institute of Science and Technical Education (NISTE) faculty of science education, teaching plan developers of ICT and provinces, master trainers and 4-8 class science teachers in ICT

Implementing Agency
National Institute of Science and Technical Education (NISTE)

Objectives
[Overall Goal]
Effective teacher training model that ensures teachers to deliver student-centered and inquiry-based (SCIB) science lessons is utilized by other provinces and areas than 5 pilot clusters in ICT according to their setup.

[Project Purpose]
Effective SCIB training model that ensures teachers to deliver SCIB science lessons is established.

Results and achievements
The Project contributed to the first step of SCIB science lesson implementation in Pakistan. Positive changes such as improvement of students' interest, willingness and positive attitudes in science lessons were observed in the pilot schools compared to before, which was a distinct paradigm shift to Pakistan science education. Furthermore, it is expected to consolidate the foundation to utilize teaching plans, training guidelines and master trainers to extend the effects and impacts of the Project throughout the country in a sustainable manner.

Lessons Learned

- Strong commitment of the counterparts (C/P) which is crucial factor for successful project implementation could be increased through capacity development of C/P staff members and simple and feasible technical transfer. It contributes to ensuring the project sustainability.

- Teachers seek training opportunities and are willing to participate in training even without allowance if its contents are in line with their demands. If they are involved in preparation and implementation process of lesson study, they show their stronger commitment because they feel themselves as autonomous organizer of the training.

- Teachers with rich classroom experiences should be included in the teaching material development.

- School principals should be involved through training so that they become strong supporters.

- PC-1 must be approved before launching the project if it is a nationwide project.

(4) Non-Formal Education Promotion Project

Project Period
From July 2011 to June 2014

Project Area
Punjab Province

Target Group
[Pilot projects]
Centres/Schools in 9 Districts: 209 in total in Khanewal, Multan, Okara, Nankana Sahab, Mandi Bahaudin, Sheikhupura, Mianwali, Bahwalnagar and Khushab Districts; In total of approximately 5,400 leaners
[Direct beneficiaries]
1) Literacy and Non-Formal Basic Education Department (LNFBED)
2) All the 6 ongoing and new projects at LNFBED
3) District officers
4) Teachers of NFBE schools and CLCs of pilot projects
[Indirect beneficiaries]
1) 6.2 million out-of-school children (5-14 years)
2) 37.7 million youth and adult illiterates (15+ years)

Implementing Agency
Punjab Literacy and Non-Formal Basic Education Department

Objectives
[Overall Goal]
Access and quality of non-formal education (NFE) are improved in Punjab.

[Project Purpose]
System for quality non-formal education delivery is strengthened in Punjab.

Results and achievements
The Project contributed to improving access and quality of NFE in Punjab. It developed standards, curricula, teaching-learning materials and assessment methods/tools which were effective to provide quality NFBE and adult literacy services. It also provided training for provincial and district officers and teachers to be able to utilize the project outputs effectively through a variety of NFBE and Adult Literacy projects that LNFBED carries out with a range of innovative delivery models (workplace, community, etc).

Lessons Learned

- Hands-on and participatory capacity development for the counterpart personnel is effective to stimulate motivation and foster sense of ownership.

- Networking and linkage with various stakeholders can make a potential to increase effectiveness and efficiency of projects.

- Policy dialogue facilitates conducive environment for project

(5) Advancing Quality Alternative Learning Project

Project Period
From September 2015 to March 2020

Project Area
Federal area, Balochistan, Punjab, and Sindh

Target Group
[Direct beneficiaries]
1) Federal Government and Provincial Governments (Punjab, Sindh and Balochistan) in charge of Non-Formal Education
2) District officers in Punjab, Sindh, Balochistan, and Federal area
4) Teachers of Non-formal basic education schools and Adult Literacy/community learning centres
[Indirect beneficiaries]
1) Learners of pilot Non-formal basic education schools and Adult Literacy/community learning centres
2) Non-Formal Education Providers (Private Sector, Development Partners and NGOs/CSOs)

Implementing Agency
Ministry of Federal Education and Professional Training; Literacy and Non-Formal Basic Education Department Punjab; School Education and Literacy Department Sindh; Social Welfare, Special Education, Literacy & NFBE, and Human Rights Department Balochistan

Objectives
[Overall Goal]
Access and quality of Non-formal education (NFE) improved through alternative learning paths in federal area, Balochistan, Punjab and Sindh (the Target Areas)

[Project Purpose]
Non-formal education system is strengthened in the Target Areas

Results and achievements
AQAL's outputs were generated through interaction among generation process of the three Outputs; including platform construction, data-driven management, and delivery of quality NFE. It created a sense of "common spaces" for wide range of stakeholders. The sense of ownership was fostered, and the Government invested considerably in NFE promotion. The project helped target provinces be equipped with need-based and accelerated learning programmes.

Lessons Learned

- Holistic approach makes the stakeholders unite and committed, contributing to acceleration and expansion of quality NFE provision.

- Long term commitment generates a greater achievement with accumulated knowledge and network.

- NFE has high potential as a first option equally to school.

6.2.2   Grant Aid Projects

(1) Project for Establishment of Teachers' Training College for Female and Provision of Educational Equipment for North-West Frontier Province in Islamic Republic of Pakistan

Project Period
Grant Agreement in 1994

Project Sites
Located behind the Government Degree College in the town of Abbottabad, Abbottabad District in North-West Frontier Province (then)

Executing Agency
Education Department, N.W.F.P., is responsible for the administration and execution of the project.

Objective of the Project
To improve the primary education in the North-West Frontier Province in the light of gender equity

Expected Outputs
1) Construction of one teachers' training college for female in Abbottabad comprising;
−   Administration block to accommodate one principal, 10 instructors and the other staff
−   Academic block with classrooms for 200 students, laboratory, library, multi-purpose hall, etc.
−   Hostel for 200 boarders with students' rooms, dispensary, warden's room and office, common room, dining hall, kitchen, etc.
2) Provision of educational equipment comprising;
−   Science laboratory equipment (biology, chemistry, physics)
−   Audio visual equipment, etc.
−   Sports gears
−   Educational equipment for the 30 model primary schools
−   One mobile teaching unit for both mobile classes and mobile in-service training

Lessons Learned
N/A since no document is available about results of the project.

(2) Project for Improvement in Primary Education for North-west Frontier Province in Islamic Republic of Pakistan

Project Period
From FY1994 to FY1996

Project Sites
30 sites in the North-West Frontier Province

Executing Agency
Education Department, N.W.F.P., is responsible for the administration and execution of the project.

Objective of the Project
To improve the primary education in the North-West Frontier Province in the light of gender equity

Results and achievements

30 model primary schools (co-education) were constructed as scheduled.

Lessons Learned
At the time of ex-post evaluation in April 2002, it was expected to take longer time to achieve the full use of the all model primary schools constructed in the project because the enrolment rates were 60% in urban area and 30% in rural area. However, awareness building in rural area and decrease of school fees would improve the enrolment rate, so that the number of students in the primary model schools would also increase.

(3) Project for Upgrading Primary Girls Schools into Elementary Schools in Southern Rural Sindh

Project Period
Grant Agreement of Notes in 2014

Project Sites
29 schools in Southern Provinces of Sindh

Responsible Organization
Education and Literacy Department, Government of Sindh

Objective of the Project
To reduce gender gap in rural area of southern rural Sindh by upgrading primary schools into elementary schools through the expansion of facilities and the installation of equipment for elemental schools, thereby contributing to improve the access to basic education for girls

(4) Project for Upgrading Primary Girls Schools into Elementary Schools in Northern Rural Sindh

Project Period
Grant Agreement of Notes in 2016

Project Sites
25 schools in Northern Provinces of Sindh

Responsible Organization
Education and Literacy Department, Government of Sindh

Objective of the Project
To reduce gender gap in rural area of Northern rural Sindh by upgrading primary schools into elementary schools through the expansion of facilities and the installation of equipment for elemental schools, thereby contributing to improve the access to basic education for girls

Expected Outcomes
[Quantitative Outcomes]

- The number of girl students studying in targeted 25 schools in 6 districts of Northern Sindh increases from 100 to 2,028.

- The number of deteriorated primary school classrooms available for the continual use increases from 0 to 17.

[Qualitative Outcomes]

- Improve the learning environment of girl students from primary schools by the reconstruction

of unsecure classrooms.

- Reduce the number of out of school girl students by providing necessary facilities and environment for learning through the installment of toilet rooms and outer walls.

6.2.3 Loan Projects

(1) Balochistan Middle Level Education Project

Project Period
Exchange of Notes in August 1996
Loan Agreement in March 1997
Final Disbursement in November 2011

Project Sites
Balochistan Province

Executing Agency
Government of Balochistan

Objective of the Project
To increase the number of children enrolled in lower secondary education in the target schools and widen the coverage of technical education by constructing middle schools and Technical Trade Centres and by training teachers, thereby contributing to equal educational opportunity for boys and girls in the Province of Balochistan.

Results and achievements

- Upgrading schools to middle schools including the construction of classrooms and furniture and the provision of equipment for (200 schools, 80 boys' and 120 girls' schools)

- Construction of Technical Trade Centres in middle schools and provision of equipment (10 schools, 6 boys' and 4 girls' schools), Training of 40 teachers

- Repair of buildings, furniture & equipment for schools related to (1) and (2) above (210 schools)

- Construction of Hostels for female teachers (1 hostels), furniture & equipment

Lessons Learned

- It is desirable to assess the executing agency's monitoring scheme at appraisal for a smoother PDCA cycle and, if necessary, add a component to the project's scope to enhance their monitoring capacity (such as implementation of a data base and operational support).

- For a project which develops infrastructure in multiple sites, in order to identify a sustainable project scope it is desirable to assess the current budget allocation and, if the current budget allocation is difficult to predict in the long run, it is desirable to examine a stepwise project implementation at the time of appraisal.

6.3 Results, achievements and lessons learned of the cooperation for TVET

For TVET sector, technical cooperation presented in Table 6-2 has been provided thus far. No

grant or loan projects have been carried out yet.

Table 6-2 Assisted Projects in TVET

Scheme	Project Title	Project Area	Period
TA	Project for Development of Centre of Excellence for Technical Education	Punjab	2008-2013
TA	Project for Automobile Industry Development Policy	ICT	2010-2011
TA	Capacity Development of Technical and Vocational Centres in Khyber Pakhtunkhwa	KP	2014-2016
TA	Project for Technical Support to Auto Parts Manufacturing Industry	Lahore, Karachi	2015-2019
TA	Project for Strengthening DAE in Mechanical Technology at Government College of Technology in Punjab Province	Punjab	2016-2020
TA	Project for Technical Assistance on Capacity Building in Construction Technology Training Institute	ICT	2015-2017
TA	Project for Skills Development and Market Diversification of Garment Industry of Pakistan	Lahore, Faisalabad	2016-2019

Source: Constructed by the Survey Team

The results, achievements and lessons learned of each project are given for future use.

6.3.1 Technical Cooperation Projects

(1) Project for Development of Centre of Excellence for Technical Education

Project Period
From December 2008 to November 2013 (5 years)

Target Group
Direct: GCT Railway Road Lahore, Punjab TEVTA
Indirect: NAVTEC, Industries, students

Implementing Agency
GCT Railway Road Lahore, Punjab TEVTA

Objectives
[Overall Goal]
Acquired knowledge of the project, which provide technical education to fulfil industrial needs, is shared with other courses in GCT

[Project Purpose]
Mechanical and architecture courses of GCT provide quality in technical education based on industrial needs as CoE

Results and achievements
The Project contributed to strengthen the management system of GCT RR in delivery of training courses reflecting skills demand from industry, management capacity of training cycle management, placement support system.

Lessons Learned

- Three years course was target so that project duration of three years was very appropriate and utilized in effective manner. In the three years, Project activities were implemented in

actual training cycle management so that C/P could learn training cycle management timely manner.

- Training needs assessment conducted in the very beginning of the Project was very helpful to plan details of the Project activities for total duration. Views from industry organization and graduates were useful as well.

- Curriculum revision was supposed to be done at the level of TEVTA but not at the level of an institute. Since it was not clarified in the designing stage, it took much time for adjustment and coordination with TEVTA. Such procedure should be clarified in the designing stage.

- In addition, when visited the institute in the field survey, it is observed that technology transfer by Japanese Experts were penetrating in utilization and maintenance of equipment. This kind of outputs in development of attitudes are unique feature of Japanese assistance. While administration system may change under the reform, significance of Japan's approaches in technical cooperation project is high in terms of development of essential attributes of individuals that are not to change.

(2) Project for Automobile Industry Development Policy

Project Period
From March 2010 to January 2011

Implementing Agency
Engineering Development Board, Ministry of Industries, Production and Special Initiatives

[Overall Goal]
Environment for manufacturing industry in Pakistan to develop further is arranged.

[Project Purpose]
Approaches and action plans for improvement of production and technology of auto industry in Pakistan to are developed and promoted for implementation

Results and achievements

- International competitiveness of auto industry in Pakistan is strengthened

- Modernization of human resources and production facilities in auto industry is promoted

- Engineering Development Board is strengthened and Auto Industry Development Programme is implemented

- Industry standard for auto safety and environment reservation and inspection and monitoring are developed

Contents of the Project
Assistance for development of Automobile Industry Policy

(3) Capacity Development of Technical and Vocational Centres in Khyber Pakhtunkhwa

Project Period
From 2014 to 2016

Contents of the Project

Electrician and mechanic training assistance

(4) Project for Technical Support to Auto Parts Manufacturing Industry

Project Period
From April 2015 to March 2019

Target Group
Auto parts suppliers, Small and Medium Enterprises Development Authority (SMEDA) staff, Pakistan Association of Automotive Parts & Accessories Manufacturers (AAPAM) engineers and local consultants

Implementing Agency
SMEDA

Objectives
[Overall Goal]
1. Quality and productivity improvement activities are spread to auto parts suppliers and small and medium enterprises in other sectors.
2. Competitiveness of auto parts suppliers is strengthened.

[Project Purpose]
Quality and productivity of auto parts produced by the target suppliers are improved through the development of support system for auto parts manufacturing industry.

Results and achievements
The Project formed framework of support system for auto parts supplier, model cases are created through support for auto parts suppliers, fundamental skills of the support system members, SMEDA, PAAPAM engineers and local consultants, are developed, transferred information on productivity and quality management and share with other suppliers are improved.

Lessons Learned

- Training on skills of auto parts manufacturing at local factories had limitations in condition of available equipment and quality of material from suppliers. Lack of skills of workers is not the largest difficulty.

- Productivity and quality management skills was reasonably transferred. Timely supply of ordered quantities of parts is required when working with Japanese manufactures.

- Multi-skilled worker is very resourceful for production management. After start working in factory, it may be good to develop skills in same production line usually other workers are in charge.

(5) Project for Strengthening DAE in Mechanical Technology at Government College of Technology in Punjab Province

Project Period
From February 2016 to February 2020

Target Group
Direct: Instructor, Mechanical Department, Government College of Technology, Railway Road (GTR RR), Lahore, Government College of Technology, Faisalabad
Indirect: Trainees, Mechanical Department, GCT RR, Lahore, industries

<u>Implementing Agency</u>
GCT RR, Lahore, GCT Faisalabad

<u>Objectives</u>
[Overall Goal]
Graduates from mechanical courses of GCT in Punjab Province acquire skills demanded in local industry

[Project Purpose]
Organizational structure for deliver quality training in DAE mechanical in eastern Punjab is strengthened

<u>Results and achievements</u>
The Project improved curriculum of mechanical course of GCT to meet industry skills demand, upgraded training facility and equipment of GCT to deliver revised curriculum, developed master trainers who are able to conduct ToT in target GCT

<u>Lessons Learned</u>

- Ongoing TVET reform modified curriculum development and accreditation procedure. It affected curriculum revision activity. Specially when reform is going on, relevant procedures need to be regularly confirmed.

- Two GCTs are targeted. One is in Lahore and another is in Faisalabad. It takes about one hour to travel from one to another by road. It caused some obstacles in communication as a whole project team. In such design of the Project sites, communication system is better discussed in designing stage.

- Mentality of instructors could be hindering factor in some cases. It was found that instructors in charge of DAE think theory is more important, but industry expect skilled workforce. Through interaction with industry, instructors start understanding what industry really wants that is skills but not too much theory.

(6) Project for Technical Assistance on Capacity Building in Construction Technology Training Institute (CTTI)

<u>Project Period</u>
From April 2014 to July 2017

<u>Target Group</u>
Construction Technology Training Institute, Ministry of Communication
Direct: Faculty & students of CTTI, Islamabad
Indirect: Local and multinational construction companies in particular

<u>Implementing Agency</u>
Construction Technology Training Institute, Ministry of Communication

<u>Objectives</u>
[Overall Goal]
Qualified technical human resource trained at CTTI is provided to major industries

[Project Purpose]

Quality technical education and placement support are provided at CTTI based on the latest industrial needs

Results and achievements
Revision of 5 short courses were completed under the Project, then instructors were trained in delivery of the 5 short courses under the Project, and placement support was strengthened to certain degree under the Project

Lessons Learned

- In revision of curriculum, most effective and constructive views came from CTTI graduates who are now industry for they face difficulties in their work place because of curriculum not meeting skills demand.

- Curriculum revision was not in instructors ToR so that they did not understand the design of the Project in which instructors were supposed to do the revision. It is necessary to identify personnel need to take time and make efforts in Project activities in designing stage and let them understand those.

- Candidates for master trainers to be trained under the Project had tight work schedule so that it was difficult to find time for technology transfer. Workload of such personnel should be discussed in the designing stage to avoid unnecessary overload.

- It could be considered that involvement of industry such as in-service training or seminar on skills for private sectors or internship to be accepted by private sectors CTTI in order to produce pass-outs to meet the skills demand in industry.

- In addition, on the day of the visit in field survey, they were expecting visitors from Europe to discuss possible cooperation. KOICA is also assisting IT training area. This institute was established by Japan's grant aid project. And somehow it may be attracting other development partners. One of the reasons may be infrastructure established by Japanese high standard architecture and construction technology

(7) Project for Skills Development and Market Diversification of Garment Industry of Pakistan, 2016 - 2020

Project Period
From January 2016 to December 2020

Target Group
Ministry of Textile Industry (MINTEX), Training Institutes (Pakistan Knitwear Training Institute (PKTI) / Pakistan Hosiery Manufacturers & Exporters Association (PHMA), Pakistan Readymade Garments Technical Training Institute (PRGTTI) / Pakistan Readymade Garments Manufacturers & Exporters Association (PRGMEA), Female Exclusive Training Institute (FETI) / Faisalabad Garment City Company (FGCC))

Implementing Agency
MINTEX, Training Institutes (PKTI/PHMA, PRGTTI/PRGMEA, FETI/FGCC)

Objectives
[Overall Goal]
Human resources are developed for market expansion of Pakistani garment industry

[Project Purpose]

Management capacity of target training institutes is developed to fulfil needs of garment industry

<u>Results and achievements</u>
Still ongoing

<u>Lessons Learned</u>

- It is not yet time for lessons leant because it is still in implementation. but when visited in the field survey, the difference from public TVET institutes that would conduct any kind of training was felt clearly. They have clear training objectives so that rationale is simple and clear. They told that funding and management capacity have issues. However, it is in a good environment for training implementation having goals clearly shared among stakeholders.

- They are managed by industry organization. Therefore, they are much closer to industry than public institutes. It makes it easier for them to facilitate employment. They are also in efficient position since they only deal with one industry sector but have no need to coordinate with variety of different industry.

7. Japan's Future Cooperation for Basic Education and TVET in Pakistan (Proposal)

7.1 Strategy and priority areas for Japan's cooperation for basic education and TVET in Pakistan

7.1.1 Basic Education

Because the National Education Policy Framework 2018 gives the top priority to the issue of OOSC, and the provincial policies and strategies are also in the same line, Japan's cooperation for the reduction of OOSC through multiple approach presents a powerful appeal for both Pakistani and international societies. Not only the alignment with the Pakistani policy but also the magnitude of the problem (i.e. existence of 22.8 million of OOSC to be educated) justifies Japan's intervention in this domain. Moreover, provision of education for those who have missed out educational opportunities can contribute directly to enhancing the human capital which is critically needed for the socio-economic development of Pakistan.

With regard to the proposed solutions to the factors of OOSC and dropout presented in Table 4-1 in Chapter 4, taking account of the policies, systems, current status, described from Chapter 1 to 3 as well as ongoing and past cooperation of Japan and other donors summarized in Chapter 5 and 6, Japan's action on each solution is proposed in Table 7-1.

Table 7-1 Proposed Solutions for OOSC and Dropout and Japan's Action

Proposed Solution	Japan's Action
Implementation of projects for industrial development incorporating a perspective of human development	It should be considered when a project for industrial development is designed because it is beyond the scope of assistance in the education sector and thus impossible to be discussed here.
Establishment of new schools, reopen of non-functional schools, upgradation to higher-level schools	Upgradation from primary schools to middle ones should be assisted as the immediate goal is to let children complete middle education.
Enhancement of NFE	Assistance should be continued to maintain and expand the outcome of Japan's past cooperation for NFE.
Merit-based recruitment including outsourcing to a third-party Biometric recognition, rigorous monitoring	While backing the measures already adopted by the Pakistani governments and assisted by other donors, Japan should not make new intervention.
Capacity enhancement mainly through cluster-based CPD (in-service training) and pre-service training	A technical cooperation project should be carried out to assist implementation of cluster-based CPD. Possibility of further technical assistance for pre-service training should be examined later.
Strengthening of pre-service training (especially female teachers in rural areas)	Establishment of new teacher training institutions in the areas without any should be assisted.
Revision of curriculum and textbooks	Analysis for future improvement should be done in the forthcoming project, and actual revision should be carried out in the subsequent one.
Development and introduction of supplementary learning materials and teaching aids based on the results of diagnostic evaluation	A technical cooperation project should be carried out to assist the prevention of school dropout based on Japan's experiences of international cooperation in mathematics and science education.
Introduction of rigorous monitoring system	While backing the measures already adopted by the Pakistani governments and assisted by other donors, Japan should not make new intervention.
Improvement of school according to plans through school-based management Improvement of school facilities through community participation	A technical cooperation project should be carried out to assist the prevention of school dropout and promotion of schooling based on Japan's experiences of international cooperation in school-based management.

Capacity enhancement of educational administration	Assistance should be given to the federal ministry based on Japan's experiences of cooperation for data-driven management of NFE in Pakistan. Capacity development of other counterpart agencies should be also assisted though implementation of respective projects.
Stipends, vouchers, conditional cash transfer	While backing the measures already adopted by the Pakistani governments and assisted by other donors, Japan should not make new intervention.
Promotion of inclusive education (Reasonable accommodation in terms of facilities and learning contents and methods)	Possibility for future cooperation should be examined.

Source: Constructed by Survey Team

Therefore, the following strategy is recommended for the cooperation in the domain of basic education:

Japan assists Pakistan by means of increasing the students' retention rate and reducing the number of out-of-school children through multiple approaches so that all the children, especially girls, can complete quality elementary education.

The multiple approaches suggested in the above-mentioned strategy include:

- Assistance in developing a viable plan with clearly demarcated responsibilities

- Support for the enrolled children in their completion of education up to elementary level

- Reduction of children not attending school because of lack of educational institution

- Provision of alternative educational opportunities for OOSC and illiterates

Possible JICA's next intervention can be technical and financial assistance aimed at the improvement of both access to and quality of education, so that it can contribute to increasing enrollment of out-of-school children, and improving drop-out rate, completion rate, and effective transit rate in primary and elementary education, which are all critical issues faced by basic education in Pakistan. The following explains each approach and outline of intervention.

(1) More viable planning

Although many policies and plans have been already developed in Pakistan, issues of their implementation too often come up[215], so that more viable planning is indispensable. In this regard, robust data-driven and evidence-based analysis and planning is required about current status and its reasons in terms of access to and quality of education. It is a legacy of JICA's long-lasting assistance for non-formal education subsector in which data-driven management by using NFE management information system (NFEMIS) has been promoted. AEPAM or another organization in charge of data management at the federal level could be the target of capacity development to improve the use of data and information for the sake of proper education planning. On the basis of such results of data analysis, advisory support for policy making and planning with clearly demarcated responsibilities at the federal level as well as provincial level would help the governments to achieve their objectives. In the discussions with MoFEPT during the present survey, assistance for data analysis and policy review based on it was specifically requested. Such intervention should be carried out through appointment of an education policy advisor to MoFEPT.

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[215] The issue of limited implementation of plans is pointed out in Pakistan Vision 2025; Draft National Education Policy 2017-2025; Summative Evaluation of GPE's Country-level Support to Education, Batch 2, Country 5: Pakistan (Balochistan and Sindh Provinces), Final Report (V5), etc.

The assistance for making a viable plan could be followed by technical and/or financial assistance for its implementation. Since the advisor should be appointed at the federal ministry, the target area of the implementation should also be the federal area (i.e. ICT). As described in the subsection "1.3.1 Islamabad Capital Territory", education in the capital area has considerable problems, while the objectives to be set in the plan would be relatively attainable, taking account of its small size of area, its indicators achieved thus far, etc.

Furthermore, as such assistance for developing policy and plans would be effective in other provinces, too, it is significant to study the possibility to appoint a policy advisor to another provincial education department after MoFEPT. The provinces are receiving or will receive assistance of GPE based on the developed sector education plan. However, as reported that the implementation of the education sector plans of Balochistan and Sindh for 2013-2017 was unsatisfactory[216], need for a more sophisticated plan could be envisaged.

(2) Prevention of dropout and support for completion up to middle education

Among Japan's actions proposed in Table 7-1, "Development and introduction of supplementary learning materials and teaching aids based on the results of diagnostic evaluation" and "Improvement of school according to plans through school-based management (including community participation)" will be put into practice by a technical cooperation project aiming to prevent school dropout and support completion up to middle education. To achieve the objectives, cluster-based CPD which is currently becoming the main methodology for capacity development of educational personnel in Pakistan will be adopted. However, as cluster-based CPD model is still new in Pakistan, technical assistance for implementation of CPD is also needed. As for the target area, one province should be selected, following Japan's experiences in cooperation for NFE where assistance was first given to Punjab Province alone and expanded later to other provinces after confirming the effectiveness of interventions. To select the target province, in consideration of the security status at the time of the present survey, ICT, Punjab and Sindh are the candidates since Japanese experts can directly provide technical assistance there. Among them, Sindh province should be selected in accordance with the objective because it faces the most serious problem of OOSC. In Sindh, as mentioned in the subsection "2.3.3 Teachers", School Education Sector Plan and Roadmap for Sindh (SESP&R) 2019-2024 estimates the expenses of PKR 2.84 billion (approx. JPY 2.04 billion) for promotion of cluster-based CPD for 5 years. In the discussions with School Education and Literacy Department during the present survey, it was requested that out of the 29 districts in the entire province, 1 or 2 should be selected and all the primary and middle schools there should be targeted to examine the effects of the model, so that the model should be expanded throughout the province once its effectiveness is verified. It is expected, in consideration of the existing data and information about student achievement, that the project should at first focus on the students' mastery of basic knowledge and skills according to the test results. With the maximum use of the past JICA's experiences in mathematics and science education, those subjects could be targeted, and the classroom practices should be improved. Most probably, supplementary learning materials will be used for the mastery of basics in mathematics, and improvement of lessons in science will be aimed by using teacher's guides elaborated in the Project for Student-Centered and Inquiry-Based Science Education.

As for "Improvement of school according to plans through school-based management (including community participation)", use of cluster-based CPD model is also recommended because SESP&R includes head teachers and administrators as target of CPD. As mentioned earlier, Sindh will review the system of SMC since problems including its inappropriate management and use

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[216] Universalia Management Group. (2018). *Summative Evaluation of GPE's Country-level Support to Education: Batch 2, Country 5: Pakistan (Balochistan and Sindh Provinces), Final Report (V5)*

of subsidiaries were revealed. If the forthcoming project can assist proper operation of SMC, it will align with the provincial plan.

More concretely, major training topics will include promotion of community participation based on the experiences of JICA's cooperation for NFE in Pakistan and other projects for school management in different countries. By mobilizing community people and raising their awareness on importance of education, the project will promote the enrollment of OOSC in school, prevent enrolled students from dropping out, help them complete primary education, and encourage them to enter to middle school. Those schools participating in the project are recommended to conduct activities to promote education with special emphasis on girls' schooling, such as home visit for out-of-school children and their families, awareness-raising campaign in the community, and other effective events and strategies. Furthermore, community people should be also involved in monitoring teachers' attendance, identifying problems on school management, and making an annual plan to solve the identified problems.

Sindh Province is one of the provinces targeted by the Accelerating Quality Alternative Learning (AQAL) Project implemented until March 2020, and its second phase explained below will also provide assistance for NFE there. The series of JICA's projects for NFE subsector have accumulated experiences very useful for reconstruction of SMC, such as village education plan to promote learning developed by Village Education Committee consisting of community members. Therefore, if two projects for formal education and NFE are implemented at the same time, synergy effect can be expected. Furthermore, in Sindh where JICA supported construction of girls' middle schools or upgradation of existing primary schools to middle schools, the forthcoming project may utilize that infrastructure as cluster resource centres for CPD.

Although the forthcoming project should first deal with immediate problems being faced by children in Pakistan, more long-term improvement of the quality of education need to be considered. For example, Sindh School Education and Literacy Department expressed their desire for Japanese assistance in improvement of mathematics and science curricula and textbooks.

(3) Reduction of OOSC

With regard to strengthening the infrastructure to guarantee educational opportunities, JICA has implemented grant aid projects in the northern and southern parts of Sindh, focused on the construction of new school buildings for girls' middle schools and the upgrading of existing girls' primary school to girls' middle school. Since those grant aid projects fit well to address the challenge faced by basic education in Pakistan, it is recommended for JICA to undertake a similar intervention in a coming few years. Though lack of school facilities is a common serious problem for all the provinces, further assistance for Sindh should be proposed because of the expected synergy effect as explained above. Indeed, the gross enrolment rate at the middle level in rural area of Sindh province is as low as 22%[217].

Sindh SESP&R 2019-2024 aims to increase 35,021 classrooms for middle education for 5 years (4,901 in 2019/20; 6,195 in 2020/21; 6,954 in 2021/22; 8,080 in 2022/23; and 8,891 in 2023/24). Meanwhile, the decided intervention is only upgradation of 5 primary schools to middle ones in each district within the provincial annual development project for 2019/20 and 2020/21 (3 classrooms per school x 29 districts x 2 years = 174 classrooms) and upgradation of 160 schools (from primary to secondary by adding classrooms for G6-10) of ADB's Sind Secondary Education Improvement Project. Therefore, the practical plan is far below the target[218].

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[217] Pakistan Social and Living Standards Measurement Survey (2014-15), Pakistan Bureau of Statistics, 2016
[218] According to the interview with the Directorate of Planning, Development and Research of the School Education and Literacy Department on March 10, 2020.

In addition, appointment of teachers is of course necessary if new classes or schools are opened. Especially, as discussed with relation to the cause of dropout, lack of female teachers is a hindering factor to girl's schooling. Meanwhile, in Sindh Province, there are presently 7 districts without any teacher training institutions though teacher education is generally carried out under the responsibility of district authorities. Therefore, assistance for construction of new teacher training institutions could be a good strategy to promote education, especially that for girls. Moreover, as mentioned in Table 7-1, improvement of pre-service training programme needs future assistance.

(4) Alternative opportunities

Certainly, as discussed earlier, prevention of dropout of already enrolled students is more effective than creating new opportunities for OOSC. However, it is also true that 22.8 million children between 5 to 16 years old are indeed out of school. While searching the possibility to send or send back them to formal schools, alternative learning programmes should be given for those who have less chance to receive formal education for one reason or others. Cooperation for the non-formal education subsector should continue even after the completion of on-going Advancing Quality Alternative Learning (AQAL) Project[219]. In the AQAL Project, accelerated learning programmes equivalent to formal primary education was developed and approved. There is a plan to expand the programme up to middle level in the next phase, which give further educational opportunities to those who completed the primary level.

In order to reach out the massive out-of-school population, Japan's funding alone cannot be sufficient. As already realized during the period of previous NFE projects, active cooperation with other development partners should be sought to implement accelerated learning programmes developed through AQAL in larger areas.

7.1.2 TVET

In consideration of Japan's assistance in the field of TVET, it is recognized that steady implementation of the TVET reform is a priority for Pakistan, which is currently underway with the support of various development partners. The latest policy document, National "Skills for All" Strategy, shows the direction of the reform. In Chapter 4 of this report, key issues, factors, and proposed solutions for the issues are indicated by using analysis framework which was based on 8 priority areas. In this chapter of this report, actions to be taken by Japanese ODA as shown in Table 7-2 are proposed based on policy, system, and current status of Pakistan's TVET sector described in Chapter 1 to 3, development partners' cooperation and Japan's cooperation in Chapter 5 and 6 respectively, and proposed solutions in Chapter 4.

Table 7-2 Proposed Solutions for Key Issues and Japanese ODA's Action for TVET Sector

Proposed Solutions	Japanese ODA's Action
Organizational restructuring of the entire TVET sector around NAVTTC as responsible body of the federal government	Organizational restructuring is underway under TVET Sector Support Programme (TSSP) with the support of GIZ and other donors. Support TSSP instead of new intervention.
Coordination of the relationship between federal and provincial governments according to the Constitution	Give advice to TVET regulatory organizations at provincial level on coordination with federal government, especially with NAVTTC
Proposition with due consideration of donor's cooperation policy and indicators to be achieved	Support project formulation of TVET sector to be supported by Japan and promote collaboration with other development partners

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[219] From February 9 to 25, 2020, the Consultative Mission for the Advancing Quality Alternative Learning Project was conducted. During the mission, the mission team and Pakistani partners agreed on the outline of the second phase of the project. The project summary proposed in the subsection 7.2.1 cites the agreement made in that mission.

Results-oriented management taking account of benefit to industry and directly related to employment	Based on the lessons and learnt from the relevant cases, develop model of the training programme which collaborate with industries from the pre-training stage on the premise of employment after the completion of training
Appropriate selection of beneficiaries to utilize social welfare funds	Present example of utilizing social welfare funds through promoting training for out of school youth and people with low education
Cost reduction through linkage with in-house training	Conduct survey on in-house training at industry and consider ways to collaborate with industry to formulate technical cooperation project
Optimization of existing facilities and schemes	Consider ways to expand chances of optimizing existing facilities such as mobile training institute and formulate technical cooperation
Establishment of new institutions	Defer a decision on opening of new facilities with the support of Japan considering the amount of funds that need to be invested
Development and implementation of TVET programmes for OOSC and people with low qualifications	Examine the possibility of implementing technical cooperation project in collaboration with Japan's cooperation in NFE sector
Awareness raising on gender equality	Include components which promote women's social advancement in technical cooperation project
Arrangement of transportation, preparation of gender-sensitive environment	Take due account of gender-sensitive when training for women is conducted with the support of Japanese ODA Examine the possibility of cooperation utilizing other schemes such as Grant Assistance for Grass-Roots Human Security Projects
Selection of courses for capacity enlargement according to the labour market trends	Consider cooperation by taking into account the result of analysis concluding that garment industry can absorb many workers
Transition to CBT curricula	Introduce CBT curricula when new training programmes are developed or existing training programmes are revised under the technical cooperation project
Coordination between existing DAE programmes and NVQF Level 5 programmes	Coordinate with NAVTTC (federal) and TEVTA (provincial) based on the experience of previous projects
Establishment of CoE	Utilizing outcomes of the previous project, establish GCT RR's leading position as an CoE and transfer know-how of GCT RR to other institutes
Enhancement of linkage with industry trough skills development of technical workers	Consider possibility of technical cooperation project based on the outcomes of previous projects
Construction of licensing system	Conduct situation analysis survey on institution-building Consider the possibility of support and collaboration in Automobile sector on the premise of applying international industrial standard
Strengthening of industry organizations	Promote the participation of industry organization associations in technical cooperation as counterparts to activate collaboration
Development of TVET programmes with due consideration for foreign labour market	Conduct survey to identify relationship with the system of specified skilled workers and Specified Skilled Worker Residency Status and ODA
Public information	Conduct PR activities to inform the outcomes of Japanese technical cooperation projects in collaboration with the Government of Pakistan
Improvement of economic and social status of TVET graduates	Conduct technical cooperation project to support employment of TVET graduates

Source: Constructed by Survey Team

Therefore, the following strategy is recommended for the cooperation in the domain of TVET:

Based on the ongoing TVET reform, Japan assists Pakistan so that good practices focused on women, employment and collaboration with industry and present valuable suggestions on direction for the reform by sharing experiences with stakeholders active in the sector.

Based on the above strategy, Japanese ODA's response shown in Table 7-2 can be summarized as; (1) Support improving TVET system, (2) Out-of-school youth and people with low educational attainment, (3) Support establishing CoE, (4) Collaborate with industry through in-service continuing training, and (5) Enhance employment placement support. Details each response is explained below.

(1) Support improving TVET system

As mentioned earlier, it is desirable to contribute to improve TVET system in line with the on-going TVET reform which embarked on institutional reorganization. Interventions to provincial level are more effective than federal level as advantage of Japan's ODA is practical cooperation in the field. Thus, it is proposed to dispatch an advisor to TVET regulatory authority at provincial level and contribute to improve TVET system from various angles. Specifically, it is suggested to dispatch an advisor to PSDA in Punjab where the greatest numbers of Japan's prior cooperation projects in TVET and literacy education have been conducted and is considered to be ahead of the other provinces in terms of scale and quality. Based on above support strategy, when it provides suggestions to entire reform by generating good practices and sharing them with stakeholders, it is effective and efficient to support Punjab where there already is a certain level of experience and infrastructure. As explained in Chapter 2, PSDA is newly established as a superior organization of existing TVET organizations in Punjab. It is significant that the advisor gives advice to new organization from various perspective.

In detail, advice below are expected based on the Japanese ODA's response shown in Table 7-2.

- Provide advice to TVET regulatory organizations at provincial level in coordination with federal government, especially with NAVTTC

- Support project formulation of TVET sector to be implemented by Japan

- Introduce good practices towards collaboration with upcoming new intervention by ADB in Punjab

- Coordinate with NAVTTC to evolve DAE curricula into CBT curricula in line with NVQF

- Gather information to consider measures to promote collaboration with industry and foster the exchange of opinions with stakeholders

- Conduct situation analysis of TVET sector in the province and consider approaches to expand opportunities of optimizing existing facilities

- Conduct situation analysis on proposed licensing system for TVET qualification

- Gather information to consider possible roles of Japan's ODA in the newly introduced Specified Skilled Worker for Japan

(2) Out-of-school youth and people with low education

As mentioned above, high percentage of OOSC is top priority issue to be tackled in education sector in Pakistan. Chances for them to acquire necessary skills to get jobs are also limited and it becomes a risk to hinder the social and economic development in Pakistan as underlined in national development policy "Pakistan Vision 2025". On the other hand, not many TVET stakeholders recognize them as potential candidates for technical/vocational training. It would be truly meaningful to promote vocational training for out-of-school youth and youth with low educational attainment with the support from Japan.

The target group will be youth under 16 years old who do not go to school and youth over 17

years old who missed educational opportunities and haven't acquired necessary skills to get jobs. As mentioned in survey result of basic education sector repeatedly, more girls are out-of-school and illiterate than boys. Furthermore, more females are disadvantaged comparing to male in terms of vocational training opportunities and employment opportunities. Boys/males are not excluded from the Project's target groups but it is suggested to focus on creating training opportunities for girls/females.

Short training courses for stitcher can be considered as training component. As stated earlier, textile export industry especially knitwear sub-sector has shown very high growth rate. Both export amount and growth rate by sector are the highest in Pakistan. Knitwear sub-sector is labour intensive as one individual sticher operates one stitching machine all through the working hours. It is rational to target stitchers as knitwear sector can absorb a large number of employers. In Pakistan, traditionally most of stitchers are male. However, for gender equity, training for female are more advocated recently.

There are two related JICA's projects; AQAL Project and the Project for Skills Development and Market Diversification of Garment Industry of Pakistan. Although the target areas of AQAL Project are three Provinces and ICT, three former projects targeted only Punjab Province. Also, one of the counterpart agencies of garment industry project is Industries, Commerce, Investment & Skills Development Department of Punjab Provincial Government. It is appropriate to select Punjab as a target area as collaboration with these projects or succeeding projects are effective. The Government of Punjab put textile industry as the highest priority sector to be promoted and expect to create more employment in its regional development policy paper "Punjab Growth Strategy 2018", and it fits to industry development policy of the province.

AQAL Project Phase 2 is planned (refer 7.2.1 Basic Education) and Accelerated Learning Programme (ALP) which is equivalent to lower secondary education will be developed. In addition to general education, skills training shall be included to ALP as well as adult literacy programmes. Thus, collaboration with AQAL Phase 2 is essential to consider this project implementation. Possible collaboration is that learners who completed NVQF level 1 with the completion of lower secondary education and literacy education under AQAL Phase 2 can proceed to short training course which is equivalent to NVQF level 2 under this project and find a job at knitwear factory.

(3) Support establishing CoE

JICA provided grant aid project and two phases of technical cooperation projects to GCT RR. Phase 1 focused on Mechanical Department and Architecture Department and phase 2 focused on Mechanical Department of GCT RR and GCT Faisalabad. Target group of the Project was instructors of DAE courses. Knowledge and experiences of these instructors of Mechanical Department can be utilized as an asset to disseminate its outcomes to other mechanical DAE courses in Punjab. These activities fit government's priority policy to establish CoE. ADB prepares to launch a new large-scale project in TVET sector in Punjab and 20 CoEs in 7 priority industries will be established. One of the 7 priority areas is manufacturing as mentioned in Chapter 5 and engineers who oversee factory operation and maintenance will be required. Having prior consultation with ADB, JICA's assets can be mobilized for human resource development under the ADB's project.

Based on the above, it is proposed to upgrade the above two GCTs as CoEs and strengthen other GCTs in Punjab.

Participants of DAE courses which requires completion of Grade 10 are elite group among those

who enter TVET courses. It is strategically meaningful to enhance education and training for TVET elite in order to add further value to industry and economic development.

(4) Collaboration with industry through in-house training

JICA conducted the Project for Technical Support to Auto Parts Manufacturing Industry which focused on in-service technicians. During the latter stage of the project, the Project provided trainings on skills in auto parts manufacturing, production management, and quality management to auto parts suppliers who supply parts to Japanese automobile companies. The trainings received favorable feedbacks. The Project cooperated with Small and Medium Enterprises Development Authority (SMEDA) under the Ministry of Industry and Pakistan Association of Automotive Parts & Manufacturers (PAAPAM) as coordinating agency to conduct trainings for technicians. Utilizing and strengthening this established cooperation with the industrial groups will enable efficient planning and implementation of the cooperation projects with manufacturers.

Based on the above, a technical cooperation project is proposed to provide training for in-service technicians in Karachi and Lahore.

Immediate effect on enhancing the value of industry can be expected by upgrading skills of engineers who already have rich experiences in the field. Strategic significance can be found to promote industrial development which changes import-dependent products to domestic production and domestic market industry to export market industry.

(5) Enhancing employment support

JICA conducted the Project for Technical Assistance on Capacity Building in Construction technology Training Institute from 2015 to 2017 in ICT. The project purpose was to provide quality technical education and placement support at CTTI based on the latest industrial needs. As described in Chapter 6, revision of 5 short courses were completed and instructors were trained in delivery of the 5 short courses under the project. However, input to strengthen placement support system were limited due to allocation plan of limited resources. In order to achieve the Project's overall goal "Qualified technical human resource trained at CTTI is provided to major industries", further strengthening of placement support is needed[220].

There are some situations where trainings provided not only by CTTI but also by other TVET institutes do not lead to amelioration of employment rate and sometimes employment status of graduates have not been updated. This survey showed that employment support of TVET institutes are not functioning well. If good practices of strengthening employment support by TVET institutes will be presented through the proposed project, it will provide suggestions on how to strengthen employment placement support in TVET sector in the context of the TVET reform. There could be several possible measures proposed by making the most of good experiences in Japan, such as systematic information management on updated employment status of pass-outs by establishment of accumulated database of them, or promotion of information sharing of job vacancies by strengthening network of pass-outs by organization and activation of alumni. For the activation of the pass-outs networks such as alumni, ICT applications provided by various social network system (SNS) will enhance effective communication easily today. Furthermore, institutes may approach employers where pass-outs of each institute have been recruited to obtain reliable information on job vacancies efficiently for the near future.

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[220] Interview with CTTI dated on March 3rd, 2020.

7.2 Proposed programmes and projects for basic education and TVET in Pakistan

7.2.1 Basic Education

According to the strategy given in the subsection 7.1.1, four projects will be proposed here. Before presenting the details of each project, the strategic coordination between different interventions is illustrated in the form of a diagram (Figure 7-1).
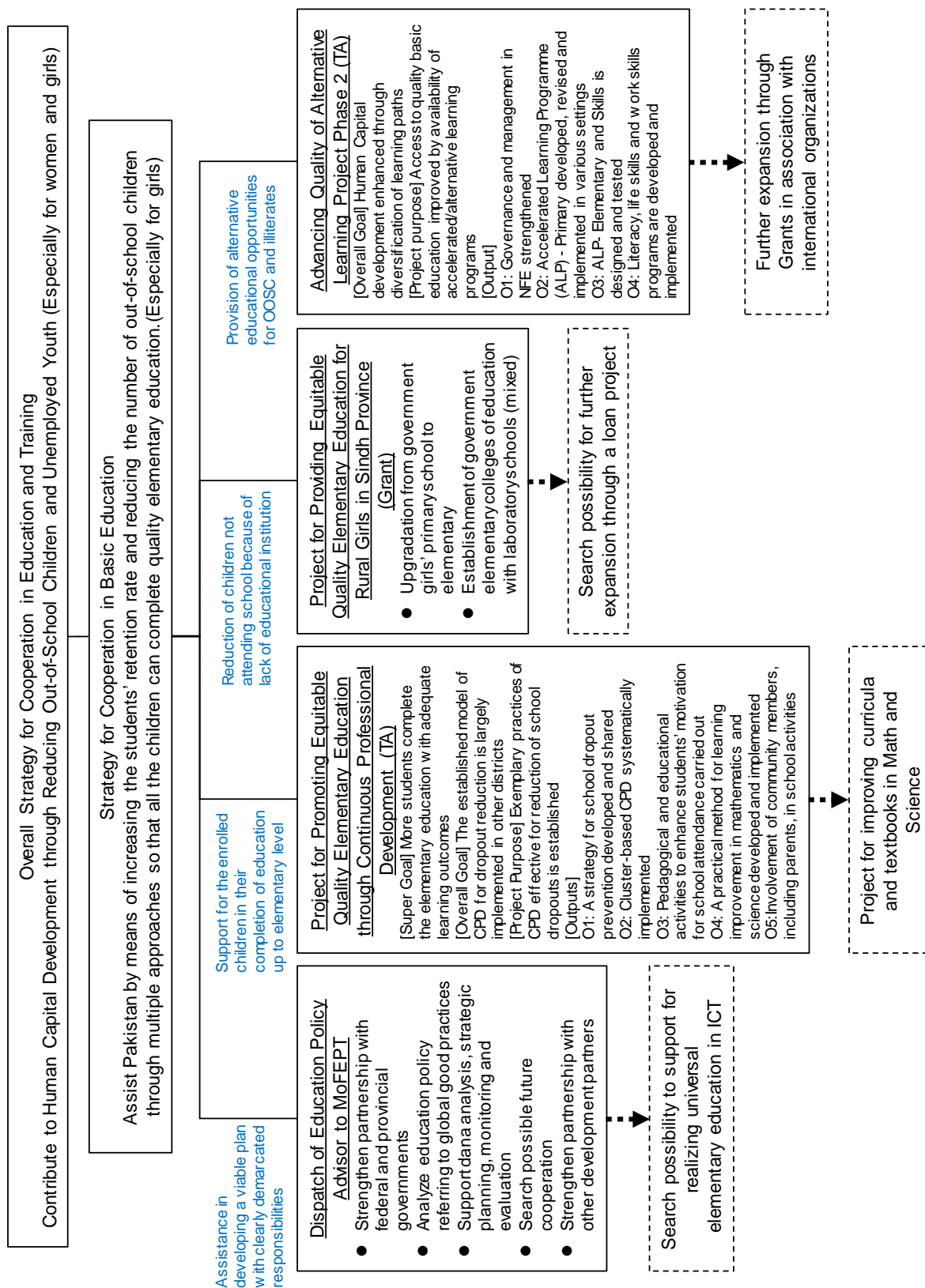
Source: Constructed by Survey Team

Figure 7-1 Strategic Coordination between Different Interventions

(1) Dispatch of Education Policy Advisor to the Ministry of Federal Education and Vocational Training

Issue

At the Federal Ministry level, an educational reform including organizational restructuring is progressing rapidly. In addition to such change, because of the devolution after the 18th constitutional amendment, holistic coordination in the country is not very visible. Insufficient level of concreteness and feasibility is observed in development and implementation of the policies. The targets in middle and long-term plan are often too ideal and high and no concrete roadmap to achieve them are provided. Consequently, despite inadequate implementation of the plan, no review comparing plan and result is carried out or even comparison itself does not make sense. Therefore, no one claims responsibility of the unsatisfactory implementation and similar policy and plans are developed repeatedly.

Title of the expert to be appointed:

Education Policy Advisor

Expected period of appointment

From January 2021 to December 2021 (first term)

From January 2022 to December 2023 (second term)   Total three (3) years

Partner organization to which the expert will be appointed

Ministry of Federal Education and Professional Training (MoFEPT), Government of Pakistan

Reporting line

Under the direct supervision of the Secretary, MoFEPT

Objective of the appointment

- To strengthen partnership between the Federal Government of Pakistan and the Government of Japan through which Japanese collaborative relationship with the federating units of Pakistan will be also enhanced

- To assist MoFEPT including its subordinate organizations to make policy analysis by reference to good practices from a global perspective

- To assist MoFEPT including its subordinate organizations to improve their capacity for data analysis, strategic planning, monitoring and evaluation

- To search possibilities for further cooperation programmes and/or projects between the Government of Pakistan and the federating units, and the Government of Japan

- To assist JICA to secure the close coordination with other developing partners in terms of their cooperation with Pakistan in the field of education and training

Terms of refences

- Organize meetings on a regular basis between MoFEPT and other Pakistani stakeholders, the Embassy of Japan, and JICA

- Participate as an observer in the Inter Provincial Education Ministers' Conference, as far as it can be allowed

- Submit technical working documents to the focal point assigned by Secretary

- Exchange information and ideas about educational development in Pakistan, in formal and

informal manners, with international, governmental and non-governmental stakeholders in consultation with and under the guidance of MoFEPT

- Conduct a policy analysis of the Federal and Provincial Governments together with MoFEPT's personnel and other national/international experts in terms of the flowing four national education priorities:

    – Decrease OOSC and increase school completion
    – Uniformity in education standards
    – Improve the quality of education
    – Enhance access to and relevance of skills training

- Give advice to MoFEPT for improvement of Pakistani Government's education policy making according to the results of policy analysis

- Conduct analysis of EMIS data in a statistical manner to exercise microplanning and monitoring to address the issue of OOSC

- Analyze, together with MoFEPT's personnel and other national/international experts, students' learning achievement to identify their strong and week points in view of improvement of curriculum, teaching practices and learning materials

- Give advice to MoFEPT in terms of utilization of information and communication technology for quality and equity improvement of education

- Exchange ideas and experiences with provincial departments in charge of education and training in consultation with and under the guidance of MoFEPT

Obligations:

- Working space with furniture will be provided by MoFEPT

- Means of transportation and communication will be provided by JICA

(2) Project for Promoting Equitable Quality Elementary Education through Continuous Professional Development

Issue
Students leave school for various reasons. Research reveals their unwillingness to come to school is a major reason. Even though there are causes which cannot be addressed through technical cooperation, more child-friendly learning environment can be established by introducing a variety of educational activities, including co-curricular activities and improvement of teacher-student relationship, etc. Community members, particularly including students' parents, should be involved in school activities and management to make the school worth coming to for children. Furthermore, insufficient learning achievement is a nationwide problem. Low quality of education is one of the reasons for school dropout. Make lessons easier to understand is one solution to increase students' interest in learning.

Implementing Agency
School Education and Literacy Department, Government of Sindh.

Project Period
From September 2021 to March 2025 (42 months)

Target Area
One (1) or two (2) districts to be selected considering their enrolment rate, student performance

in mathematics and science, number of union councils and accessibility for international experts
All school clusters (at the Union Council level) in the target district (not exceeding 60)

Target Group
[Direct beneficiaries]
1) Officers of Directorate of School Education, Directorate of Curriculum, Assessment and Research (DCAR), Directorate of Teacher Training Institutes (DTTIs), Sindh Teacher Education Development Authority (STEDA), Provincial Institute of Teacher Education (PITE), Directorates of School Education of the target districts

2) Faculty of pre-service and in-service teacher training institutions in the target districts

3) Guide Teachers and Subject Coordinators in the target districts

[Indirect beneficiaries]
1) Teachers of the primary and middle/elementary schools in the target districts

2) Students of the primary and middle/elementary schools in the target districts

3) Parents and community members in the target districts

Narrative Summary of the Project
[Super Goal]
More students complete the elementary education with adequate learning outcomes in Sindh province.

[Overall Goal]
The established model of continuous professional development for school dropout reduction is largely implemented in other districts.

[Project Purpose]
Exemplary practices of continuous professional development effective for the reduction of school dropouts is established in the target districts.

[Outputs]
Output 1:
A strategy for school dropout prevention practicable at the school level is developed and shared among stakeholders.

Output 2:
Cluster-based CPD for teachers, headmasters, and administrators is systematically implemented.

Output 3:
A variety of pedagogical and educational activities to enhance students' motivation for school attendance are carried out.

Output 4:
A practical and contextualized method for improving students' learning in mathematics and science is developed and implemented.

Output 5:
Involvement of community members, including particularly students' parents, in school activities is strengthened.

[Activities]
1-1   Analyze the reasons for students' dropout through a field survey as well as using existing results of studies

1-2   Hold a broad consultation with different stakeholders about measures to be taken at the school level for dropout prevention

1-3   Develop capacity of the organizations concerned with the development of strategy for dropout prevention including teacher education plans

1-4   Elaborate a guidebook on possible solutions to tackle the issue of school dropout

1-5   Distribute the guidebook to the teachers and headmasters of the schools in pilot clusters

2-1   Review the legal, regulatory and practical documents related to the cluster-based CPD model

2-2   Assess the current practices of cluster-based CPD

2-3   Remove institutional obstacles, if any, and prepare favorable conditions for the implementation of cluster-based CPD

2-4   Develop practical manual on the cluster-based CPD

2-5   Carry out training for Guide Teacher and Subject Coordinator on their roles

2-6   Monitor and facilitate the implementation of cluster-based CPD by teachers and headmasters

2-7   Develop and operate an information system about CPD and other attributes of individual teachers

2-8   Evaluate the effectiveness of cluster-based CPD and learn lessons from the actual implementation

3-1   Develop a guidebook on the pedagogical and educational activities to enhance students' motivation for school attendance

3-2   Carry out workshops in the form of cluster-based CPD about the pedagogical and educational activities

3-3   Encourage teachers and headmasters to include reading practices as a part of educational activities

3-4   Evaluate the effectiveness of pedagogical and educational activities for the dropout prevention

4-1   Carry out a diagnostic assessment of students' learning in mathematics and science

4-2   Analyze and identify students' achievement and difficulties in their learning mathematics and science according to the diagnostic assessment as well as existing data

4-3   Develop a practical and contextualized method for improvement of students' learning in mathematics and science, including formative assessment techniques

4-4   Develop teaching-learning materials to put the developed method into practice, considering the possibility to utilize information and communication technology

4-5   Carry out workshops in the form of cluster-based CPD about the method

4-6   Monitor and facilitate the implementation of the method

4-7   Evaluate the effectiveness of the method for improving teaching and learning quality in mathematics and science

4-8   Carry out analysis of curriculum, textbook, and assessment framework in mathematics and science, and give recommendations for improvement

5-1   Review the legal, regulatory and practical documents related to the School Management Committee (SMC)

5-2   Assess the current practices of SMC

5-3   Reconstruct effective mechanism to involve community members, including particularly students' parents in the school activities

5-4   Develop practical method for communication between headmasters/principals/ teachers and parents

5-5   Carry out workshops in the form of cluster-based CPD about the community involvement

5-6   Monitor and facilitate the community involvement

5-7   Evaluate the effectiveness of the community involvement with regard to dropout prevention

(3) Advancing Quality of Alternative Learning Project Phase 2

Issue
Because of the lack of middle education institutions, those who have completed the NFE programme at the primary level are not guaranteed to continue their learning in a certain programme. Integration of learning and skills which contributes to learners' income increase and life improvement is required.

Project Period
From September 2020 to September 2024 (48 months)

Target Area
Federal area, Balochistan, Punjab, Sindh and Khyber Pakhtunkhwa

Target Group
[Direct beneficiaries]
1) Federal Government and Provincial Governments (Punjab, Sindh, Balochistan and Khyber Pakhtunkhwa) in charge of Non-Formal Education

2) District officers in Punjab, Sindh, Balochistan, Khyber Pakhtunkhwa and Federal areas

3) Teachers of Non-formal basic education schools and Adult Literacy/community learning centres

[Indirect Beneficiaries]
1) Learners of pilot Non-formal basic education schools and Adult Literacy/community learning centres

2) Non-Formal Education Providers (Private Sector, Development Partners and NGOs/CSOs)

Narrative Summary of the Project
[Overall Goal]
Human Capital development is enhanced through diversification of learning paths

[Project purpose]
Access of disadvantaged children, youth and adults to quality basic education is improved by the availability of flexible/customized and accelerated/alternative learning programmes

[Output]
Output 1:
Governance and management in NFE are strengthened.

Output 2:
Accelerated Learning Programme - Primary (ALP-P) is developed, revised and implemented in various educational settings.

Output 3:
ALP- Elementary and Skills (E&S) is designed and tested for out of school children, adolescent and youth as viable continuing education opportunities.

Output 4:

Literacy, life skills and work skills programmes are developed and implemented for illiterate and neo-literate youth and adults for improving their lives.

[Activities]

1-1 Strengthen in functioning national and provincial coordination (involving all stakeholders), and formulate/strengthen mechanism in each target area for their sustainability

1-2 Support in implementation of NFE policies and its strategic plans (e.g. 5-year NFE sector plan)

1-3 Revise NFE policies and its strategic plans

1-4 Support for restructuring and strengthening the administrative structure of NFE department/directorates at federal, provincial and district level

1-5 Support for design/improve and approval of projects for expansion of NFE with due consideration of gender equity

1-6 Facilitate in establishing/enhancing accreditation and certification mechanism for NFE

1-7 Support to implement data driven management among NFE stakeholders in the Target Areas (e.g. Cycle of plan-implementation-monitoring-evaluation and capacity of evidence-based management)

1-8 Customize and introduce Non-Formal Education Management Information System (NFEMIS)

1-9 Advise to integrate NFEMIS with National/Provincial EMIS

1-10 Conduct training for staff at federal, provincial and district level to generate, analyze & utilize NFEMIS

1-11 Improve community mobilization manual and conduct training of field staff

1-12 Conduct training for staff at provincial and district level to develop local education plan

1-13 Introduce and enhance community mobilization strategies in NFE implementation

1-14 Support federal and provincial officers in research and development (R&D) for evidence-based planning

2-1 Revise/ upgrade ALP-P curriculum and materials and related activities

2-2 Facilitate to enhance capacity of ALP-P master trainers in Target areas

2-3 Assess effect of ALP-P for its improvement

2-4 Develop and pilot ICT supported delivery model in ALP-P

2-5 Monitor and support implementation of ALP-P in Maddrassah in pilot areas

2-6 Monitor and support implementation of ALP-P in formal education remedial courses in pilot areas

2-7 Facilitate and coordinate advocacy of ALP-P approach

3-1 Customize and introduce standards, curricula, assessment and learning materials of Elementary /Elementary and skills ALP-E&S, i.e. academic course and vocational course

3-2 Develop and implement equivalency mechanism between Elementary /Elementary and skills ALP-E&S, formal elementary education and national vocational framework

3-3 Customize training modules of ALP-E&S for federal, provincial, district officers and teachers

3-4 Support federal, provincial and district officers in development and implementation of training mechanisms

3-5 Train federal, provincial and district officers, and master trainers for Elementary /Elementary and skills ALP-E&S

3-6 Support to implement and examine effectiveness and innovation of ALP-E&S approaches through pilot projects

3-7 Develop and pilot ICT based ALP-E&S delivery model

3-8 Facilitate and coordinate advocacy of Elementary /Elementary and skills ALP-E&S approach

4-1   Customize and introduce standards, curricula, assessment and learning materials of Integrated literacy and Skills (ILS) and Literacy for Social Impact (LSI)

4-2   Develop short courses for neo-literate to enhance literacy and bridge continuing education/ vocational training

4-3   Develop and implement equivalency mechanism between ILS, Formal education and national vocational framework

4-4   Customize training modules of literacy for federal, provincial, district officers and teachers

4-5   Train federal, provincial and district officers, and master trainers

4-6   Support federal, provincial and district officers in development and implementation of adolescents, youth and adult literacy programmes

4-7   Examine effectiveness of ILS/LSI programmes through pilot projects

4-8   Develop and pilot ICT supported delivery model in ILS/LSI

4-9   Facilitate and coordinate advocacy of ILS/LSI approach

(4) Project for Providing Equitable Quality Elementary Education for Rural Girls in Sindh Province (grant)

<u>Issue</u>
One of the main reasons for large-scale issue of out-of-school children is shortage of secondary education institutions. The magnitude of OOSC in Sindh is huge. For improving girl's education especially in rural areas, it is crucial to increase the number of middle schools.

<u>Implementing Agency</u>
School Education and Literacy Department, Government of Sindh.

<u>Project Period</u>
Preparatory survey   From 2021 to 2022
Project Implementation   From 2022 to 2025

<u>Target Area</u>
[Upgradation to elementary school]
XX districts according to the priority of Sindh Province
[Construction of government elementary college of education]
7 districts without teacher training institution
   1)   Sujawal
   2)   Tando Muhammad Khan
   3)   Tando Allah Yar
   4)   Mitiari
   5)   Jamshoro
   6)   Kambar-Shahdadkot
   7)   Ghotki

<u>Objective of the Project</u>
The objective of the project is to reduce gender gap in rural areas in Sindh by upgrading government girls' primary schools into elementary schools through the expansion of facilities and the installation of equipment, as well as by establishing government elementary colleges of education with laboratory schools, thereby contributing to promote the equitable quality elementary education especially for girls.

<u>Component of the Project</u>
[Upgradation from government girls' primary school to elementary]

150 sites (number requested by the Pakistani side. The actual number of sites for assistance should be reconsidered according to the available budget and the supervisor's and implementing body's capacity.)
1) 3 classrooms for middle education
2) Rehabilitation or additional construction of classrooms for primary education in case of sincere damage or insufficiency in number of existing classrooms.
3) Science laboratory
4) Multimedia room (computer laboratory + library)
5) Principal's office
6) Lavatory
7) Compound wall
8) Educational furniture
9) Computers
10) Equipment and materials for science laboratory
11) Solar power system

[Establishment of government elementary colleges of education with laboratory schools (mixed)]
7 sites
1) 6 classrooms for elementary college
2) 16 classrooms for laboratory school (ECCE, G1 to G5, G6 to G10 for girls and boys)
3) Science laboratory
4) Multimedia room (computer laboratory + library)
5) Auditorium
6) Gymnasium
7) Principal's office
8) Staff rooms
9) Common rooms (to be used for prayer and other purposes for boys and girls separately)
10) Canteen
11) Lavatory
12) Compound wall
13) Educational furniture
14) Computers
15) Equipment and materials for science laboratory

(5) Grants in Association with an International Organization for NFE subsector

Issue
Because AQAL Project is a technical assistance, more large-scaled expansion of NFE programmes should be implemented to resolve the problem of large number of OOSC. Though Pakistan governments are allocating a certain amount of budget, further cooperation is required.

Proposed Intervention
While JICA has experience of such intervention with UNICEF, discussions are being made with UNHCR and UNESCO.

7.2.2 TVET

(1) Dispatch of Policy Advisor to the Punjab Skills Development Authority

Issue
TVET administration in Punjab is in the process of dynamic reform. New regulating body named Punjab Skills Development Authority to streamline all the TVET administration is under

establishment. World Bank project is ending in June 2020 and ADB project is proceeding with official procedure for commencement. ADB plans to include Japan Fund for Poverty Reduction so that they are positive for mutual collaboration with JICA. Outputs from NFE project and GCT project may be useful resources for new intervention by JICA. C/P organization should be PSDA since it is going to be an apex organization.

At the time of this survey, only one staff, (acting) Director General was appointed. C/P personnel shall be discussed taking staffing progress into consideration.

Proposed roles
1) Effective support for designing Japan's ODA projects for the Province
  - information gathering for designing project in the garment sector employment support proposed below
  - information gathering for designing project of further CoE support focusing on 2 GCTs
2) donor coordination including ADB for effective and efficient JICA intervention in the Province
3) seeking possibility of collaboration with Japanese companies in Punjab
4) updating TVET sector situation to input to JICA intervention
5) technology transfer through day-to-day communication in PSDA
6) coordination and cooperation with Federal Government, specially NAVTTC, including shift to CBT by evolving traditional curricula such as DAE
7) updating progress of adding value to TVET qualification by license system
8) information gathering of response of Provincial Government to Japan's Specified Skilled Workers scheme and consideration for relevance of JICA's support for promotion of the scheme

(2) Garment Sector Employment Support Project in Punjab

Issue
A large number of youths, more girls than boys, are out of school. The status of them leads them to be considered as uneducated and not eligible for skills training, eventually unemployable. It is not only a problem of the girl and her family, but issue of society when the number becomes large.

Implementing Agency
Punjab Industry, Commerce and investment Department, Government of Punjab.

Project Period
to be finalized (60 months)

Target Area
Punjab Province

Target Group
[Direct beneficiaries]
1) Officers (in charge of garment sector development in newly established Punjab Skills Development Authority (PSDA))
2) Pakistan Hosiery Manufacturers and Exporters Association (PHMA), Pakistan Readymade Garment Manufacturers and Exporters Association (PREGMEA), other industry organization
3) Punjab TEVTA, Punjab VTC, private TVET institutes

[Indirect beneficiaries]
1) OOSC in Punjab
2) Private Garment Industry in Punjab

[Partner] (to be discussed and considered)

Global Compact Network Pakistan[221]

<u>Narrative Summary of the Project</u>
[Overall Goal]
Industry organizations in garment sector maintain capacity to coordinate skills demand from member companies and supply from eligible youths

[Project Purpose]
PHMA and PRGMEA in Punjab and Faisalabad acquire capacity in recruitment coordination with industry, Commerce and Investment Dept. in garment sector employees including stitchers.

[Outputs]
Output 1:
Establishes mechanism to collect skills demand information from member companies

Output 2:
Based on skills demand information, develop most suitable training courses.

Output 3:
Facilitate effective use of funding from member companies in delivery of courses (e.g. sponsor course)

Output 4:
Develop plan of training courses to bridge demand and supply of stitcher skills.

Output 5:
Invite applications for industry stitching short course from those who has basic literacy including those from AQAL NFE programme.

Output 6:
Facilitate job placement for successfully completed

Output 7:
Arrange value addition to in-company trainings conducted by large companies such as NVQF certification and sponsorship OOSC as CSR

[Activities]
1-1   hold kick-off seminars for all the stake holders to introduce new intervention seeking possibility of funding training by industry who will employ trainees
1-2   prepare questionnaire to collect skills demand information from member companies
1-3   distribute questionnaire to member companies
1-4   follow up communications about the survey over members' SMS, phone, email
1-5   compile information collected

2-1   categorize and classify skills demand collected from member companies
2-2   analyze the processed information
2-3   compile skills profile in demand
2-4   develop curriculum to produce labour with the skills profile, considering possible collaboration with AQAL that is planning to develop courses in level 1 in NVQF, level 2 in NVQF is tentatively planned for smooth connection from AQAL
2-5   develop training material where necessary

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[221] Initiative proposed at World Economic Forum in 1999. Promotion of international framework to realize sustainable development through creative leadership with social responsibilities of various types of corporations

3-1   estimate cost of training to be conducted

3-2   discuss with member companies how necessary cost could be funded with what kind of conditions from companies

3-3   design funding scheme for training delivery

4-1   draft training implementation plan including timeframe, venue, instructors, etc.

4-2   coordinate with relevant organization/individual to secure necessary resources

4-3   prepare announcement for invitation of application for training

5-1   announce invitation for application to training course through industry organization

5-2   announce invitation for application to training course through AQAL

5-3   announce invitation for application to training course to local communities

6-1   identify those who successfully completed training course

6-2   provide information of completed participants to member companies as agreed before the training

6-3   coordinate employers and employee for smooth agreement for employment

7-1   make visits to those large companies where in-company training is conducted and collect details of the in-company training

7-2   discuss possible value addition from TVET authorities with PSDA, TEVTA, PVTC, PBTE, PTTB and NAVTTC where possible and necessary

7-3   prepare proposal of value addition such as awarding certificates with NVQF, sponsorship for OSSC as CSR, etc.

7-4   present the proposal to the company and seek possibility of value addition from TVET authorities.

(3)   Expansion of GCT RR and GCT Faisalabad Mechanical (TA)

<u>Issue</u>
It is widely pointed out that TVET courses are not providing skills in demand in actual industry. One of reasons is level of technical and instructional skills.

<u>Implementing Agency</u>
Punjab Industry, Commerce and investment Department, Government of Punjab, TEVTA, GCT RR, GCT Faisalabad

<u>Project Period</u>
to be finalized (60 months)

<u>Target Area</u>
Punjab Province

<u>Target Group</u>
[Direct beneficiaries]
1)   Officers in charge of DAE mechanical in Punjab TEVTA

2)   All GCT offering mechanical courses in Punjab

[Indirect beneficiaries]
1)   Trainees of mechanical courses under GCT in Punjab

2)   Private Manufacturing Industry in Punjab

Narrative Summary of the Project
 [Overall Goal]
Graduates from mechanical courses of GCT in the Province find employment in respective occupation in industry and evaluated as very competent by supervisors of employers

[Project Purpose]
All instructors in mechanical courses of GCTs are capable to deliver courses meeting curriculum requirement specially in practical skills demanded by industry, and cultivate readiness for shift to CBT curricula.

[Outputs]
Output 1:
Extend ToT by MT for GCT Mechanical in Province

Output 2:
Extend ToT for Instructors of GTTI、GVTI, VTI (PVTC) in Mechanical short courses by MT from GCT based on Training Needs Assessment

Output 3:
Design & conduct skill refresh course for active workers in local industry in collaboration with Industry organization

Output 4:
Industry engagement is further strengthened.

[Activities]
1-1   list of mechanical instructors in GCT is prepared with information of experience and career history
1-2   training needs are identified based on information collected about instructors and requirement to deliver current curriculum, with special attention to difference between those who were target for capacity development in previous phase in eastern Punjab and those who were not in western Punjab
1-3   curriculum and material for ToT is developed based on identified training needs, with components of CBT curricula in terms of instruction and assessment with shift to CBT in mind
1-4   ToT is delivered to all ToT target with assessment at the end

2-1   list of mechanical instructors in GTTI, GVTI and TTC is prepared with information of experience and career history
2-2   training needs are identified based on information collected about instructors and requirement to deliver current curriculum in level 3 and 4 training
2-3   curriculum and material for ToT is developed based on identified training needs
2-4   ToT is delivered to all ToT target with assessment at the end

3-1   hold workshops with representatives from industry to discuss continuing training for their workers
3-2   based on findings from the workshop, questionnaire is prepared to collect information on skills demand for their workers through industry organization
3-3   conduct the questionnaire survey for local manufacturers to identify training needs
3-4   based on identified training needs, curriculum for continuing training is developed
3-5   training is advertised through industry organization and application is collected
3-6   continuing training is delivered with assessment at the end
3-7   hold internal workshop to share learning through interaction in implementation of

continuing training, and compile into lessons leant and recommendations
3-8   feedback from industry is collected for improvement for next cycle

4-1   through activities under output 3, establish regular communication channel with industry through industry organization
4-2   using the established channel, OJT for trainees, industry attachment for instructors, job placement is facilitated
4-3   Institute Management Committee is activated through the above activities

(4) Strengthening Institutional Capacity for Placement at CTTI

Issue
Placement facilitation by TVET institutes is one of weakness in Pakistan since supply driven training have been practiced for several decades traditionally. Placement and monitoring of graduates need to be strengthened.

Implementing Agency
Construction Technology Training Institute (CTTI), Ministry of Communications

Project Period
to be finalized (36 months)

Target Area
N/A

Target Group
[Direct beneficiaries]
1) Staff, CTTI

[Indirect beneficiaries]
1) Trainees of CTTI

2) Private Industry with potential employment of CTTI graduate

Narrative Summary of the Project
[Overall Goal]
Graduates from CTTI become a part of placement mechanism of CTTI through continuing communication such as alumni

[Project Purpose]
Placement function of CTTI establish mechanism to collect and update graduate employment status.

[Outputs]
Output 1:
Database of graduates is developed.

Output 2:
Data collection mechanism of graduates working employment is developed.

Output 3:
Database is used for planning for placement

[Activities]

1-1   information about how placement is done in other TVET institutes are collected
1-2   based on the collected information, specification of database is developed
1-3   database development (may be outsourced) is done with operation manual and annual cyclic procedures

2-1   develop a forum for all the graduates possibly using SNS
2-2   discuss establishment of alumni on the forum
2-3   very first alumni meeting is planned and held
2-4   activities involving graduates such as seminars inviting graduates as guest speakers or industry visits through graduates employers
2-5   those activities are documented in graduate organization possibly in constitution

3-1   collected information through alumni related activities are entered into the database
3-2   report from database is used for identification of possible employer for upcoming placement
3-3   contact employers of graduates for possibility of new recruitment if possible.
3-4   review the placement tasks for improvement

(5)   In-service Training Programme for Technicians

Issue

Technician generally are not well motivated to continue to gain higher skills and qualifications which are not well appreciated by supervisors in Pakistan once they start working. It is hindering skills development in technical level in the country. The preceding technical cooperation project, Project for Technical Support to Auto Parts Manufacturing Industry, provided trainings in the area of production management. However, it is not well utilized because of the lack of technicians who are capable of multiple skills even when priorities of tasks are identified through production management.

Implementing Agency

Small and Medium Enterprises Development Authority (SMEDA), Ministry of Industry, Pakistan Assembly and Manufacturer Automotive Association (PAMA), Pakistan Association for Automotive Parts and Accessories Manufacturers (PAAPAM)

Project Period
to be finalized (36 months)

Target Area
Sindh and Punjab Province

Target Group
[Direct beneficiaries]
1)   Officers in charge of automotive industry in SMEDA

2)   Staff involved in human resources, PAMA and PAAPAM

3)   Workers at auto parts industry

[Indirect beneficiaries]
1)   Member companies of PAAPAM and PAMA

2)   Relevant TVET institutes

Narrative Summary of the Project
[Overall Goal]

Auto-parts companies are capable of production management in compliance with client auto manufacturers

[Project Purpose]
Workers of PAAPAM members develop multi-skill to contribute efficient production management.

[Outputs]
Output 1:
Status of current skills of PAAPAM members is compiled.

Output 2:
Skills training options to produce multi-skilled workers are developed.

Output 3:
Skills training is delivered.

Output 4:
Feedback from trained workers and employers are collected through monitoring activities

[Activities]
1-1   categorization and classification of skills in auto parts manufacturers is drafted
1-2   workshop inviting PAAPAM members to finalize the categorization and classification of skills
1-3   questionnaire survey to identify currently acquired skills individually and desired multi-skills based on agreed categorization and classification
1-4   result of questionnaire survey is analyzed and compiled

2-1   based on output 1, skills gaps are listed
2-2   competency is extracted from each item on the list
2-3   curriculum and material are developed for implementable training to fill the gap

3-1   training options are announced through PAAPAM
3-2   application for trainings are received for identification of quantitative demands
3-3   details of training are finalized including schedule with identification of trainers' availability
3-4   training are delivered
3-5   assessment is conducted at the end and certification awarded

4-1   questionnaires to get feedback from workers trained and employers are prepared
4-2   follow up visit is made to company that gave useful feedback
4-3   reflect feedback for upcoming trainings
4-4   discuss experiences of conducted training to make recommendations to introduce trainings to other manufacturing industry

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