Sindh Education Sector Plan 2013 – 2016

Sub-sector Plans Submitted for

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4.EARLY CHILDHOOD EDUCATION (ECE)

'Improvements in quality of ECE shall be based on a concept of holistic development of the child that provides a stimulating, interactive environment, including play, rather thana focus on regimes that require rote learning and rigid achievement standards.' (NEP 2009, p. 27)

Pakistan struggles with incessant poverty, lack of basic necessities and deteriorating social support structures; thus, investments in Early Childhood Education (ECE) become more significant than ever before. This is truer for situation in Sindh. Therefore, broad-based investment in young children's survival, development and education becomes a corner stone of SESP (2013- 2016).

The Government of Pakistan (and by implications Sindh) is a signatory to the EFA Declaration in 2000 at Dakar Conference, and has made commitments to use all the necessary means to achieve the goals of EFA. One of the six goals of EFA is 'expanding and improving comprehensive early childhood care and education'. To date, however, there has been minimal meaningful involvement of the state in increasing the access to Early Childhood Education or Development or towards improving its quality. The province of Sindh, perhaps, is quite unfortunate in this regard as no systematic and systemic efforts have been made to promote Early Childhood Education (ECE).

4.1 Policy Context and Situation Analysis

4.1.1 Current Policy and Historical Roots

Early Childhood Education (ECE) in Pakistan's public education sector can be traced back to the country's first Education Conference in November 1947. The terms of reference for the primary and secondary committee, then, included the provision of pre-primary education through a clause that the committee shall 'recommend the lines on which pre-primary education may be run and to consider the part of the Central and Provincial governments in setting up Nursery schools (TEC, 1947)'. The age bracket for early childhood mentioned in the proceedings of the same conference of early childhood was from 3- 6 years.

The following table provides a snapshot of the history of policy development on ECE.

Table 4.1: History of Policy Development on ECE

Timelines	Policy Development on ECE Education – A Historical View
1947	Viewing Nursery as an integral part of the mainstream education at the Education Conference 1947
1950s – 1980s	*Katchi* classes as a means to merely familiarize children with school setting; no education policy during the four decades made any reference to ECE
1992	Education policy proposed to mainstream *katchi* classes
2001-2015	National Plan of Action for EFA (2001-2015) charts out a complete plan for mainstreaming ECE in formal education system, through sensitization of stakeholders, allocation of funds, encourage private sector etc.
2002	• National ECE Curriculum was developed • Sindhi version of the revised National ECE Curriculum is available
2004	In Education Sector Reform-Action Plan, ECE was taken up as a recognized education level
2009	Education policy proposes for ECE to become part of the main stream education, and suggests action plans

The above table shows that an important milestone in ECE was achieved by developing ECE Curriculum in 2002, which was later revised in 2007. The curriculum document provided policy and curricular guidelines pertaining to early childhood education in Pakistan.

During the past decade, a greater emphasis on Early Childhood Education and Development has been witnessed both, in the public as well as non-governmental sector. During this period, multiple early childhood programs had been developed by a number of organizations; however, most of these belong to the private sector, and were initiated in form of projects, which implies that the efforts were not sustained over a period of time. A number of projects initiated in Sindh were, primarily, through NGOs working for ECE promotion. Some significant projects, for instance, are listed below. The following table presents past project on ECE in Sindh.

Table 4.2: Examples of Past Projects on ECE in Sindh

Agency	Project title	Timeline	Areas covered	Description
CRI	Interactive teaching and learning program	2006-2009	Karachi, Hyderabad	Program initiated with the funding from USAID

AKF, HANDS, AKES, SEF, AKUHDP, TRC	Releasing confidence and creativity	2003-2011	Various districts of Sindh e.g. Hyderabad, Tando Muhammad Khan, Thatta, Badin, Khairpur, Matiari, Tando Allahyar	A flagship program for ECE, covering a number of government, private and community schools
SEF	Early Learning Program	2009-2012	5 districts: Tando Muhammad khan, Badin, Khairpur, Ghotki, Noushero feroze	A PC-1 project funded by GoS; aimed at establishing ECE classes in 150 schools
TRC	Early Childhood Education Program	1997-2002	Karachi, Shikarpur	CIDA funded program; first of its kind as far as Sindh is concerned
CGN-PK /RTP	School based ECE centers	2009-2011	Khairpur, Mirpurkhas, Umerkot, Sanghar, Thatta	UNICEF funded program

Apart from the above mentioned projects, a number of projects were also initiated for the physical wellbeing of children, and for maintaining their health and nutrition. Through these projects, several government schools in different districts of Sindh were benefited.

The current education policy has put significant emphasis on Early Childhood Education and as part of the EFA goals, the government is also determined to mainstream the ECE into the education system. The National Education Policy (2009), which is also an agreed policy by the GoS, provides the following five policy actions with reference to ECE:

Policy Actions for ECE – NEP 2009

Policy Action 1 — Improvements in quality of ECE shall be based on a concept of holistic development of the child that provides a stimulating, interactive environment, including play, rather than a focus on regimes that require rote learning and rigid achievement standards.

Policy Action 2 — ECE age group shall be recognized as comprising 3 to 5 years. At least one year pre-primary education shall be provided by the State and universal access to ECE shall be ensured within the next ten years.

Policy Action 3	Provision of ECE shall be attached to primary schools which shall be provided with additional budget, teachers and assistants for this purpose.
Policy Action 4	For ECE teachers, a two-year specialized training in dealing with young children shall be a necessary requirement.
Policy Action 5	This training shall be on the basis of the revised ECE National Curriculum. The curriculum and support material for ECE shall take account of the cultural diversity of particular areas. (cf. NEP 2009)

In response to ECE related commitments, a number of donor agencies have also initiated some ECE specific interventions; for instance:

Table 4.3: Current and Future ECE Interventions in Sindh (Donor-funded)

Donor	Nature of Intervention	Nature of support
UNESCO	a) ECE Resource Center: Continuation of technical assistance to ECE Resource Center established at PITE, Nawabshah b) Guidebooks: Improvement, printing and dissemination of teacher guidebooks on ECE c) Training of Trainers workshops on ECE methodologies (This has been and being done by UNICEF also)	Technical and financial assistance to the implementing agency
World Bank	Opening of new schools under public private partnership with ECE as inbuilt feature of the schools	Technical and financial support to the implementing agency

The Early Childhood Education initiatives though are undertaken by the government, there is still a need to identify a generic implementation framework to streamline ECE in schools.

4.1.2 Theoretical Analysis

Educational research suggests that early experiences of a child have profound effect on their attainments at later stages in life (both, positive and negative). Therefore, it is important to invest

on child's education to provide positive and enabling experiences right from their early age. Adequate early childhood programs not only help in the development of brain but also contribute to the physical, emotional and social development of child.

There are several curricular approaches to preparing children through early childhood programs such as: (1) The Creative Curriculum; (2) High/ Scope; (3) Project Approach; (4) Reggio Emilia; and (5) Montessori. The ECE curriculum developed in Pakistan is widely influenced by the High-scope approach, as the document states, '*The National ECE Curriculum has been influenced by the High/Scope Curriculum, which is a developmentally appropriate model, based on Jean Piaget's theory of cognitive development. Great care has been taken to ensure that the active learning model in this curriculum is culturally relevant, and is firmly grounded in the Pakistani context and the needs of our society.*'[1]

4.1.3 Analyzing the Current Situation

According to SEMIS Census 2011-12, the total enrolment in *katchi* class is more than half a million. This figure includes both, un-admitted and admitted children. Yet, it is a significant number of students that come to schools in their early age. In spite of this large number of students, there is still a huge shortage of professionally developed teachers in ECE curriculum.

Table 4.4: Enrolment of katchi class

	2009-2010	2011-2012
Boys	395,886	324,841
Girls	308,684	271,439
Total	704,570	596,308

Source: SEMIS 2009-2010 and 2011-2012

UNICEF has put serious efforts to develop more than 300 government teachers in ECE. Nevertheless, an educated guess for teacher-student ratio is: 1:1000. This figure may be justified since the primary purpose of *katchi* classes has been just to acclimatize children with the school and, therefore, no extra efforts were made to professionally develop and depute teachers in *katchi* classes. ECE, on the other hand, requires an effective teaching and learning environment, which ensures proper management of classrooms, a prescribed curriculum, availability of learning resources and, above all, provision of skilled and dedicated teachers – this, however, was not considered necessary for teaching in a *katchi* class.

The enrolment trend of *katchi* classes depicts that the girls' enrolment is slightly less than the boys'; however, this disparity is more visible at the higher grades. One of the reasons could be the cultural acceptance of younger boys and girls to be sent to the same schools. However, what is alarming is that the overall enrolment has declined to 16% in a year; if the data validity is not questionable, then, the decrease in enrolment should be taken seriously. Nevertheless, it is still important to note that enrolment figure alone does not signify that this number of children is actually benefiting from ECE. For a child to get benefit from ECE, it requires developmentally appropriate education and pedagogy.

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[1] Curriculum for Early Childhood Education, 2007

The Annual Status of Education Report (ASER) 2012 indicates that around 62.4% children of ECE age were out of school in Sindh. ASER report is based on a survey conducted in 17 districts of Sindh. The same report further indicates that 37.6% children are attending some kind of early education: 89.9% of these are going to government schools, whereas, 9.2% are going to public schools. *Madarasah* is a source of ECE/ pre-schooling for 0.4% of the children. There is hardly any data providing evidence that these 'enrolled' students are receiving age appropriate education.

Table 4.5: Percentage Distribution of Children according to Age and School type

Age group	Govt.	Pvt.	Madrasah	Others	Out-of-school 2011	Out-of-school 2010
3	10.6	0.7	0.0	0.0	88.7	91.8
4	28.0	3.1	0.3	0.1	68.6	76.1
5	55.3	5.8	0.3	0.3	38.3	43.8
3-5	33.8	3.5	0.2	0.1	62.4	
Total			37.6		62.4	
By Type	89.9	9.2	0.5	0.4		

Source: ASER 2012

There is a general lack of reliable statistics due to lack of clarity on the definition of various ECE approaches. Since ECE has not been formalized, there is no separate identification of ECE schools in the SEMIS data. Moreover, the SEMIS data collection form also does not contain category for pre-primary schooling, suggesting that the pre-primary schooling does not stand on its own as a separate entity.

The current available statistics (number of enrolments), as mentioned earlier, do not necessarily mean that the children in *katchi* class are actually benefiting from ECE. The ECE class demands child-friendly environment, a variety of learning resources and age appropriate methodologies. Mere attendance and/ or enrolment in a*katchi* class donot serve the purposes envisaged by the ECE curriculum.

Table: 4.6: Availability of Rooms at Schools

Number of Rooms	Type of Schools		
	Boys	Girls	Mix
5 rooms	450	416	898
6 rooms	164	151	385
7 rooms	108	93	212
8 rooms	82	68	139
9 rooms	58	51	80
10+ Rooms	166	165	339
Total	1028	944	2053

Source: SEMIS 2010-11

Most of the pre-primary classes (*katchi*) are attached to primary schools with or without proper rooms allocated. Sometimes, these children are treated as non-enrolled children and, therefore, not formally considered or counted in the enrolment figures. In Sindh, there are a total of 44,522 primary schools. Of these schools, there are merely 4025 schools which have 5 or more rooms. Table 4.6 indicates the distribution of schools according the number of rooms.

The analysis of the situation indicates that mainstreaming of ECE requires serious efforts and implicates huge financial and human resources. The implementation strategy will require a phase-wise approach. The current infrastructure of schools can be seen as a starting point for establishing ECE centers/ classrooms.

4.2.
Key Issues and Challenges

Early Childhood Education (ECE) in Sindh faces many issues and challenges in relation to policy and implementation. Some of the important ones are listed below.

- There are no comprehensive ECE policy and minimum standards for Early Childhood Education available in Sindh; hence, various models are in use by the public and private sector. There is, thus, the need for a clear policy on ECE that could define various forms of ECE services, including '*katchi*', and for ensuring stakeholders' understanding and awareness on ECE, especially, that of parents' and teachers'.
- Government falls short in terms of teacher development and/ or deployment strategy, as ECE specific cadre of teachers is not available.
- Generally, there is a lack of ECE materials, facilities and resources at the school level, such as, teachers, supplies and separate rooms for ECE.
- Moreover, as ECE is still a new concept for the government schools and, then, the conditions and learning needs of children in rural and urban areas are different, it requires different strategies and/ or flexible approaches in ECE provision for complete mainstreaming of the ECE program. It is essential to develop ECE resource centers, which could work on developing the capacity of the teachers and education providers in ECE. These centers could either be based in the existing schools or established separately as per the availability of the resources.
- Since there is a lack of policy clarity on ECE and it is not properly mainstreamed in government schools, there is no proper system for supervising and monitoring the ECE classes.
- Generally, due to budgetary constraints, the government tends to prioritize primary and secondary education for investment over ECE provision. There is a strong need for mainstreamed budget allocation (in ADP) for ECE.
- Most of the public sector schools in Sindh lack child friendly environment and teaching and learning approaches; hence, transition of children from ECE to higher classes is another challenge. The same challenge is faced by Community Based ECE Centers while mainstreaming into public sector schools.

- Existing pattern of school buildings, which are meant for Class 1 to 5 or Class 1-8, is another challenge because there is no separate provision for ECE class in the existing school buildings.
- There is a lack of reliable statistics due to lack of clarity on the definition of various ECE approaches and a lack of representation of ECE classes in SEMIS.
- ECE curriculum exists, however, without proper dissemination or awareness raising of teachers.
- Rural populations do not always use the birth registration system, which makes it difficult to identify and plan for demands.

The overall analysis of the situation vis-à-vis policy directions reveals that the system should streamline the ECE into schools at a faster pace, as there are already a large number of children available in *katchi* classes. Hence, the children enrolment may not be an issue as such. Further, the existence of an ECE curriculum brings a sound theoretical basis to implement ECE in schools. However, the weaknesses are: absence of a comprehensive policy framework and guidelines; lack of capacity in understanding ECE and its pre-requisites; low priority attached to ECE evident through funds allocated. Although all the new schools would have the provision of ECE as an in-built feature, the provision of ECE in the existing schools requires significant financial support.

The willingness of the community to send their children to ECE classes, which is evident through *katchi* enrolments, presents a significant opportunity. Second, there is a huge body of knowledge and experience in the civil society available to tap on and to get insights for ECE provision. Similarly, a good number of private schools are imparting various forms of ECE, such as Kindergarten, Montessori and ECE education systems.

4.3.
Objectives, Strategies, Targets and Activities

From the above analysis, the following objectives have been formulated:

1. Develop ECE policy and minimum standards for ECE (e.g., space, enrollment, teacher requirements, teaching learning material, etc.)
2. Phase-wise establishment of model ECE Centers across the province and transforming *katchi* into ECE classes
3. Establish ECE teachers' cadre
4. Review and revise ECE curriculum and ensure provision of learning materials, as prescribed in the ECE-curriculum
5. Supporting learners' transition from home to school and ECE to higher classes

Next, Table 4.7 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table 4.7: ECE: Objectives, Strategies, Targets and Activities

Objectives	Strategies	Targets (2013-2016)	Activities
Strategic Objective 1 *Develop ECE policy and minimum standards for ECE (e.g., space, enrollment, teacher requirements, teaching learning material, etc.)*	• Mobilizing stakeholders through advocacy for policy approval/ legislation • Documentation of the existing ECE models, particularly, in Pakistan • Reviewing the international experiences in ECE • Dialogue and review with stakeholders	• By the end of 2014, ECE policy is developed and approved through legislation • Minimum standards for ECE developed and approved through BoC by 2014	• Arranging dialogue on ECE policy • Development of ECE policy through consultative process • Arranging dialogue on the minimum standards for ECE • Formulating ECE standards through broad-based consultation process • Ensuring that both public and private schools are following the standards through regulations • Development of the appropriate teacher learning resources
Strategic Objective 2 *Phase-wise establishment of model ECE Centers across the province and transforming katchi classes into ECE classes*	• Phase-wise establishment of model ECE centers at every district and *taluka* • Use of existing physical infrastructure of the schools • Development of existing teachers as ECE master trainers • Engaging the private sector for the professional development and recruitment of the teachers • Regular review and provision of theteacher resource learning material to ensure that it is appropriate and effective to support children learning	• 121 ECE Resource Centers are established and running by 2016 • By the end of 2016, at least 6,000Katchi classes are transformed into ECE	• Identify the schools based on established criteria • Set up the ECE resource centers in schools • Establish proper ECE classrooms in selected government schools • Establish community based ECE model, where physical space is not available • Mobilize SMCs for ECEs for the enrollment in ECE • Develop ECE infrastructure

Objectives	Strategies	Targets (2013-2016)	Activities
	• Community engagement for the promotion of ECE		
Strategic Objective 3 *Establish ECE teachers' cadre*	• Recognition of ECE teachers as sanctioned posts • Implementation ECE certification policy for eligible teacher • Designating all ECE positions for female teachers • Engaging PITE for ECE teachers' professional development • Engaging private sectors for ECE teachers' professional development	• 6000 sanctioned posts for ECE teachers are created (nomenclature of existing PST changed) • All sanctioned ECE teachers undergo PD by 2016	• Notifying establishment of ECE teachers' cadre • Design comprehensive ECE teachers' professional development leading to certification • Map the resources for ECE in the private sector
Strategic Objective 4 *Review and revise ECE curriculum and ensure provision of learning materials, as prescribed in the ECE Curriculum*	• Integration of the curriculum with the teacher education • Dissemination of the curriculum through ECE Resource centers • Create the provision of ECE learning material through recurrent/regular feature of provincial budget • Development of standards checklist for ECE learning materials on the basis of curriculum	• By the end of 2015, the curriculum is communicated to all target schools • Checklist of learning materials is developed • Provision of learning material in administrative order • Distribution of learning materials to schools	• Translate curriculum into Sindhi and Urdu languages • Put in place dissemination strategy for ECE curriculum • Conduct workshop for developing checklist for learning material • Provide access and disseminate the learning materials
Strategic Objective 5 *Supporting learners' transition from home to school and ECE to higher classes*	• Developing transition protocols for the teachers to facilitate children's transition from home to school and ECE to higher classes • Engage parents in smooth transition of their children	• All ECE classes receive transition manual • Parents receive transition orientation through ECE teachers	• Develop and disseminate ECE transition manual for children in ECE classes • Village meetings

5. PRIMARY AND ELEMENTRY EDUCATION

'The foundation for future prosperity is based upon present basic schooling'

Elementary education consists of 8 years of schooling (from Class1 to 8); mostly in two stages – Primary (Class 1 to 5) and Middle (Class 6-8). The children are enrolled in primary schools at the age of 5+. There are three categories of schools (on the basis of gender) for a child to get enrolled in: girls, boys and mixed or co-education schools. The mixed schools constitute 61% of schools in the province, in which primary-only schools constitute 91%. Some schools are run in two shifts – morning and afternoon. The medium of instruction at the primary level is Sindhi, Urdu and English, and a majority of schools are Sindhi medium. English is also taught as a subject in all schools, from Class 1 onwards.

Elementary education is evidently the most concerted area, and most of the resources are consumed at this level. However, all the efforts and resources combined have not produced the desired results. In Sindh, as in other parts of the country, the elementary education caters to children of age 5 to 12. With the 18th Constitutional Amendment, education has become the provincial subject and due to the inclusion of Article 25-A, which states that the "State shall provide free and compulsory education to all children of the age of five to sixteen years in such manner as may be determined by law", education has become compulsory. This constitutional amendment would largely influence the elementary education in each province. Sindh is the first province that has passed Free and Compulsory Education Bill under Article 25-A of the 18th Constitutional Amendment.

5.1.
Policy Context and Situation Analysis

5.1.1 Current Policy and Historical Roots

Historically, since the inception of the country, numerous programmes and attempts have been made to achieve universal primary education and to increase the overall literacy level in the country. However, the level of commitment and capacities required to achieve these overarching goals were lacking, since no policy has been implemented/ enforced. What follows is a brief synopsis of the past education policies and the policy directions.

Table 5.1: Historical Overview of Education Policies related to Primary/ Elementary Education

Timelines	Policy	Policy directions/ considerations	Strategies
1947	National Education Conference	• Emphasized free and compulsory primary education • Considered problems of medium of instruction, teacher training, physical education, etc. • Achieve UPE in two decades	• Levy a special tax to finance primary education • Primary school age group 6-11 • Encourage private sector to open schools
1951	National Plan of Educational Development	• 66% children in the age group of 6 to 11 were out of school • The principal constraint was the lack of trained teachers as 50% teachers in primary schools were untrained and the expansion of primary schools would require over 86,000 additional teachers	• Establish over 24,000 new primary schools with a total capacity of 3.7 million pupils • Develop more teacher training institutions to fill in the teacher gap
1959	Report of the Commission on National Education	• Less than 50 percent of the children of primary school age were enrolled in schools • Achieve UPE within a period of 15 years	• Eight years compulsory education to make the child literate • Female teachers for primary education • Resource mobilization for additional funds
1970	The New Education Policy	• Reaffirmed the government's commitment "to the objective of universal elementary education" • Achieve UPE by 1980 • Particular stress on girls education	• Rapid expansion of primary schools • Emphasis on female enrolment • Female teachers for primary schools
1972	The Education Policy	• Equalizing access to education through provision of special facilities for women, under-privileged groups. • Free and universal up to Class X • Achieve UPE for boys by 1979 and for girls by 1984 • Achieve UEE up to Class VIII for boys by 1982 and for girls by 1987	• Construct 61,000 additional classrooms for primary classes • Train 150,000 teachers • Recruit an additional 75,000 teachers through the National Literacy Corps
1979	National Education Policy and Implementation Program	• Achieve the Boys UPE by 1987 and Girls UPE by 1992 • Eliminate wastage to achieve 60 percent retention rate by 1983 and 100 percent thereafter	• Reconstruct/ improve 17,000 existing primary schools • Open 13,000 new primary schools, mainly in rural areas

			• Establish 5000 mosque schools for boys
1986	Various schemes were given to national education plan, e.g. Drop-in schools, Nationwide Literacy Program, *Nai Roshni* Schools, Etc.	• To provide an opportunity toschool dropouts and out of school children, especially, children of low income strata to complete primary education • To impart lower secondary education through non-formal methods to 2,25,000 children and enable them to join formal upper secondary classes by 1989	• Reduce drop-out population/ out of school children through school monitoring and community mobilization • Introduce a system of non-formal primary education
1992	National Education Policy	• Basic education for all shall be pursued not merely as a sector-based target, but as an integral part of human development plan • Emphasis on female teacher recruitment Eliminate disparity • Achieve UPE by 2002 • Increase the literacy rate to 70 per cent by the year 2002 • Make primary education compulsory	• Setting up model schools (male and female) in rural areas; • Introducing compulsory social service for students; • Opening of 107,000 new primary and mosque schools • Training and recruitment of 265000 new primary teachers
1998	National Education Policy	• Double the rate of literacy by the year 2000 • Involvement of donor agencies • The Policy relating to elementary education was based on agreed themes and strategies of Social Action Program • Key issues: more than 5.5 million primary school age (5-9) children are left-outs; high dropout rates; teacher absenteeism ; weak instructional supervision; about one-fourth of the primary school teachers are untrained and the present training infrastructure does not appear to improve the quality of instruction • By 2002-03, 90 percent of the children in the primary age group (5-9) will be in schools and by the year 2010, the gross enrolment will rise to 105 per cent • Consequently, the promulgation and enforcement of Compulsory Primary Education Act will be possible by 2004-05"	• The Policy proposed to construct 190,000 new formal primary schools, 250,000 non-formal basic education centers, and 57,000 mosque schools, upgrade 60,000 primary schools, begin double shifts in 20,000 existing primary schools, and recruit 527,000 additional teachers • Necessary resources were also been pledged at the highest level to raise the expenditure on education from 2.2 to 4 percent of GNP
2004	Education Sector Reform-Action Plan	• Universal Primary/ Elementary Education is the most challenging milestone for the Government of Pakistan *Targets* • Access: Increase participation rate at	• National Ordinance for Compulsory Primary Education • Improving infrastructure in

		primary level (I-V) by 4% annually (baseline 89%) through formal and non-formal delivery systems • Equity : Reduce gender disparity by 10% annually • Completion: Increase completion rate by 3% annually (baseline 50%) • Increasing gross participation rate from 89 percent to 100 percent (4% per annum) • Reducing gender disparity by 10% annually • Enhancing primary completion rate from 50 percent to 70 percent (6% per annum)	• existing primary schools • Construction of new schools • Upgrading of existing primary schools to elementary facilities • Initiating Early Childhood Education in existing *katchi* classes • Capacity building for Decentralized management at district and local level

It is evident from the past policy analysis that the main focus of all educational policies was to achieve Universal Primary Education. However, the targets tend to get revised with each policy. Since 1998, there has been a growing realization that the government did not have the necessary capacity to achieve the targets instantly; rather, some benchmarking needed to be done for every three or five years. ESR Action plan document is a representative example of such a policy shift.

In light of the above inconsistent policy measures and deteriorating indicators of education, the current National Education Policy 2009 was formulated. Like the previous policies, this policy also indicates its commitment to achieving universal primary education. However, it also highlighted the loopholes in the system, suggesting some action points to fill in the gaps.

Policy Provisions for Primary/ Elementary – NEP 2009

Policy Action 1 — Achieve UPE by 2015.

Policy Action 2 — Official age for primary education shall be 6 to 10 years

Policy Action 3 — Efforts to provide the necessary financial resources to achieve the EFA goals.

Policy Action 4 — Wherever feasible, primary schools shall be upgraded to middle level.

Policy Action 5	International development partners shall be invited through a well-developed plan for expanding school facilities.
Policy Action 6	High priority shall be paid to reducing the drop-out rates.
Policy Action 7	Food based incentives shall be introduced to increase enrolment and improve retention and completion rates, especially for girls.
Policy Action 8	Schools shall be made more attractive by providing attractive learning environment, missing basic facilities and other measures.
Policy Action 9	Government shall establish at least one residential school in each province.
Policy Action 10	Every child, on admission in Grade I, shall be allotted a unique ID that will continue to remain with the child throughout his or her academic career.

(cf. NEP 2009)

In recent years, the GoS has not only increased the overall education budget by 15%, but has also tapped on the international funding through development partners. As a result, there have been a number of projects designed and delivered through international development agencies and through ADPs. Some of the recent education programs initiated in Sindh since last five years are indicated in the following table.

Table 5.3: Recent Education Programmes (in response to the current education policy directives)

Programs	Salient Features	Response to Policy
Sindh Education Reform Programme (SERP 1)- 2008 to 2011 (Funded by the World Bank and European Union	• School rehabilitation and improvement • Free textbooks • Girls stipend • Upgrading SEMIS • Gauging learning outcomes of students Assessments • Opening up of schools through public private partnerships • Merit based Recruitment of Teachers, • Education Management Reform • School Management Committees	Improving access, International development agencies involvement, schools with better learning environment, Student profiling
Education Fund For	• Work predominantly with low cost private and	Improving access,

Sindh- 2012-2015 (Funded by DFID)	government schools • Focus on three districts(Karachi, Khairpur and Kambar) • Established intermediaries delivering low cost private education • Implementing a voucher scheme which has proven to be effective elsewhere in Pakistan • Adoption of public schools on small scale	International development agencies involvement, schools with better learning environment
Sindh Education Reform Program SERP II (2013-2017)	• Program budget and expenditure management • Annual School Census • Student Achievement Test • School budgets • School Management Committees • School system consolidation • School infrastructure development • Public-private partnership in education • Education management • Teacher management	Access, up-gradation of schools, reduction of dropouts, involving international agencies, textbooks
ADP Schemes: (2012-2013)	• Establishment of Cluster Hub Schools in Sindh at UC Level • Up-gradation of Primary Schools to Middle Schools in Sindh (450 Units), • Establishment of Elementary Schools in Sindh (400 units), • Improving Teaching Learning Quality in SEF schools • Introduction of academic and infrastructural reforms in 200 rural/ katcha areas • Educational sites and education and development for juvenile and adult inmates (especially women) in prison approved in the meeting • Establishment of English Medium Schools in Sindh (46 units in Cambridge System, Nursery to 0 Level) • Construction/ re-construction of dangerous schools in Sindh (100 units); Consolidation/ improvement of missing facilities (public school Sukkur, Mithi, Naushehro Feroze, Chachro and Badin)	Access to schooling, up-gradation of schools, improve learning environment

Some significant initiatives and efforts have been made since the introduction of the last education policy. However, what is required is a more holistic framework of development that not only caters to the needs of the more disadvantaged areas, but also makes an alignment within the overall education system and scenario in the province.

5.1.2 Theoretical Analysis

Education is primarily about holistic development of a child. The educational research suggests that the returns on primary education are the highest among all educational levels.

The core of elementary education is the concept of child centrality, i.e. education system must be centered on students' aspirations, interests and its integration into broad societal perspective. Education system must equip each student with the basic knowledge and motivation to become a life-long learner. Education system should inculcate in the children critical thinking, universal values, civic awareness and the ability to cope with the demands of changing world.

Given the requirements of quality provision of elementary education, serious and concerted efforts are needed. In a context like Sindh's, where the mere provision of elementary education has been a daunting task, the provision of quality education aligned with global education standards, evidently, seems more challenging. The policy makers need to address the issue of quality and the quantity at the same time.

5.1.3 Analyzing the Current Situation

In order to describe the current situation of public education system in Sindh, this section is divided into three parts i.e. Access and Equity, Efficiency and Quality.

Access and Equity

The current statistics show that the ratio of boys' enrolment is significantly higher than the girls' in primary schools; however, the situation does improve in the middle and elementary schools. In fact, in elementary schools, the girls' enrolment ratio is better than the boys' (but the proportion of elementary schools in the system is only 1%).

Table 5.4: Gender wise number of schools according to level

	Boys	Girls	Mixed	Total
Primary	10,331	6,471	26,287	43089
Middle	537	594	870	2001
Elementary	122	137	294	553
Total	10,990 (24%)	7,202 (16%)	27,451 (60%)	45,643

Source: SEMIS 2011-12

Similarly, the percentage of male staff is much higher (triple and double) than the female staff in primary and middle schools respectively. Both of the indicators show that there are huge gender disparities in the system; especially, the proportion of female staff is quite alarming. The provision of female staff has a positive relationship with the enrolment of girls, as in the rural culture of Sindh, communities are generally reluctant to send their girls to the schools where male teachers are teaching in the classes.

Table 5.5: Elementary Schools' Basic Statistics

Indicators	Primary	Middle	Elementary
Student School ratio	69.17	87.02	191.69
Student teacher ratio	30.03	21.53	26.67
Teacher school ratio	2.30	4.04	7.19
Boys enrolment ratio	0.59	0.52	0.48
Girls enrolment ratio	0.41	0.48	0.52
Percent male staff	0.72	0.63	0.48
Percent female staff	0.28	0.37	0.52

Source: SEMIS 2011-12

It is evident from Table 5.6 that the girls-only schools are much lesser than the mixed schools i.e. only 16% girls' schools exist in the province. Although a large number of mixed schools also exist in the system, the average strength of girls in girls-only schools is 75% as compared to 25% in the mixed schools and 14% in the boys' schools. This clearly shows that the communities are much more inclined towards sending their girls in girls' only schools, and it is important to establish separate facilities for girls.

The trend of availability of schools in the last five years (see Table 5.6) depicts that the growth rate of schools is decreasing, i.e. instead of increase in the number of schools, there is actually a reduction of schools in the overall public elementary education system. The reduction of schools is

Table 5.6: Gender-wise Number of Schools for 5 years

Year	Boys	Girls	Mixed	Growth Rate %
2007	11,022	8,401	27,989	Base
2008	15,728	8,137	23,440	-0.23
2009	11,095	8,172	28,445	0.86
2010	12,055	7,870	27,102	-1.44
2011	10,990	7,202	27,451	-2.94

Source: SEMIS 2011-12

mostly related to the closure of non-viable schools and clustering of schools (school consolidation). Currently, around 2200 new schools have been identified to expand the access to education in the province.

In addition to existing school facilities, the status of the building conditions (see Table 5.7) is another hindering factor relevant to access and equity (it also relates well to the issue of quality): Only one-third of the buildings are in satisfactory condition, with little or no resources such as, electricity, water or toilet.

Table 5.7 Conditions of School buildings

N=35896	Satisfactory	Need Repair	Dangerous	No info
Boys	2,613	4,493	1,470	87

Girls	1,576	2,975	1,080	66
Mixed	6,175	11,370	3,825	166
Total	10,364	18,838	6,375	319

Source: SEMIS 2011-12

Efficiency

Every education system must be assessed on the basis of how efficient it is to impart consistent education to the children. On reviewing some basic efficiency-based statistics (see Table 5.8), it is evident that the education in Sindh is lagging far behind the desirable or acceptable level. For example, the transition rate from primary to middle grade (i.e. how many children in Class 5 actually get enrolled in Class 6) is about 60%. This means that more than one-third of the children do not continue their education after primary level.

Table 5.8: Efficiency Indicators

Transition rate from primary to middle	62%
Retention rate from grade 1 to grade 5	49%
Retention rate from grade 1 to grade 8	27%

Source: SEMIS 2011-12

Table 5.9: Enrolment vis-à-vis No. of Teachers

| Enrolment	1,890,162	1,370,412	3,260,574
Teachers	78,844	32,473	111,317

Source: SEMIS 2011-12

The situation is more critical if the retention rate of children from Grade 1 to 5 and Grade 1 to 8 is considered. Only 50% of the students actually survive from Class 1 to 5, which implies that the dropout of the children at the primary level is quite alarming. The situation becomes graver in higher classes, as the available figures depict that out of every 100 children, the system is able to retain only 27 children in the school. After reviewing these simple statistics, it is quite obvious evident that the elementary education system needs to be revamped and revamped on war footing, if UPE targets are to be achieved by 2020.

Quality

Quality of education is a determining factor for completion. The performance of Sindh in terms of the quality of education in Sindh is perhaps lower than any other indicators. The recent ASER survey indicates that even the basic literacy and numeracy competencies are not imparted to the students and their test results are not more than 20%.

FIG. 5.2 ASER BASIC COMPETENCY LEVEL IN SINDH (%AGE)
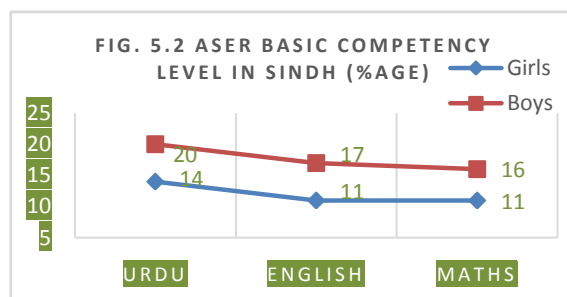
The quality of education is attributed through multiple factors ranging from quality of teachers, learning environment, children's health, and support mechanisms for the children both, at school and at home. Even on the very basic aspect of the learning environment i.e., the physical infrastructure and support, the poor quality of infrastructure is evident from the fact that the majority of schools lack basic facilities e.g. electricity, toilet and water facilities. Facilities, such as labs and libraries are virtually non-existent (at only 0.3%). Moreover, the system also needs to improve the quality of teachers (discussed in Section 8), and the overall system's management (discussed in Section 10) to improve the overall quality of education.

Table 5.10 : Basic Facilities in Schools in percentage

Electricity	38.44
Toilets	54.22
Drinking Water	47.17
Boundary Wall	56.49
Science Lab	0.32
Library	0.39
Play Ground	25.15
SMC	87.02

Source: SEMIS 2011-12

5.2.
Key Issues and Challenges

From the above analysis, it is quite evident that the system is facing some serious issues, which are being synthesized in the following lines:

- Low primary enrolment and increasing gender disparity in participation – the situation gets further deteriorated with the transition rate of students from one grade to another and from one education level to another.
- High prevalence of small schools (e.g. 50% one-room, 50% one-teacher) leading to wider use of teaching through combining multiple grades and poor education quality, discouraging the school from becoming an efficient and effective institution with proper system and procedures in place.
- Lack of basic facilities (e.g., proper classrooms, washrooms, drinking water, security, etc.) is a major constraint, especially, in the rural areas.
- Shortage of qualified and specialized teaching force, especially, for the females (and at the middle and higher levels, and in rural areas) is an important issue. Further, the quality of teaching is more important because incompetent teachers may account more for the wastage in the system.
- Limited capacity for effective school governance and education management at all levels; especially, the supervisory and accountability system is quite weak. Basic student profiling data is not part of the province's education management information system due to which important indicators of student retention and drop-out cannot be obtained reliably.

- Assessment of learning is not systematic, and formative assessment needs to be introduced in schools. In addition to that, the assessment data is not maintained at the department level due to which outcome indicators cannot be obtained reliably.

The current dismal condition of the elementary education system is the result of various system wide challenges related to human and physical/ financial resources, utilization of available resources and the capacity of educational managers. The deteriorating situation of law and order adds further to the challenges. In fact, lack of supply side deficiencies trigger demand issues, such as, lack of trust in the system. These challenges require a system-wide approach and strategic orientation in creating a reliable, resilient and efficient education system.

Revamping elementary education is a gigantic task, as this alone constitutes more than 90% of public schooling in Sindh. Yet, there are opportunities to develop effective and productive system, as nearly all the donor agencies are willing to provide support both, financial and technical. Opportunity also lies in the political will, as it is becoming difficult for political leadership to ignore the situation of education in the province.

5.3.
Objectives, Targets and Strategies

From the above analysis, the following objectives have been formulated.

Objectives
1. To increase access to education at Class I-VIII level
2. To increase enrollments in the elementary/ primary schools
3. To increase efficiency of elementary/primary schools through implementing effective school supervision system
4. Implementing formative assessment in schools
5. To conduct research on issues of delivery services of the elementary education

Next, Table 5.10 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table: 5.10: Primary and Elementary Education: Objectives, Strategies, Targets and Activities

Objectives	Strategies	Target/ Indicators (2013 – 2016)	Activities
Strategic Objective 1	• Document best practices in the region and local issues to access, especially for marginalized groups	• Document best practices to improve access by 2014 • Document issues	• Document best practices to improve access • Conduct research study, addressing issues of

Objectives	Strategies	Target/ Indicators (2013 – 2016)	Activities
Increase access to education at class I-VIII level	• Engaging the private sector • Use of innovative approaches to address the issue of marginalized children: ○ Community schools ○ Mobile schools ○ Distance schools • Addition of classrooms and allied facilities in existing schools • Construction of new schools in under-served areas • Establishment of Community Schools • Introduction of Mobile Schools • Establishment of Distance Schools	pertaining to access in the local context by 2014 • 5 districts with lowermost access initiate projects to enhance access with help of the private sector by 2016 • 20% of the underserved areas get access to education • 10% of the underserved areas get community schools in 3 years • 100 mobile vans for Distance schools centres established in 5 districts	access, especially for marginalized children (including poor, girls, rural/ urban slums, religious and ethnic minorities, disabled, from remote areas - coastal belt, deserts and mountainous areas) • Develop an engagement plan for private sector to improve access to elementary education • Formulate and implement innovative strategies and plan to reach out targeted groups • Document the processes and outcomes of innovative programs
Strategic Objective 2 *Increase enrolments in Elementary/ Primary Schools*	• Strengthening of 2nd shift schools policy on need and merit basis • Public-private partnership for under-served areas • Financial support to ultra-poor and vulnerable children • Increasing the number of female teachers at primary level (gradually moving to females only at elementary level) • Reduction in Dropouts • Increase transition rates	*General:* • Primary: Increased enrolment with the annual growth rate of % 5-7% / year i.e. • By the end of 2016, NER is increased from 53% to 70% *Year Specific:* • NER increased to 58% by 2014 • NER increased to 63% by 2015 • NER increased to 70% by 2016 • Reduce dropout by 10% at primary level each year • Middle: Increased enrolment with the growth rate of 3-5% per year i.e. • By the end of 2015, NER is increased from	• Guidelines for need based 2nd shift developed and implemented • Initiate policy development process to reuse school space for flexible school timings • Identification of underserved areas and developing relevant programs with the help of private sector • Financial support to poor and vulnerable students • Recruit female teachers only • Develop projects for testing innovative approaches and ideas • Enhance enrolment drive in all districts

Objectives	Strategies	Target/ Indicators (2013 – 2016)	Activities
		19% to 30% *Year Specific:* • NER increased to 22% by 2013 • NER increased to 26% by 2014 • NER increased to 30% by 2015 • Increase Transition by from Primary to Middle 7 % each year	

Strategic Objective 3
 	
Increase efficiency of elementary /primary schools through implementing effective school supervision system
	• Ensuring that schools work as a system i.e. with annual plans, school timetables, and annual performance audit, etc.
	• Whole school development plan to improve learning environment
	• Strengthening of the education management information system for reliable data
	• Capacity development of supervisory skills (through CPD courses)
	• Enhanced communication between parents and teachers
	• Integrated EMIS
		General:
		• By the end of 2015, grade wise efficiency shall increase on average
		  - There is reduction in dropout from 17.4% to 10%
		  - Transition rate is increased from 62% to 75%
		  - Survival rate is increase from 49% to 65%
		• By the end of 2015, 1500 Supervisors receive CPD in school supervision skills
		• Integrate EMIS with student, teacher and assessment profiles by 2016
			• Development, approval and implementation of whole school development policy
			• Whole school development plan to improve learning environment (co-curricular activities, enriched learning experiences)
			• Development, approval and implementation of education managers and teachers performance policy
			• Develop and implement courses for development of supervisory cadre
			• Put in place policy for mandatory parents-teacher meeting once in a quarter
			• Redefine the scope of EMIS through technical teams

Strategic Objective 4 *Implementing formative assessment in schools*	• Study current practices of students assessment in schools • Capacity development of teacher to implement formative assessment • Implementing formative	• Every school has at least one teacher who can use formative assessment and can guide her/his peers by 2015 • 25% schools use	• Study current practices of students assessment in schools • Capacity development of teacher to implement formative assessment • Implementing formative

Objectives	Strategies	Target/ Indicators (2013 – 2016)	Activities
	assessment in schools	formative assessment by 2016	assessment in schools
Strategic Objective 6 *Conduct research on the issues of delivery services of the primary education*	• Mapping and prioritizing of issues related to education service delivery for operational research (max 3 studies)	• By the end of 2015, maximum 3 research studies are conducted	• Prioritize issues • Develop and implement research framework and plan • Conduct studies

6. SECONDARY AND HIGHER SECONDARY EDUCATION

> "While elementary education determines the contours of the life pursuits of an individual, Secondary and Higher Secondary education determine the manner and measure of an individual's performance as a citizen and as a contributor to the economy both, for individual and State benefits" (White Paper 2007)

This section presents the analysis, priorities and plan pertaining to the Secondary and Higher Secondary Education in the province. In the context of Sindh, the secondary education (also known as matriculation) refers to Grades 9-10, while higher secondary education refers to Grades 11-12, which is also known as Intermediate Education.

The current education system in Sindh requires young students to make early choices for their future careers into the streams of Science(further divided in Biology and Computer Science), Arts, Commerce and Home Economics (for Girls only). After graduating from secondary school, a student has the following choices:

Table 6.1: Existing Streams for Career Choices at Secondary Level

Category	Choices
Science subjects (Physics, Chemistry, Biology, Mathematics, Computer Science)	• In science stream, a student can choose either pre-engineering or pre-medical group • Student has option to take other streams of science, arts, commerce and computer studies • The graduate can join intermediate college or a higher secondary school
Graduating with Science, Arts, Commerce and Home Economics	• The graduate can only opt for subjects in the same stream • The graduate can join intermediate college or a higher secondary school

6.1. Policy Context and Situation Analysis

6.1.1. Policy Context: Historical Roots and Current Policy

Secondary education has always been acknowledged as an important milestone in education. For instance, the Constitution of Pakistan, in its Article 37-B, commits to provision of secondary education: "The State shall remove illiteracy and provide free and compulsory secondary

education within minimum possible period." The newly inducted Article 25-A reiterates the same commitment. The article says:

> "The State shall provide free and compulsory education to all children of the
> age of five to sixteen years in such manner as may be determined by law."
> (Article 25-A,Constitution of Pakistan 1973)

Recently, the Government of Sindh has passed The Sindh Right of Children to Free and Compulsory Education Bill, 2013.

The following matrix provides an overview of historical development from the perspective of national educational policies.

Table 6.2: Overview of Historical Development - National Educational Policies' Context

National Educational Policies	Focus on Secondary/ Higher Secondary Education
1947 First Educational Conference	• The 'Committee of Primary and Secondary Education' of the Conference proposed that 'the intermediate stage should be abolished and these classes i.e. XI and XII should be added to the secondary level'
1951 Second Educational Conference	• The policy was concerned about untrained teacher and emphasized teachers' training at secondary levels
1957 National Education Commission	• Based on thorough analysis, emphasized that secondary education should be recognized as a complete stage in itself • At secondary level of education, the curriculum should offer a common core of subjects compulsory for all students and a variety of elective courses designed to prepare students for careers
1969-70 The New Education Policy	• Building on 1959 policy, it proposed the creation of a District School Authority in each district. The Authority was to be autonomous with specific functions, to streamline the primary and secondary school system
1972-80 The Education Policy	• Noticed the malpractices in the system of terminal examinations by the Boards of Intermediate and Secondary Education and put emphasis on making every effort to eliminate these malpractices- a goal yet to be achieved
1979 National Education Policy	• Proposed replacement of the existing four-tier system; namely, primary, secondary, college, university to three tiers, namely, elementary, secondary and university. All schools need to be upgraded as higher secondary schools

1992 National Education Policy	• The policy proposed shifting of classes XI and XI1 from the colleges to the general schools and vocational schools
1998-2010 National Education Policy	• Proposed a conceptual framework to reform secondary education. The features were: enhancing access to secondary, integration with technical and vocational education based on our experiences and adequate development of a student to enter into world of work or further studies

The historical examination of the educational policies indicate that secondary education has been an area of neglect in the sector despite its significance in relation to providing skilled workforce and input to tertiary education.

The NEP 2009 has identified two main shortcomings:
   a) Narrow base that leaves a large number of young people out of the system
   b) Poor quality of skills produced by the system.

Based on its analysis, NEP 2009 has made the following important policy provisions:

Policy Actions for Secondary/ Higher Secondary Education – NEP 2009

Policy Action 1 — Provision shall be expanded, particularly in the rural areas and of schools dedicated for girls. Priority shall be given to those locations where the ratio of secondary schools is low.

Policy Action 2 — Student support shall be increased to prevent students from dropping out of school for financial reasons.

Policy Action 3 — Schools shall introduce more student-centered pedagogies.

Policy Action 4 — Counseling facilities shall be made available to students from the elementary level onwards, in order to constructively utilize their energies, to deal with any displays of aggression amongst young students and to address any other psychological distress that a student may be in, by suggesting a suitable remedy.

Policy Action 5 — Life Skills-Based Education (LSBE) shall be promoted.

Policy Action 6 — Counseling at higher secondary level must also address the career concerns of young students and encourage them to take up studies as per their aptitude other than the "accepted" fields of study, be it technical, vocational or any other area of study.

Policy Action 7	Schooling shall also be made more attractive by adding community service programmes.	

Policy Action 8	Grades XI and XII shall not be part of the college level and shall be merged with the school level, forming part of existing secondary schools where needed and provision of necessary human and physical resources shall be ensured. This exercise shall be undertaken after a detailed study of the failures of similar previous efforts.	

Policy Action 9	A system for ranking of primary and secondary educational institutions across the country shall be introduced with rankings based on result outcomes, extra-curricular activities and facilities provided to the students. This will encourage healthy competition amongst schools.	

Policy Action 10	To create an order for excellence in the country, a "National Merit Programme" shall be introduced to award bright students

(cf. NEP 2009, Section 5.3, pp. 29-30) | |

The NEP 2009 emphasizes on enhancing access, reducing drop-outs, improving employability of graduates (through counseling services) and enhancing schools' ability to retain the students (this also includes scholarships for females besides improving pedagogy and learning environment).

6.4 Analyzing the Current Situation

Access and Equity

The issues of access and equity are inextricably linked with each other. The following paragraphs analyze the current situation of secondary and higher secondary education using statistics available through SEMIS. The Table 6.3 shows that boys and girls schools at secondary and higher secondary levels are almost the same

Table 6.3: Distribution of Secondary and Higher Secondary Schools (Gender wise)

	Boys	Girls	Mixed	Total
Secondary	641	513	485	1639
Higher Secondary	101	86	88	275
Total	742	699	573	1914

Source: SEMIS 2011-12

and, in addition to that, mixed schools where both, boys and girls, can enroll are also present. The real problem of access gets underscored when all types of schools are compared. Figure 6.1 provides a summary of recent figures on public schools.

Fig. 6.1
Public Schools

■ Primary & Elementary ■ Secondary
■ Higher Secondary

3% 1% 96% 1%
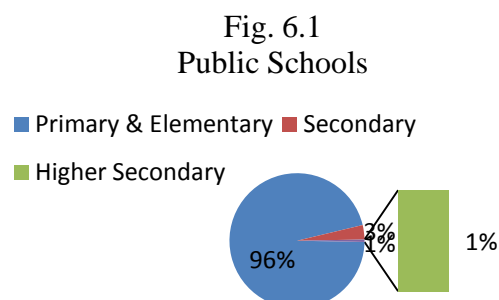
The figure shows a huge gap in terms of access to education when comparison is made between elementary and secondary level. The school facilities at secondary level make only 4 % of the total public schools. This ratio needs to be improved urgently. Moreover, there is very modest up-gradation of the secondary and higher secondary schools. The following tables provide data on number of secondary and higher secondary schools over the past five years.

Table 6.4: Secondary Schools (over past five years)

	Boys	Girls	Mixed	Total
2007	638	491	472	**1601**
2008	762	476	366	**1604**
2009	663	518	481	**1662**
2010	684	513	444	**1641**
2011	641	513	485	**1639**

Source: SEMIS EDUCATION PROFILE (ASC 2011-12)

The Table 6.4 shows that over the last five years, only 38 schools were added or upgraded. The picture is quite dismal from this perspective. Similarly, the following table provides data for higher secondary schools for the last five years. The Table 6.5 shows that there had been an average increase of 10 schools per year for boys, while the average increase in girls' schools was only 5 per year. Another important aspect of physical access is the physical status of the school buildings that also do not present a very promising picture. Table 6.6 provides a summary of the physical status of the secondary and higher secondary schools.

Table 6.5: Higher Secondary Schools (over past five years)

	Boys	Girls	Mixed	Total
2007	49	66	83	**198**
2008	73	72	71	**216**
2009	73	71	87	**231**
2010	88	75	83	**246**
2011	101	86	88	**275**

Source: SEMIS EDUCATION PROFILE (ASC 2011-12)

Table 6.6: Physical Status of School Buildings

		Satisfactory Buildings	Need Repair	Dangerous	No information
Secondary	Boys	170	353	85	5
	Girls	183	254	55	5
	Mixed	79	304	91	1
	Total	432	911	231	11
	Percentage	27.26%	57.48%	14.57%	0.69%
Higher Secondary	Boys	16	66	18	0
	Girls	27	52	6	1
	Mixed	14	59	14	1
	Total	57	177	38	2
	Percentage	20.80%	64.60%	13.87%	0.73%

Source: SEMIS EDUCATION PROFILE (ASC 2011-12)

The above table shows that less than one-third of the school buildings are at satisfactory level in secondary schools, and this figure of satisfactory school buildings gets worse (around one-fifth) in case of the higher secondary schools. In both the cases, around 14% school buildings are in dangerous conditions.

Enrollments

The overall pattern of enrollments is presented in the Figure 6.2. The figure shows that only 23% students are enrolled at secondary level. More than half of the students enrolled at the primary and elementary level do not reach to the secondary level. Within secondary education, the enrollments are given in Table 6.7.

Fig. 6.2
Enrollments

■ Primary & Elementary ■ Secondary
■ Higher Secondary

16%
7%
77%
7%
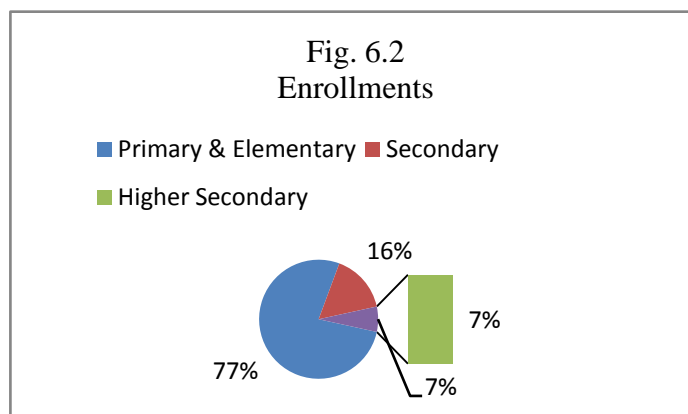
Table 6.7: Enrollments at Secondary and Higher Secondary Schools (Gender wise)

	Boys	Girls	Total	Comments
Secondary	393,984	278,079	672,063	58.62% Males 41.38% Females
Higher Secondary	179,161	110,362	289,523	61.88% Males 38.12% Females

Source: SEMIS EDUCATION PROFILE (ASC 2011-12)

The Table 6.7 shows that the gap between male and female enrollments is around 17% at the secondary level, but it gets acute (.i.e., around 24%) at the higher secondary level.

Teachers

The overall distribution of teachers in elementary and secondary level is given in Figure 6.3. As the figure indicates, in the workforce composition, the percentage of teachers in secondary and higher secondary education is almost the same (1% higher) when compared to the pattern of enrollment at elementary and secondary levels. Moreover, the Table 6.8 shows that the discrepancy in male and female teachers both, at secondary and higher secondary school level, is around 20%.
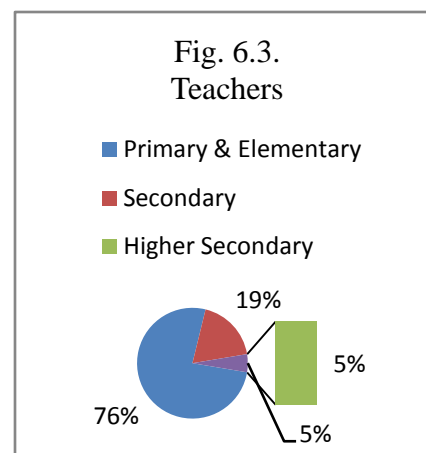

Fig. 6.3.
Teachers

■ Primary & Elementary
■ Secondary
■ Higher Secondary

19%
5%
76%
5%

Table 6.8: Male and Female Teachers at Secondary and Higher Secondary Level

	Male	Female	Total	Percentages
Secondary	16,104	11,005	**27,109**	59.40% Males 40.60% Females
Higher Secondary	4,972	2,705	**7,677**	64.76% Males 35.24% Females

Source: SEMIS EDUCATION PROFILE (ASC 2011-12)

secondary level.

Efficiency

Table 6.9 indicates that the dropout rate is increasing both, from elementary to secondary education and also from secondary to higher secondary education. Around 80% students leave the system at higher secondary level.

Quality

This section maps the quality in secondary and higher secondary education, using UNICEF's framework (2000) for quality in education. The framework has five dimensions: learner, learning environment, content, processes and outcomes. Firstly, quantitative data, mainly available through SEMIS, is presented and, then, the overall description is provided using anecdotal evidences.

Table 6.9: Dropout Rates (Grades 8 – 11)

Dropout Rates	ASC 2010-11	ASC 2011-12
Dropout rate from class 8 to 9	8.2%	11.1%
Dropout rate from grade 10 to 11	77.9%	88.9%

Source: SEMIS EDUCATION PROFILE

The physical status of secondary and higher secondary schools is already presented and discussed in the above paragraphs which showed that only a small fraction of schools is in good shape, whereas majority of the schools need repair. Table 6.10 gives the break-up of facilities at secondary and higher secondary schools.

Table 6.10: Facilities at Secondary and Higher Secondary Schools

	Total Schools	Lab	Library	Playground	SMC	Average
Secondary	1,639	847 51.58%	482 29.41%	814 49.66%	1600 97.62%	57.07%
Higher Secondary	275	201 73.09%	144 52.36%	154 56%	264 96%	69.36%

Source: SEMIS EDUCATION PROFILE (ASC 2011-12)

The above table shows that more than 70% secondary schools do not have library facilities, which has implications for learning environment. Similarly, around half of the higher secondary

schools do not house a library. In the paragraphs below, the subject specific distribution of science labs is presented.

The following table provides data on the current scenario of lab facilities at the government schools.

Table 6.11: Lab Facilities at Secondary Schools

		Home Economics	Physics	Chemistry	Biology	Computer	Total	%
Boys	Rural	13	69	62	75	57	276	23.79%
	Urban	19	265	245	237	118	884	76.21%
	Total	32	334	307	312	175	1160	100%
Girls	Rural	15	30	23	33	29	130	16.09%
	Urban	58	170	169	170	111	678	83.91%
	Total	73	200	192	203	140	808	100%
Mixed	Rural	9	86	88	107	43	333	76.73%
	Urban	4	27	25	30	15	101	23.27%
	Total	13	113	113	137	58	434	100%
Grand Total		118	647	612	652	373	2402	

Source: SEMIS EDUCATION PROFILE (ASC 2011-12)

The above table provides interesting insights into the lab facilities available in secondary schools. For example, the biology lab has the largest number and other subjects which are offered in the same group (such as, physics and chemistry) do not have the same number of labs. The table further shows that the number of computer labs is nearly half of that of Biology labs; and there is no data available regarding the functionality of these labs.

Table 6.12: Lab Facilities at Higher Secondary Schools

		Home Economics	Physics	Chemistry	Biology	Computer	Total	%
Boys	Rural	4	28	38	39	31	140	56.45%
	Urban	2	30	28	23	25	108	43.55%
	Total	6	58	66	62	56	248	100%
Girls	Rural	2	16	13	14	20	65	31.25%
	Urban	15	30	32	33	33	143	68.75%
	Total	17	46	45	47	53	208	100%
Mixed	Rural	4	48	46	47	36	181	95.26%
	Urban	0	1	1	4	3	9	4.74%
	Total	4	49	47	51	39	190	100%
Grand Total		27	163	158	160	148	656	

Source: SEMIS EDUCATION PROFILE (ASC 2011-12)

The above table shows that the facility of Home Economics lab is the lowest as compared to the provision for other subject labs. The table further shows that the computer labs are not at par with other science labs.

Teachers Professional Qualification

Table 6.13: Teachers' Professional Qualification at Secondary and H. Secondary Levels

Level		PTC	CT	B. Ed.	M.Ed.	Other	Un-trained	NoInfo	Total
Secondary	Male	139	1,246	4,209	7,471	1,889	294	136	15,384
	Female	116	1,026	5,037	3,312	532	68	75	10,166
	Total	255	2,272	9,246	10,783	2,421	362	211	25,550
HigherSec.	Male	24	234	915	2,807	353	75	38	4,446
	Female	22	104	689	1,150	83	32	4	2,084
	Total	46	338	1,604	3,957	436	107	42	6,530

Source: SEMIS 2009-10

There is an obvious need to develop indicators that can measure the quality in secondary and higher secondary education more comprehensively. The following table provides an overview of quality at the secondary level.

Table 6.14: Overview of Quality in Secondary Education (Using UNICEF framework)

Dimension	Observations / Findings
Quality Learner	• There is no data available on students' profile entering into secondary education and/or leaving secondary education except academic results
Quality Learning Environments	• There is no documentation of different aspects of learning environment (such as information regarding students club and forums) beyond basic physical facilities and student–teacher ratios
Quality Content	• Current content does not cover and relate well with market-oriented skills s well as life skills (NEP 2009)
Quality Processes	• Text-based and 'barren' teaching learning processes (relevant policy action is also proposed by NEP 2009) • Quite limited opportunities for teachers learning (details in Chapter 8)

	• Inadequate and sporadic co-curricular activities • Lack of standards for supervision, monitoring and support • Limited use of ICT for teaching learning and management process
Quality Outcomes	• There is some data available such as PEACE, ASER, and SAT . However, that is hardly used to improve the educational processes. • Higher order thinking is not promoted in examination

6.2
Key Issues and Challenges

Based on current policy and deliberations of the Technical Working Group (Secondary education), the issues and challenges relevant to secondary and higher secondary education are summarized in this section. These issues, in broader terms, can be seen as extension of issues raised in the discussions of elementary education.

As indicated in NEP 2009, there is a limited provision of secondary and higher secondary education that has resulted in 'structural drop out' of a large number of students from the system. The graduates of secondary and secondary education do not have the relevant market skills. This issue highlights the challenge of developing more relevant curriculum for secondary education.

In the following table, the issues and challenges have been presented.

Table 16: Synthesis of Issues and Challenges

Issues	Challenges
Access and Equity	• Limited provision of secondary and higher secondary education.
	• Low enrolment in existing schools
	• Non availability of subject specialist (Science, Math, English)
	• Subject specific lab facilities
	• Limited options for females , particularly in rural areas

Efficiency (internal and external)	• Management capacity to address issues of access and quality
	• Prevalent malpractices in examination system
	• Low transition rates from secondary to higher secondary
	• No provision for career counseling
	• Quality standards / minimum specifications for educational processes and outcomes are missing
Quality	• Examination promotes rote learning
	• Existing curriculum does not fulfill the individual and societal needs
	• Lack of professional harmony between subject specialist and teachers
	• Lack of accountability at individual and system level

The above table indicates specific areas of intervention to improve secondary and higher secondary education in Sindh. Based on the above analysis, the following sections present strategic objectives and strategies for the betterment of secondary education.

6.3
Objectives, Targets , Strategies and Activities

From the above analysis, the following objectives have been formulated:

Strategic Objectives
1. Expand the provision of Secondary and Higher Secondary Education
2. Increase enrollments in the existing Secondary and Higher Secondary Schools.
3. Develop contextually relevant and broad based curriculum
4. Revitalize vocational education within mainstream education in order to increase employability and feed in to professional institutions
5. Facilitate students in their career choices and help in psychological issues.
6. Strengthen management and supervision capacity for Secondary and Higher Secondary Education

Next, Table 6.17 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table 6.17: Secondary and Higher Secondary Education: Objectives, Strategies, Targets and Activities

GOAL: **Improving the provision and quality of Secondary and Higher Secondary Education in Sindh**			
Strategic Objective	**Strategies**	**Targets (2013-2016)**	**Activities**
Strategic Objective 1 *Expand the provision of Secondary and Higher Secondary Education*	• Upgrading of large elementary schools as secondary schools • Upgrading of large secondary schools as higher secondary schools • New comprehensive schools construction • Recruitment of subject specialists for higher secondary schools • Upgrading of lab facilities in higher secondary schools	• 100 schools get upgraded as higher secondary school by 2016 • 200 Schools added as secondary schools by 2016 • 100 new comprehensive schools get constructed by 2016 • Subject specialists recruited by 2016	• Identify list of elementary/ secondary schools for upgrading • Get criteria for up-gradation approved • Identify sites for new schools • Construct new secondary schools • Prepare SNEs for additional staff (need based) • Hire staff through a competitive process (merit based and need based) • Enhance number of campus based schools, where primary and secondary are within one boundary • Rationalize existing placements at school level
Strategic Objective 2 *Increase enrollments in the existing Secondary and Higher Secondary Schools*	• Scholarships for female students from disadvantaged backgrounds • Increased infrastructure facilities at the schools • Student-centered	• Increase in transition by 5% annually • 5 % improvement in GPI • Increase Net Enrolment Rate by 5% districts, sex and location	• Financial support for scholarships for females • Conduct infrastructure audit of secondary and higher secondary schools for enabling learning environment • Add facilities on the basis of audit

GOAL: **Improving the provision and quality of Secondary and Higher Secondary Education in Sindh**			
Strategic Objective	**Strategies**	**Targets (2013-2016)**	**Activities**
	pedagogies in the schools • Enhancement of SMCs' role to increase transition rates from elementary education to secondary education		• Drive enrollment through SMCs • Secondary schools develop and implement enrollment enhancement programs in collaboration with nearby schools (elementary, middle). • Create provision of boarding facilities for girls • Rationalize lab facilities for secondary schools • Organize school based (and school initiated) professional development sessions to improve students participation in learning processes • Mobilize SMCs to enhance the retention capacity of schools through developing more conducing learning environment
Strategic Objective 3 *Develop contextually relevant and broad based curriculum*	• Review of existing curriculum • Study to identify market relevant skills for youth in Sindh • Provision of co-curricular activities in every school	• Curriculum enrichment manual is developed and implemented • Study report is available on market relevant skills for youth in Sindh by 2013 • Weightage is given to co-curricular activities in school performance criteria/ standard	• Develop life skills curriculum • Create school based students' clubs, such as environment club, sports club, drama club, writing club and health and hygiene club • Develop network of schools for enhanced students activities

GOAL: **Improving the provision and quality of Secondary and Higher Secondary Education in Sindh**			
Strategic Objective	**Strategies**	**Targets (2013-2016)**	**Activities**
Strategic Objective 4 *Revitalize vocational education within mainstream education in order to increase employability and feed in to professional institutions*	• Strategy development for introducing vocational trades into mainstream education through Linkages with STEVTA and local industry • Skill development for better employment • Capacity building of teachers in authentic assessment and developing higher thinking assessment tasks	• Approved Strategy paper is available by 2014 • % of teachers educated in skill based courses • % of teachers educated in authentic assessment and developing higher thinking assessment tasks	• Notify and constitute a committee to develop the strategy paper • Conduct consultative process for inducting vocational courses • Introduce new courses of market relevance, such as repairing home appliances, cell phone, automobile; sewing; patch work; cooking, etc. • Develop IT skills as a special emphasis
Strategic Objective 5 *Facilitate students in their career choices and help in psychological issues*	• Capacity building of staff at secondary schools in career and psychological counseling (basic level) • Mechanism should be developed to use resources and expertise outside public sector to achieve this objective	• 100 % higher secondary schools have at least one staff member educated in career and psychological counseling skills (basic level) by 2015	• Develop criteria for staff to be provided with counseling skills • Identify staff to be professionally developed • Engage PITE/ STEDA in designing and delivering training to selected teachers • Conduct follow up of teachers after PD • Identify NGOs that can assist in career and psychological counseling • Develop a mechanism for collaboration • Plan, implement and monitor the collaborative

GOAL: **Improving the provision and quality of Secondary and Higher Secondary Education in Sindh**			
Strategic Objective	**Strategies**	**Targets (2013-2016)**	**Activities**
			activities
Strategic Objective 6 *Strengthen management and supervision capacity for Secondary and Higher Secondary Education*	• Development and implementation of school ranking system • Capacity building of Principals in school improvement • Development implementation of school based quality assurance mechanism	• System of school ranking is developed by 2014 • 100% of Principals of higher secondary schools have received PD by 2015 • 75 % of higher secondary schools have internal quality assurance mechanism in place (and have produced, at least, one internal QA report)	• Identify core team to develop ranking criteria for secondary schools through participatory approaches • Pilot ranking system in 4 districts • Revise and implement the ranking system • Develop QA mechanism at school level • Implement accountability QA mechanism at school level

7. LITERACY AND NON- FORMAL EDUCATION

Basic education is a fundamental human right, as it is a vehicle for human development. The Government of Pakistan (GoP) is constitutionally committed to provide education for all:

> TheState shall'remove illiteracyand provide freeand compulsory secondary educationwithinminimum possibleperiod'. (Constitution of Pakistan 1973, Article 37-B)

Literacy, being a key learning tool, is the first step towards basic education. The Sindh Vision 2030 can only be realized through building an educated and literate society. With the Eighteenth Constitutional Amendment, the responsibility of educating masses has shifted solely to the provinces. The Eighteenth Constitutional Amendment has made education as a provincial subject (by deleting it from Concurrent List) and the amendment has also introduced a new article, Article 25-A, which says:

> The State shall provide free and compulsory education to all children of the age of five to sixteen years in such manner as may be determined by law.(Constitution of Pakistan 1973, Article 25-A)

Within this context of compulsory education, it becomes both, urgent and important for educational planners and managers to take meticulous stock of the situation. Leaving aside the issue of quality learning outcomes (which is an important dimension) for the time being, the following table simply presents basic data on children who ever attended school.

Table 7.1 shows that 40 % of the population never went to school. Further, the data clearly indicates the discrepancies in terms of location and gender. Overall,

Table 7.1: Percentage of population that has ever attended school (percentage)

	Percentage of Population ever Attended School (%)		
	M	F	Both
Urban	82	69	76
Rural	61	22	43
Overall	72	47	60

Source: PSLM 2010-11

more than 50 % females never attended school and the same is true for the rural population in Sindh. Unfortunately, the issue becomes compounded for rural females, where around 88 % have never attended school. Given this situation, providing access to education for rural females is an urgent priority. The current literacy rate for Sindh, using the above definition, is given in Table 7.2.

Table 7.2: Percentage of Literate Population 10 Years and Older (percentage)

The table shows that the overall literacy rate in Sindh is 59%. The table underlines that in addition to the disparities between rural and urban, there are continued disparities between male and female literacy rates. This gender disparity combined with rural – urban disparity becomes worse to the extent that only 22 % females are literate as compared to

	Male	Female	Both
Urban	82	68	75
Rural	60	22	42
Overall	71	46	59

Source: PSLM 2010- 2011

60% for males in rural. Given the Sindh Vision 2030 and the existing situation, improving the literacy rate of females becomes an important priority.

As Education & Literacy Department, Government of Sindh is committed to providing quality learning opportunities and Education for All, besides formal school system, the following educational provisions have been made available for out-of-school children and adults who have missed the opportunity.

The Directorate of Literacy and Non Formal Basic Education (DL&NFBE) is responsible for programmes on literacy and non-formal education in Sindh and has recently developed Sindh

Table 7.3: Non Formal Education (NFE) Provisions

Age Cohort	Provision
5- 14 Year	Non- Formal Basic Education – accelerated program
10 + Year	Adult Literacy

Literacy Plan 2010- 2015 with a vision of 'Literate, educated and prosperous Sindh province'. However, with high illiteracy rate (male 35 %, female 68 %: cf. PSLM 2011) and huge discrepancies, the overall task needs strong commitment.

7.1
Policy Context and Situation Analysis

7.1.1 Policy Context: Historical Roots and Current Policy

Historically, commitment to the adult literacy has always been a part of international commitments and a cornerstone of national commitments. The following table briefly describes international commitments.

The commitments indicate that Pakistan is signatory to all important literacy initiatives taken at the international level. This commitment is also reflected in national educational polices and plans. The educational policies of 1972 and 1979 laid particular emphasis on adult literacy. In 1981, a Literacy and Mass Education Commission was established to promote literacy. The National Education Policy of 1992 pledged to achieve a literacy target of 50% by 1995 and 70% by 2002. The National Education Policy (1998-2010) aimed to raise literacy rate to 70% by the year 2010. The Education Sector Reforms (2001-2005), adopted as action plan to implement the National Education Policy of 1998-2010, committed to Education for All (EFA) goals and targets. The National Plan of Action (NPA) on Education for All (2001-2015) was prepared as a follow up on the Dakar Framework of Action (2000). NPA focuses on three themes i.e., elementary education, adult literacy and early childhood education.

> *Box 7.1 :Literacy - International Commitments*
>
> - Pakistan is signatory to Education For All (EFA) and Millennium Development Goals (M DGs) - Literacy is one of the six Goals of EFA and Pakistan is committed to improve it to 50% by 2015
>
> - Target: 86% literacy to be achieved by 2015 (National Plan of Action for EFA - Ministry of Education, 2003)
>
> - UN Literacy Decade (2003-2012): Pakistan reflected achievement of UNLD goals in its PRSP-1
>
> - LIFE: Pakistan has agreed to launch Literacy Initiative for Empowerment (LIFE) in 2005.
>
> - PRSP: EFA and Literacy are part of Poverty Reduction Strategy Paper (PRSP II)

Despite the fact that increase in literacy rate has been consistently mentioned as a policy target in almost all educational policies, our progress with literacy has been least encouraging. The overall growth rate in literacy has been under 1% over the years. In absolute terms, there is a continuous increase in the number of illiterates in Sindh.

This discouraging progress in literacy had been due to different reasons. UNESCO's report on 'Literacy Trends and Statistics in Pakistan' has noted that adult literacy is a neglected area in terms of planned action in Pakistan, whereas 'Guidelines for Strategic Frame of Action for United Nations Literacy Decade (2003-2012) in Pakistan' identifies lack of political will, weak organizational structure and inadequate finances as major contributing factors to the current literacy scenario in Pakistan.

Current Policy Context

The National Educational Policy 2009, which is still a jointly owned national document mandated through Joint Declaration of Education 2011, identifies four key issues with the current literacy and non-formal learning programs. Those are:

Box 7.2: Key Issues with Current Literacy and Non-Formal Learning Programs

Overall, the policy analysis refers to the dire need of linking such programs to the economic empowerment, as learners may not get attracted just for learning alphabets, especially in the contexts of ultra-poverty. In addition to that, minimum quality standards for teachers and leaning outcomes need to be defined and guarded.

Policy Actions for Adult Literacy and Non-formal Education – NEP 2009

Policy Action 1 — Literacy rate shall be increased up to 86% by 2015 through up-scaling of ongoing programmes of adult literacy and non formal basic education in the country.

Policy Action 2 — Sustainability of adult literacy and NFE programmes shall be ensured by strengthening organizational structure, coordination and enhancing budgetary allocation for this neglected sub sector.

Policy Action 3 — Government shall develop a national literacy curriculum and identify the instructional material, teacher training modules and professional development programmes to support the curriculum. The curriculum shall be objectives driven, so as to facilitate assimilation of trainees into mainstream economic activity, by imparting skills training as per local needs and market trends.

Policy Action 4 — Government shall develop and enforce minimum quality standards for organizations involved in literacy in the form of literacy certification and accreditation regime. The literacy providers shall be required to offer the literacy programmes according to the specified standards.

Policy Action 5 — A system shall be developed to mainstream the students of non-formal programmes into the regular education system, and a system of equivalence shall be developed to permit such mainstreaming. New literates shall receive formal certification so as to facilitate their entry into government schools.

Policy Action 6 — Provinces and district governments shall allocate a minimum of 4% of education budget for literacy and non-formal basic education (NFBE).

Policy Action 7	Linkages of non-formal education with industry and internship programmes shall be developed to enhance economic benefits of participation.
Policy Action 8	Horizontal linkages between schools and vocational/skills training centres shall be established.
Policy Action 9	Government schools shall initiate non-formal education (NFE) stream for child labourers. Children involved in various jobs or work shall be brought within the ambit of non formal education system through need-based schedules and timings.
Policy Action 10	National Education Foundation (NEF) programmes, currently in practice up to grade 5 shall be expanded up to grade 10, wherever required.
Policy Action 11	Special literacy skills programmes shall target older child labourers, boys and girls (aged between 14 and 17 years). Special educational stipends shall be introduced to rehabilitate child labourers.
Policy Action 12	Arrangements shall be made to use school buildings (where available) for adult literacy after school hours.
Policy Action 13	Government shall develop guidelines for post-programme initiatives. Regular follow-up shall be made a part of the literacy programs.
Policy Action 14	Steps shall be taken to ensure that teachers for adult learners and non-formal education are properly trained and have a well defined career structure allowing them to move into mainstream education.
Policy Action 15	International Development Partners, community and private sector involvement in awareness programmes, content, design and availability of facilities, shall be mobilised.

(cf. NEP 2009, Section 5.4, pp. 30-31)

The NEP 2009 emphasizes on scaling up of NFE programmes, improving quality of these programmes (through more financial allocations, management development, accreditation of institutions involved in NFE, teachers training and career laddering, etc.).

The Non- Formal Basic Education (NFBE) is, by and large, practiced as an alternative to formal schooling for the children who either do not have access to the formal school or have passed the admission age. From this perspective, the NFBE is seen as gap filler to the formal schooling. Therefore, there is a pressure to standardize the process so that mainstreaming can be achieved.

Similarly, there is a huge pressure from the stakeholders to make adult literacy programs more relevant for the lives of the adults and suggestion to link it strongly to employment opportunities. Literacy should have a cause greater than the ability to decode symbols. Literacy should increase the life chances of people.

7.1.2 Analyzing the Current Situation

The purpose of this section is to describe the current situation so as to help identify key issues related to NFE in the province. This description will also provide the basis for developing suggestions and priorities for the sector plan.

Access and Equity

If we look at the current provision of adult literacy in the province under purview of DL&NFBE, the current curriculum was developed and approved by the Federal Ministry of Education in 2007. The following table provides the figures on the number of literacy centers, enrollments and teachers (gender wise).

Table 7.4: Total Number of Adult Literacy Centers by Enrollment and Teachers

Year	# of Centers	Enrolment			Number of Teachers		
		Male	Female	Total	Male	Female	Total
2007	2886	28593	35979	64572	1154	1439	2593
2008	-	-	-		-	-	
2009	217	1040	5490	6530	34	183	217
2010	100	330	2670	3000	11	89	100
2011	100	600	2400	3000	20	80	100

Source: Directorate of Literacy & NFE Sindh

The above table shows that in recent years, there has been no increase in the number of literacy centers; rather, the figure has dropped to 100 in 2010 from 217 in 2009. In 2011, the female enrollment dropped from 89% to 80%. There has been a similar dip in the gender composition of teachers in 2011 as compared to the one in 2010. The following table provides the figures on the number of NFBE centers, enrollments and teachers (gender wise) in the province under purview of DL&NFBE.

Table 7.5: Total Number of Non-Formal Basic education Schools (NFBES) by Enrollment and Teachers

Year	# of Schools	Student Enrolment			Number of Teachers		
		Male	Female	Total	Male	Female	Total

| 2010 | 400 | 3300 | 9250 | 12550 | 57 | 343 | 400 |
| 2011 | 400 | 3350 | 9445 | 12795 | 57 | 343 | 400 |

Source: Directorate of Literacy & NFE Sindh

The above table indicates that in the current provision of NFBE, females make bigger group (almost three times larger) as compared to the male students. In terms of employment of teachers, female teachers are six times greater as compared to the male teachers.

Efficiency

The Directorate of Literacy and NFBE was established in 2002, yet it has limited professional and management capacity to design, develop and implement literacy and non-formal basic education programs effectively. Currently, the Directorate has some management positions without any professional wing. Similarly, at district level, only one post of Deputy/ DO (Literacy) exists without any professional support staff. There are no sanctioned positions at the *taluka* and UC levels where the actual actions take place.

The DL&NFBE is staffed by regular employees both, at the provincial and district level, from school education and there do not exist any special criteria for posting and placement except the grade seniority. Limited staffing with no professional support raises serious questions about the management and professional capacity of the apex institutions responsible for literacy and non-formal basic education programs. The following figure indicates the structure of DL&NFBE both, at provincial and district level.
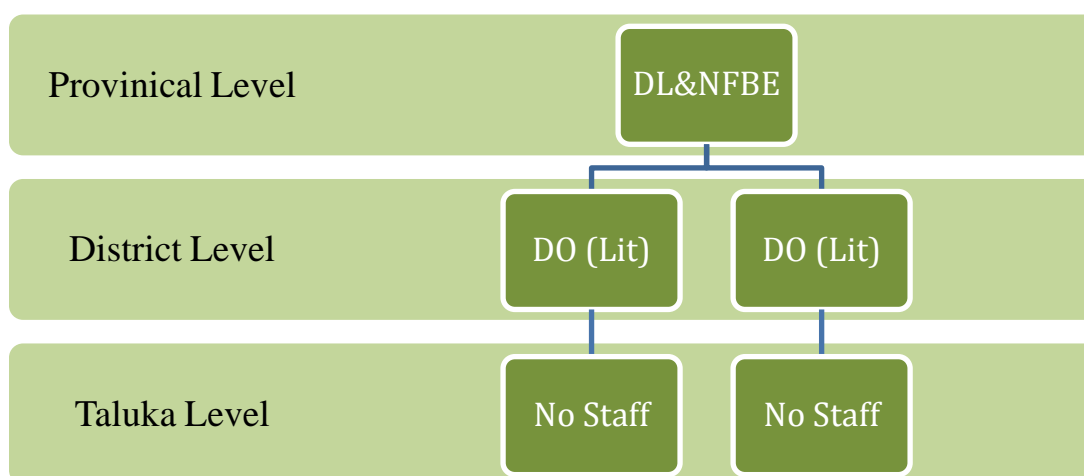
Figure 7.1: Structure of DL&NFBE

Given the above situation, there is an urgent need to strengthen the DL&NFBE both, in technical and administrative terms, such as enhancing expertise for training, material development,

supervision research and evaluation. It is important to note that there is no regular budget for the regular functioning of Literacy Centers, all these centers are being financed through ADP schemes including teachers' salaries. Though in each district l one DO (Literacy) is posted, yet, in most cases, monitoring of NFE is done through the services of an NGO.

Functional Analysis- Adult Literacy Programs

From an instructional perspective, the analysis of adult literacy programs is given below, with the help of a table.

Table 7.6: Functional Analysis of Adult Literacy Programs

Functions	Design responsibility	Implementation responsibility	Monitoring
Curriculum	National Curriculum was developed in 2007 by Federal MoE	Directorate of Literacy & NFE	No well-defined system is in place
Learning Materials	Some textbooks were developed by BoC	Directorate of Literacy & NFE	No well-defined system is in place
Assessments of learning outcomes	No well-defined system is in place	No well-defined system is in place	No well-defined system is in place
Teachers' professional development	No system in place	No system in place	No system in place
Supervision of teaching learning processes	No system in place	No system in place	No system in place

Table 7.6 shows that the teaching-learning processes are not well supported and that there is no mechanism for teachers' professional development.

Functional Analysis- Adult Literacy Programs | from 6-14 who are out of formal school system.

Next, in the following paragraphs, the provision of NFBE under DL&NFBE will be discussed.

Table 7.7: Functional Analysis of NFBE

Functions	Design responsibility	Implementation responsibility	Monitoring
Curriculum	National/ STBB	DL&NFE	NGO as local partner is supposed to do this
Learning Materials	DL&NFE and NGO (capacity?)	DL&NFE	NGO as local partner is supposed to do this
Assessments of learning outcomes	ADOs (Education)	DL&NFE	Grey area
Teachers professional development	Grey area	Grey area	Grey area
Supervision of teaching learning processes	Grey area	Grey area	Grey area

The above table shows that most of the teaching – learning process and their management is not well defined and this implicates the quality of the NFE programs.

Quality

Education Policy 2009 has noted that the quality of NFE programs is quite questionable and, as noted by the policy, the major reason is the lack of quality of teachers. The following table maps the academic qualifications and professional development of the NFE teachers.

Table 7.8: Percentage of NFE Teachers by Qualification, Training and Participation

Type of course	Number of Non-Formal Teachers						
	Qualification			Training		Participation	
	% Below Matric	% Matric	% Above Matric	% Trained	% Un-Trained	% Full Time	% Part Time
NFBES	Nil	29%	71%	-	-	100%	-
Adult	Nil	20%	80%	-	-	-	100%

Literacy							

Source:

The above table shows that 29 % of NFBE teachers possess matric qualification only. Using UNICEF framework, the following table has summarized challenges related to five dimensions of quality.

Table 7.9: Overview of Quality in Literacy and NFE Programmes (Using UNICEF framework)

Quality Dimension	Observations/ Findings
Quality Learner	• There is no data available on the profile of students entering into literacy and NFE programmes. Anecdotal records show that leaners did not find relevance of the programs to their lives
Quality Learning Environments	• There is no documentation of the different aspects of learning environment • Unfriendly learning environment
Quality Content	• A well-thought out curriculum to increase literacy and life skills does not exist either; the current content does not relate well to the market needs • Inadequate learning support materials
Quality Processes	• Lack of standards for supervision, monitoring and support • Lack of coordination amongst different implementing agencies • lack of community participation and support • Issue of monitoring and supervision of the learning processes
Quality Outcomes	• There is no data available except for limited data on academic achievements – mechanism to assess the student's progress systematically does not exist. • Students qualified through literacy/ NFBE centres have been facing numerous problems regarding their admissions into the regular stream and post literacy employment

7.2
Key Issues and Challenges

The key stakeholders were consulted (using FGDs, individual conversations) to understand the various dimensions of the problem related to non-formal provision of education in the province in depth .The following table synthesizes the above discussion for the purpose of identifying issues and priority areas. The Sindh Vision 2030, historical experiences with non-formal education and literacy, stakeholders' perceptions – all have fed into this synthesis.

In the context of 18th Constitutional Amendment, the responsibility of planning and implementing literacy development programs has shifted to the provinces. This major shift of responsibility will also bring in more accountability for provincial government on this front.

Table 7.10: Synthesis of Issues and Challenges

Issues	Challenges
Access and Equity	• Given the dimensions of the problem, the access to NFBE and AL is very limited
	• No clear policy to mainstream NFBE graduate
	• Access to formal system (mainstreaming) is not formalized
	• Lack of infrastructure and physical presence
	• Expanding the name of scope of Adult Literacy Centers (ALC) to provide opportunities for out-of-school youth
	• The challenge of access is more acute for rural females with 22 % literacy rate
	• Lack of gender sensitive HR policies
Efficiency (internal and external)	• NFE activities are implemented on ad hoc basis, without a comprehensive policy, coherent programme and strategy. For example, there is no Additional Secretary is designated to look after NFE
	• No regular funding for running the program
	• No regular monitoring system in terms of literacy program and its out put
	• Community participation is not taken care of
	• Lack of performance based appraisal system
	• Data not gathered for NFE and AL classes
	• Lack of comprehensive and an integrated database to calculate efficiency

	• Limited human resources and inadequate HR processes
Quality	• Teachers are less qualified and hardly professionally developed
	• There are no standards for learning outcomes
	• Quality of learning materials

The above table indicates specific areas of intervention to improve literacy and non-formal education in Sindh. Based on the above analysis, the following sections present strategic objectives and strategies for the betterment of secondary education.

Alternative Approaches to Non-formal Basic Education (NFBE) and Literacy

Literacy and non-formal basic education programmes are important focus to address the critical issue of out-of-school children and youth, particularly for girls, thereby, contributing to gender equity also. Given the dimensions and magnitude of the problem, active search for alternate models for the design and delivery of adult NFE is needed.

In our context, we have mainly tried to replicate traditional teaching-learning model (led by teacher in a face to face setting). The availability of quality teachers and scale of the problem has always humbled to efforts and resources spent on this issue. There is an urgent need to look for alternatives that necessarily engage technology to reduce the need of scarce human resource and to enhance access and quality of the provision.

The advances in Information and Communication Technology (ICT) have opened up new venues to deal innovatively with the issues of scale and scarcity of human resource. Low-cost and low-literacy touch-screen technologies present themselves as alternatives for the illiterate and with great potential to empower the poor. For example, in India, the Simputer Trust, has developed the Simputer (Simple, Inexpensive, Multilingual, People's Computer). Similar work, titled 'Volkscomputer', is another example from Brazil. Users need not to be literate in order to use it. Therefore, search for more viable models may be a stepping stone to formulate policy for NFE in the province.

7.3
Objectives, Targets , Strategies and Activities

From the above analysis, the following objectives have been formulated:

Objectives

1. Develop a comprehensive policy for NFE and AL in Sindh followed by the allocation of mainstreamed budget on a regular basis.
2. Improve access to literacy and non-formal education especially for girls in rural areas
3. Improve quality and relevance of learning through curriculum and learning material development
4. Build capacity of literacy and NFE teachers for improved student learning outcomes on a continuous basis
5. Use innovative, technology based approaches for NFE with the help of private sector
6. Develop accreditation and certification mechanism for mainstreaming literacy and non-formal students
7. Strengthen management capacity of Directorate of L&NFBE in developing, implementing, monitoring, and evaluating standards for processes and outcomes

Next, Table 7.11 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table 7.11: Literacy and Non-Formal Basic Education: Objectives, Strategies, Targets and Activities

GOAL: **Improving access and standards for Literacy and Non-formal Basic Education in Sindh**			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
Strategic Objective 1 *Develop a comprehensive policy for NFE and AL in Sindh followed by the allocation of mainstreamed budget on a regular basis.* *Special Note:* *NFE and ALC should be reconceptualised to make it relevant to diverse needs and age groups*	• Commission policy research for the development of a comprehensive policy	• Policy Developed and budget streamlined by 2014. • Evidence based plans should be made.	• Commission a policy research for NFE and AL • Notify a core group for policy formulation incorporating NFE/ALP • Develop policy through a consultative process and get approved • Develop rules and regulation and get approved • Develop implementation framework with clear action plan • Allocate resource for the plan

GOAL: Improving access and standards for Literacy and Non-formal Basic Education in Sindh			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
Strategic Objective 2 *Improve access to literacy and non-formal education especially for girls in rural areas*	• Learn from successful models of NCHD, SEF, and UNESCO to increase access. • Opening up of new adult literacy centres in the most disadvantaged districts by 2015 • Opening up of new NFBECs in the most disadvantaged districts by 2015	• Study report on best practices by 2014 • 20,000 new NFE centres are opened in the most disadvantaged districts by 2015 • 10,000 opened in 2014 and 10,000 in 2015.	• Commission a study on best practices / model to inform planning and implementation for enhanced access to NFE and AL • Identify the districts/UCs with highest out-of-school and drop-out ratios. • Recruit new teachers (especially local females) and provide pre-service education • Prepare academic calendar • Provide learning materials for NFEs and ALCs.
Strategic Objective 3 *Improve quality and relevance of learning through curriculum and learning material development*	• Develop relevant curriculums fulfilling needs of diverse groups (different age groups, working /nonworking group) • Review of existing learning materials (relevance to different groups) • Development of new learning materials/ text books in the light of curriculum. • Engaging public sector key	• Curriculum/textbooks development process initiated in 2013 • Current learning materials are reviewed by 2014 • Relevant topics are identified by 2014-15 • Improved materials are available for use and are being used by 2015 • 100 % new teachers participate in induction program	• Take stock of the current learning materials and identify improvement needs with special emphasis on life skills and functional literacy • Identification of relevant topics • Prepare curriculum/ accelerated curriculum (for different working and non-working children) and assessment for NFE in collaboration with BOC and PITE • Development of textbook /Supplementary materials by relevant Government

GOAL: Improving access and standards for Literacy and Non-formal Basic Education in Sindh			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
	institutions for the development of textbooks/ learning materials		Institutes i.e. STB, PITE, BOC, STEDA etc. (The said institutes are to be mandated formally for this.)
Strategic Objective 4 *Build capacity of literacy and NFE teachers for improved student learning outcomes on a continuous basis*	• Identification of minimum competency framework for graduates • Approved mechanism for skill based capacity building of existing teachers • Design and delivery of in-service training program.	• 100 % new teachers participate in induction program • NFE teachers have on going in-service training programme	• Formulate working group of stakeholders to develop and design minimum competency framework for NFE graduates and teachers • Engage STEDA/PITE/ BoC to assist in preparation of a sound teacher education programme • Develop and implement capacity building plan for NFE teachers
Strategic Objective 5 *Use innovative, technology based approaches for NFE with the help of private sector*	• Take stock of effective innovative practices – both local and regional • Develop and implement innovate NFE programs to reach "hard to reach children" inclusive of Distance learning, mobile schools etc, as appropriate	At least three innovative program piloted and scaled up by 2015	• Conduct a study to identify innovative technology based models to deliver NFE • Design and develop a technology based program • Pilot test the program • Implement the program • Review and document the achievements and challenges for further program development and delivery
Strategic Objective 6 *Develop accreditation and certification*	• Develop, approve and implement policy of equivalency and	• Framework for equivalence developed, piloted and implemented by	• Identify core working team to work on mainstreaming NFE students • Develop and implement

GOAL:
Improving access and standards for Literacy and Non-formal Basic Education in Sindh

Strategic Objective	Strategies	Targets (2013 – 2016)	Activities
mechanism for mainstreaming literacy and non-formal students	mainstreaming NFE graduates.	2016	work plan for the core team • Develop framework for implementing the mechanism identified by the core team
Strategic Objective 7 *Strengthen management capacity of Directorate of L&NFBE in developing, implementing, monitoring, and evaluating standards for processes and outcomes*	• Creating and strengthening institutional linkages • Developing standards for NFEs programs • Develop a strong monitoring mechanism for NFE programs • Institutional capacity audit for the directorate • Develop capacity for planning, management, monitoring and supervision of NFE and AL programs	• Develop protocols for institutional linkages by 2013 • Develop criteria/ standards/ definitions for NFE/AL centre, NFE/ AL teacher, intended learning outcomes to develop M&E mechanism by 2014. • Capacity audit by 2014 • Management staff has developed its capacity in evidence based decision making, academic supervision and monitoring of NFE programs by 2016.	• Create strong linkages with private sector , INGOs, IT and Social Welfare Department to support NFE initiatives • Strengthen links with related organization such as STEDA, PITE, BOC, Technical and Vocational Education for quality provisions of NFE programs • Develop criteria/ standards/ definitions for NFE/AL centre, NFE/ AL teacher, learning materials , intended learning outcomes to develop M&E mechanism • Develop monitoring and supervision plan for NFE • Include NFE and AL students', teachers and centers' data in the existing SEMIS structure • Commission a study for capacity audit of the Directorate • Develop and implement capacity building plan for the NFE Directorate

GOAL:			
Improving access and standards for Literacy and Non-formal Basic Education in Sindh			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**

8. TEACHER EDUCATION AND DEVELOPMENT

"The reform of teaching quality is of the highest priority".
(cf. NEP 2009, 106, 6.1, p.33)

The National Education Policy 2009 identifies the quality of teachers as one of the six basic pillars of quality in education, and puts it on top priority. Teacher education and development, no doubt, is a critical factor in improving school effectiveness and student learning outcomes. This chapter, therefore, presents the sub-sector review and analysis of Teacher Education (TE) in Sindh and has mainly been adapted from the 'Teacher Education Strategy 2018: Addressing the Issue of Quality (Sindh)' (May 2012).

8.1 Policy Context and Situation Analysis

8.1.1 Policy Context: Historical Roots and Current Policy

'Teacher training' came up as a topic of discussion as early as 1947 in the National Education Conference, where issues regarding teacher capacity were identified and it was decided that to meet the needs of literacy, the first five years were to be invested in teacher recruitment and 'training'. The first major breakthrough in educational reforms at national level was the Report of Commission on National Education 1959. However, teacher shortage and qualitykept recurring as key issues in the various subsequent policies, plans and development schemes.

The various policies and plans came up with different proposals to address the issue of teacher capacity.To achieve mass literacy, the Report of Commission on National Education 1959, for instance, proposed utilizing the school children for teaching their parents or using undergraduate

college students as adult literacy teachers; offering regular refresher courses; and establishing training centers and education extension centers, etc.

Similarly, to resolve the problem of non-availability of teachers (especially, for rural areas' schools), different policies created different provisions– e.g. 'construction of residences'(cf. Fifth Five Year Plan1978-83);introducing '*Razakar Muallim*' or volunteer teacher (cf. National Literacy Plan 1984-86); emphasis on specially trained teachers in 'non-formal system of education' under the*Nai Roshni* Schools (1986-90). To address the issue of shortage of trained and qualified female teachers and teacher absenteeism in rural primary schools, policy provisions included, for example, some flexibility in application of recruitment rules (hiring of intermediates and graduates or teachers without a PTC as primary teachers), part-time, contract based hiring offemale teachers, including the retired ones (cf. the Seventh Five Year Plan 1988-93). The Second Five Year Plan (1960-65) puts emphasis on teaching aids, whereas, the Third Five Year Plan (1965-70) included reforms in teacher salary. Major policies concerning teacher education, however, appeared in the National Education Policy of 1992, where emphasis was placed on improving the quality of instruction through extensive in-service teachers' training program. Consequently, the Eight Five Year Plan (1993-98) proposed the development and use of 'activity oriented' instructional material for teachers to make the learning process interesting.

Criticizing the lack of/ limited use of teaching kits (as being kept under lock and key in the headteacher's room), the NEP (1998-2010) put emphasis on, for instance,creating a matching relationship between the demand and supply of teachers; institutionalizing in-service training of teachers, teacher trainers and educational administrators; introducing parallel programs of longer duration at post-secondary and post-degree levels (to upgrade the quality of pre-service teacher training programs); and developing a viable framework for policy planning and development of in-service and pre-service TE programs.Massive involvement of foreign donor agencies in the education was one of the highlights of the 1998 Policy. 1998 onwards, therefore, marks the period of substantive inputs by donors in education, in general, and teacher education, in particular, which included a focus on introducing new concepts, techniques and innovations, structural and policy reforms under various projects.

Table 8.1: Major TE Developments from 1958-1980

Time Frame	Major TE Developments in Sindh (1958-80)
1958	• A primary teacher education institution established in Karachi
1960	• Regional Education Extension Centers (REECs) established in 3 districts for in-service TE
1960s & 1970s	• 'Teacher Training Schools' were set up in almost all districts
Early 70s	• Crash in-service TE programs were introduced, trained more than 70,000 primary teachers

1972-80	• Curriculum Wing launched a programme to revise the curricula of the TE Programmes • Elementary Teachers Training Institutions upgraded to Elementary Colleges of Education
1974	• The pre-service courses (J.V. & S.V.) were re-shaped/re-named as P.T.C. & C.T. respectively
1975-80	• Teacher guides were developed in various subjects and provided to all educational institutes
1977	• Informal media (radio) was used to train 10000 teachers under the auspices of the People's Open University
1979	• Heavy emphasis on pre-service education (e.g. PTC, CT, B.Ed. and M.Ed. programs)
1980s	• TE institutions were upgraded to integrate in-service and pre-service TE: Training schools were called Elementary Colleges (at par with intermediate colleges)
1986 – 1994	*Science Education Project (SEP 1):* • 10.90 % of the project costs was allocated for teacher education and development component
1990-1998	*Sindh Primary Education Development Project (SPEDP):* • 0.53% of the total project cost was allocated for TED component • 10500 in-service teachers were trained for resource persons through cascade model in two districts
1993 - 2000	*Teacher Training Project (TTP) Project: (ADB)* • 18.25% of the total project costs allocation was allocated for TED component • Focused on expanding the capacity of the TE sector in terms of increased access to the disadvantaged areas, and female population and improving TE quality
1995	• Provincial Institute of Teacher Education (PITE) Sindh was established under the TTP
1995-2002	*Middle Schooling Project (MSP):* • 9.98% of the total project costs allocation was allocated for TED component • Attempts to assist and encourage the rural female matriculates to qualify as middle school teachers and retain teachers and head teachers
1998 - 2005	*Girls Primary Education Development Project (GPEDP):* • 3.28% of the total project costs allocation was allocated for TED component) • Included training of supervisors, learning coordinators and staff of Community Model Schools • TE courses focused on subject enhancement and assessment of students' learning
2002	• Bureau of curriculum was again re-set and re-named • Elementary Colleges were given to PITE
2002- 2007	*Education Sector Reform Assistance (ESRA) project: USAID-RTI:* • RSU was established under ESRA to support the Provincial education department • Staff members from BoC-EW & Elementary Colleges received training • Professional development provided to PEACE

2007 - 2012	*Ed-Links – Links to Learning Project (USAID):* • Project focus was improving the quality of middle- and secondary-school • Four core subjects (English, science, math, and computer technology) were focused
2008 – 2011	*Sindh Education Reform Programme (SERP-1): (WB, EU, USAID etc.)* Improving TE was one of its key reform areas and key achievements include: • TED Policy approved (2009) • Need and merit based recruitment of 14,000 teachers (PST/JST/HST) • Sindh Teacher Education Development Authority's (STEDA) secretariat at RSU • Piloting of Associate Degree in Education (ADE-2 years) & B.Ed. (Hon., 4 years) • CPD Accreditation Criteria developed/piloted • CPD Delivery piloted in 3 EMR Districts
2011 – on-going	*Pre-Step (USAID) Pre-Service Teacher Education Program (2011-2013):* Focuses on the improvement of TE programmes through the standardization of pre-service teacher education and development • Developing Teacher Education Strategy 2018 • Building capacity of TEIs • Strengthening collaboration among and across teacher education institutions in Sindh
2012	• STEDA Bill was passed at the Sindh Assembly

Source: Adapted from Teacher Education Strategy 2018

The following lines describe the current policy context for teacher education and development.

Current Policy Context

The National Education Policy 2009 indicates the need for reform in all areas, including 'pre-service training and standardization of qualifications; professional development; teacher remuneration, career progression and status; and governance and management of the teaching workforce'. Additionally, it highlights the 'growth of private sector' as adding 'new complexities to the teaching profession' and, therefore, needs to be taken into account while planning any reform of the system. The policy directives are presented below.

Policy Actions for Improving Teacher Quality – NEP 2009

Policy Action 1 ABachelorsdegree,withaB.Ed.,shalltheminimumrequirementforteachingatthe elementary level.AMasterslevelfor thesecondary andhighersecondary,with aB.Ed., shallbeensuredby2018.PTCandCTshallbephasedoutthroughencouraging the presentsetof teachers toimprovetheirqualifications, while newhiring shallbe based on theadvancedcriteria.Exceptionsshallbemadeincaseoflessdevelopedareaswhere teacherswithrelevantqualificationsarenotavailable. DiplomainEducation(D.Ed.)may be used asan intermediatequalification tillB.Ed.teachers areavailable universally

Policy Action 2 → Teacher training arrangements, accreditation and certification procedures shall be standardised and institutionalized

Policy Action 3 → Teacher education curriculum shall be adjusted to the needs of the school curriculum and scheme of studies. The curriculum shall include training for student-centred teaching, cross-curricular competencies, and an on-site component.

Policy Action 4 → A separate cadre of specialised teacher trainers shall be developed.

Policy Action 5 → Governments shall take steps to ensure that teacher recruitment, professional development, promotions and postings are based on merit alone.

Policy Action 6 → All teachers shall have opportunities for professional development through a programme organized on a three-year cyclic basis. Progress in career shall be linked to such professional development.

Policy Action 7 → In-service teachers training in mathematics shall be provided, with due attention to developing conceptual understanding, procedural knowledge, problem solving and practical reasoning skills.

Policy Action 8 → In-service teacher training in science shall be based on real life situations, use of science kits and provision of science kits to all primary and middle schools.

Policy Action 9 → Teacher allocation plans, likewise, shall be based on school needs and qualifications of teachers. Over the next two years, Governments shall develop a rationalised and need-based school allocation of teachers, which should be reviewed and modified annually.

Policy Action 10 → Provincial and Area Administrations shall develop effective accountability mechanisms, including EMIS data on teacher deployment, to control absenteeism and multiple job-holding

Policy Action 11 → Institutionalised and standardised in-service teacher training regime shall be established in those provinces where it has not already been done.

Policy Action 12 → In-service training shall cover a wide range of areas: pedagogy and pedagogical content knowledge; subject content knowledge; testing and assessment practices; multi-grade teaching, monitoring and evaluation; and programmes to cater to emerging needs like trainings in languages and ICT.

Policy Action 13 → Training needs shall be assessed on the basis of research and training programmes.

Policy Action 14 → Governments shall take steps to improve social status and morale of teachers. These include: up-scaling of teacher salaries as part of establishing a separate teaching cadre and teaching career; teachers' professional development, and a reward system based on performance measures.

Policy Action 15 → Incentives shall be given to teachers in rural or other hard areas, at least to compensate for loss in salary through reduction of various allowances given for urban but not for rural postings.

Policy Action 16 → The teaching workforce shall be managed on a truly professional basis, organized as a specialised function.

Policy Action 17 → In-service teacher training institutions shall emphasise developing the capacity of teachers and school managers for school development plans, to overcome low achievement scores.

Policy Action 18	Special short term courses for improvement of language skills for rural area teachers shall be designed.
Policy Action 19	The voice of teachers associations shall be given due consideration in decisions on collective issues affecting teachers.
Policy Action 20	Government shall aim to draw upon resources from the private sector through public-private partnerships, especially in the areas of teacher education and professional development programmes.
Policy Action 21	International Development Partners' resources shall be harnessed within a broad national programme of teacher improvement for the country as a whole through inter-tier collaboration.
Policy Action 22	Maximum age limit shall be waived off for recruitment of female teachers.

All aspects of teacher education i.e. recruitment, promotion and teacher rationalization need to be integrated. To provide a comprehensive framework in response to NEP 2009, the Government of Sindh (GoS) took an important initiative to improve Teacher Education and Development (TED) Policy 2009; the policy guides reforms in the following three areas:

1. Initial Teacher Education (ITE) or pre-service teacher education;
2. Continuous Professional Development (CPD) of teachers or in-service teacher education; and
3. The overall management of teacher quality (teacher education and development).

8.1.2 Theoretical Analysis

The historical analysis of policy context indicates that the emphasis for teacher education and development remained on the quantitative expansion in order to address teacher shortage issue.

Although quality of teachers has also come up as a concern and various strategies were proposed to address this issue, however the discourse has remained for a long time on 'teacher training' – which is an outdated concept, and rejected globally much earlier, as it does not reflect the process of development and learning. The teacher education in Sindh needs to be viewed as a development process of learning and growth that is based on the principles of life-long learning, continuous development, and constructivist philosophies.

What is also evident in the current discourse is a prominent shift in emphasis in education, in general, and teacher education and development, in particular, towards 'standards'. Therefore, the focus on 'standards-based' teacher education is present and growing in emphasis, which, of course, has its roots in the global movement towards standards-based education. The national accreditation system and teachers' professional standards are, certainly, an important step towards enhancing the professionalization and status of teaching and teachers.

8.1.4 Analyzing the Current Situation

In the light of above policy context (NEP 2009), in following lines, the current teacher education situation in the province is discussed. This sub-section is divided into three parts i.e. Access and Equity, Efficiency (or Governance) and Quality of Learning.

Access and Equity

Access and equity is seen here in terms of availability of teachers as well as availability of resources and infrastructure for teacher development and provision of equitable opportunities for access across gender and rural-urban dimensions.

Size of the Teaching Workforce

The disparity between the numbers of male and female teachers is quite distinct at the primary level. In Figure 8.1, it is evident that the provisions of female teachers have been consistently low in all sectors. The Figure 8.2 below indicates that primary school teachers make up more than two-third of the total workforce in the public schools from the primary to the

Figure 8.1: Distribution of Gender at Primary Level

Source: Academy of Educational Planning and Management

higher secondary level. This implies that the most significant allocation of attention and resources needs to be to primary school teachers across all efforts to improve the quality of education in the province.

Figure 8.2: Teachers by School Level
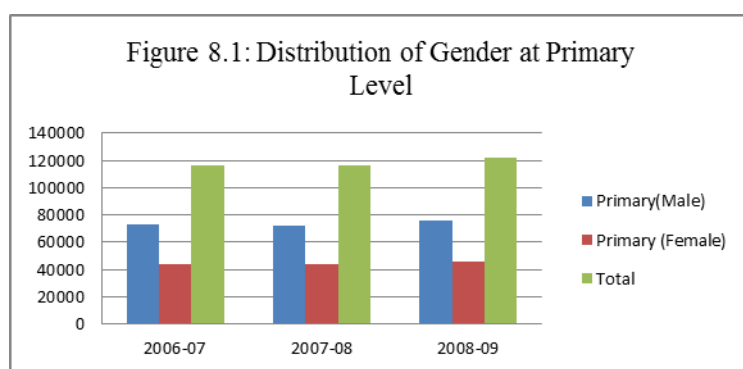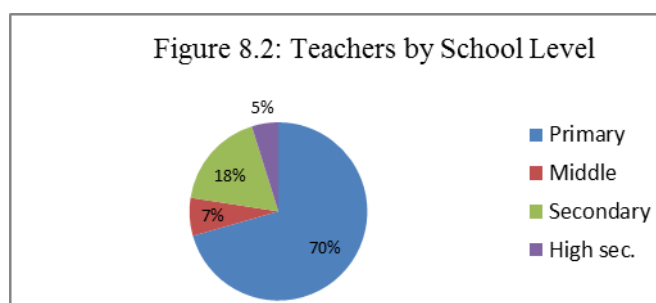
Source: Statistical Bulletin ASC (2010-2011)

Furthermore, Table 8.2 represents the teacher workforce according to their gender and designation/ nomenclature, and it is quite evident that Primary School Teachers (at 66.58%) comprise the major bulk of the workforce.

Table 8.2: Teacher Workforce byDesignation and Gender				
Staff	No. of Teachers		Total	% Total
	Male	Female		

PST	67763	28521	96284	66.58%
JST	6528	5041	11569	8.00%
HST	10096	6422	16518	11.42%
S. Special	661	342	1003	0.69%
SLT	991	474	1465	1.01%
OT	1663	481	2144	1.48%
PTI	725	299	1024	0.71%
WIT	497	16	513	0.35%
HMs	4519	1419	5938	4.11%
Other	2076	563	2639	1.82%
No info	3592	1921	5513	3.81%

Source: Statistical Bulletin Annual School Census (2010-2011)

With female teachers being less than one-third of the total number of teachers, the provision of qualified female teachers needs to be addressed in order to improve gender parity.

The size and composition of the teaching force, in a way, depends on the number of schools for both the genders. In this regard, the current scenario presents an alarming situation, in which girls' schools represent only 16% of the total number of functional schools[2]. In order to address gender inequity, a special allocation of resources needs to be diverted and/or generated towards this predicament that has been sustained over the years.

Understanding the Teaching Workforce (from the Work Dimension)

Table 8.3 gives an overview of student-teacher, teacher-school ratios (public sector) in Sindh by level. May be these are the only indicators that suggests that the student teachers ratio in general are favorable. However on deeper scrutiny the disparities within schools can easily be found, due to inappropriate staff rationalization and staff placements.

Table 8.3: Student-Teacher, Teacher-School & Student-School Ratios (Public Sector) in Sindh

Years	2006 - 07		2007- 08		2008 - 09	
	Student per teacher	Teacher per school	Student per teacher	Teacher per school	Student per teacher	Teacher per school
Mosque	-	-	-	-	-	-
Primary	34	2	35	2	33	2
Middle	20	3	23	3	21	4
High	21	17	22	16	22	17
High Sec.	28	32	32	30	32	31
Total	30	3	31	3	30	3

Source: Academy of Educational Planning and Management

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[2]Source: Statistical Bulletin Annual School Census (2010-2011)

Quality of Learning

More than 37,000 teachers are qualified for either the intermediate level or less—a figure that falls significantly below the National Education Policy 2009 standards. These teachers need to be encouraged to enhance their academic and professional qualifications through flexible programmes.

Figure 8.3: Distribution of Academic Qualification at All Levels
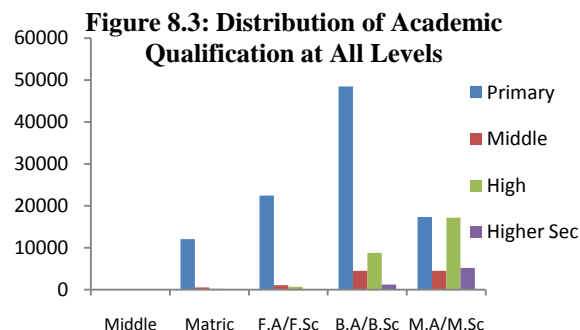
It is quite evident that nearly half of the teacher body (at least 48% of the teacher work force) will need to improve their professional qualifications—if not academic qualifications – throughbridging programmes.
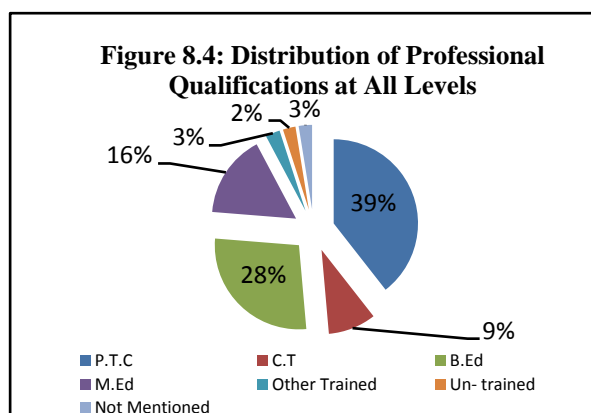
Quality of Faculty/ Teacher Educators

Likewise, the academic qualifications of teacher educators (GECE's faculty) also require closer scrutiny.

Figure 8.4: Distribution of Professional Qualifications at All Levels

The table indicates that the faculty with Arts subjects is roughly three times larger than the faculty members who have an academic background in science subjects. Also, the majority of the faculty with the Arts has a Master's degree in the Sindhi language. The colleges of education need a wider distribution of subjects for implementation of ADE and B.Ed. (Honors).

Table 8.4: Academic and Professional Qualification of Faculty in GECE				
Level	No Prof. Qualification	B.Ed.	M.Ed.	Any other (e.g. AMC)	Total
PhD	2	-	2	-	4
M. Phil	-	-	6	-	6
MSc	12	2	37	1	52
MA	8	15	109	4	136
BS	3	-	-	-	3
BSc	-	2	9	-	11
BA	1	2	-	3	6
Total	26	21	163	8	218

In addition, Figure 8.5 presents a comparison of gender distribution in selected subjects. As evident, there is greater number of male versus female teachers (76 male and 43 females). Furthermore, Computer teachers outnumber those in all other subjects, especially, as compared to Chemistry and Biology, which have the lowest numbers of teachers.

Figure 8.5: New Recruitments in GECEs– Gender Distribution
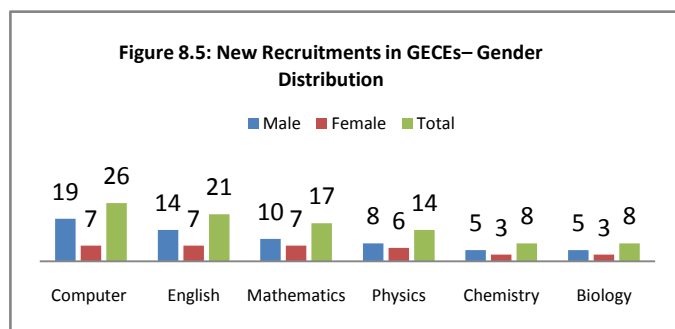
While reviewing the current provision of pre-

service and in-service teacher education in Sindh in terms of quality, it is important to mention that the situation has somewhat modified after the recent interventions of ADE Programme. Some of the positive features of the ADE program include: change in the overall quality of students enrolled in ADE Programme; evidences of programme marketing and merit-based enrolments; infrastructure is being developed at TEIs; resources are being provided; teacher educators' capacity building exercises (such as mentoring, use of IT, co-planning, etc.)An important area that needs attention is how to scale up the ADE Programme in, for example, the other TE colleges where it is not being offered currently. The issue of resources and capacity building would need to be considered. The systems and mechanisms need to be put in place to ensure that the quality of the ADE Programme is sustained even after the Pre-STEP Project (USAID) is over. It is important that research studies are conducted to gain deeper insights regarding the impact, outcomes, issue and successes of the ADE Programmes so that these insights and lessons learnt can be used to inform further interventions.

8.2. Key Issues and Challenges

The detailed situation analysis above and stakeholders' input and deliberations (e.g. TWG, FGDs, and meeting with DPMs-RSU) highlight a number of issues related to teacher quality and development. These are synthesized below along the four key dimensions of system performance (i.e. access and equity, internal and external efficiency, and quality of learning). It is important to realize that one of the biggest challenges faced by provinces, in general, and Sindh, more specifically, is in relation to the 18th Constitutional Amendment – i.e. the scale of system and management challenges posed by this provision. Both, the abolition of the Concurrent List and the insertion of the Article 25A, offer challenges (i.e. heavy mandates and increased responsibility) as well as opportunities (i.e. empowerment and autonomy) in relation to teacher education in the province. In order to fulfill the demands of the post-constitutional amendment scenario, the province needs to reposition itself, revisit its roles, build capacity, and put in place appropriate mechanisms.

Table 8.5: Key Issues Facing Teacher Education and Development in Sindh – A Synthesis

	Issues	Details
Access and Equity	18th Amendment Scenario: Implications of Article 25-A	• To ensure quality while meeting the demands of 25-A in terms of required number of qualified teachers would be a major challenge
	Teacher Shortage	• Need for female teachers at secondary and higher secondary levels, particularly. in rural areas to help increase female enrolment and retention at that level • Non availability of subject specialist teachers (Science, Math,

		English), especially, female teachers
	Missing Dimensions of Teacher Development	• Lack of teacher capacity and awareness in terms of conflict sensitivity. Teacher's potential to manage diversity in classrooms and to promote social cohesion remains under utilized • Need to prepare teachers for handling children with special needs • Preparation of teachers in handling multi-grade classes • Teacher preparation vis-à-vis ECE

Quality of Learning	Provision and Quality of Initial Teacher Education (ITE)	• Insufficient institutional capacity to implement teacher development initiatives, e.g. capacity of TEIs in terms of:
		  - Physical infrastructure and resources
		  - Quality of faculty/teacher educators
		  - Quality of intake
		  - Quality of teaching learning processes

	Provision and Quality of Continuous Professional Development (CPD)	• Lack of comprehensive CPD framework to guide in-service TE • Sporadic programmes both, by government and donors, designed in response to the requirements of donors and sponsoring agencies, and not to meet the needs of the Education Department, • Lack of support mechanisms for faculty to effectively execute the teacher education development programs or to implement their learning from the programmes • Conservative approach to teacher development in place of teacher development as a life-long learning process of growth and development as reflective practitioners • Lack of coordination between pre- and continuous programmes for teacher development
Efficiency/ Governance	18th Amendment Scenario: Implications of the Abolition of Concurrent List	Lack of redefinition of provincial role in the Post-18th Amendment Scenario
	Issue of Overlapping Institutional and Functional Mandates	• Overlapping role (control over TEIs) and functions (pre -& in-service) of PITE & BoC-EW • Lack of clarity of roles of DETRC, REEC, etc. • STEDA's role vis-à-vis existing organizations
	Issues relating to Collaboration, Coordination & Inter-linkages	Weak linkages between, among and across public and private organizations related to TE, e.g. • Weak linkages between teacher educational institutions and schools • Absence of a school-based professional development component • The BISE data is not used in any way to inform teacher education/ preparation in the areas of low performance by students • Government and private providers work in an uncoordinated manner
	Evidence based Planning for	• Lack of teacher education-specific database to effectively (i.e.

	Teacher Development, Recruitment, Deployment	based on evidence) plan initiatives for teacher recruitment, teacher education, teacher deployment, management etc. and take informed policy decisions; following challenges are faced: - there is no system for projecting teacher demand and supply - a comprehensive picture is currently not available as to how many teachers have received professional development and whether and to what extent the teacher development activities have proven to be effective or otherwise - Non-availability of HR information regarding those who are engaged in the process of delivering and managing the provision of teacher development programmes - Existing malpractices of the system (e.g. transfer of teachers would not be done on the basis of data or need, but on political grounds)
	Career Laddering; Recruitments; Service Rules, etc.	• Weak linkage between professional development and career path discourages teachers from upgrading their professional knowledge and competence • Need to link promotions with performance • ECE teacher recruitment related issues: - No specific designation for ECE teachers - Conflicts between regular and ELP teachers in project schools - Changed expectations of ELP teachers and education supervisor/ ADO - Delay in salary releases of ELP teachers and staff
	Quality Assurance Mechanism	• Quality Assurance (QA) is a very weak area • Need to link promotions with performance • New programs (e.g. ADE) need strong QA mechanisms to have any meaningful impact • QA system is ineffective due to the lack of: - human resource management and utilization, - infrastructure, including ICT and operational mobility - appropriate financial resourcing, alongside more efficient and effective utilization of existing resources - communication strategy and information sharing/dissemination with stakeholders - existing roles as mentors instead of the existing inspection roles - absence of knowledge management structure including research culture and need based planning
	Licensing, Accreditation and Standardization	• Limited implementation of National Professional Standards for Teachers • Non-existence of 'agreed' standards to monitor performance • The processes for Accreditation and certification of courses and

		in-service providers need to be finalized, communicated and implemented across the province
		• Lack of a professional body for the purpose of evaluating the teaching/learning operational process of schools and educational institutions
		• STEDA is there as a professional unit to work towards determining the extent to which national educational policies are being implemented and standards are maintained; however, STEDA is facing some challenges in relation to effective execution of its role, which include
		- a critical lack of capacity in terms of the required human resource
		- Absence of Notified Rules of Business for the authority
		- Website not being actively updated due to lack of website management system
		- Teacher Education and Development Database System (TEDDS) is not in place, creating difficulties in evidence-based planning
		• The recruitment, education and professional development of teachers is also not based on rigorous professional standards
	Sustainability Mechanism	• Need for integration of donor-funding and creation of synergy in interventions in Sindh
		• Issue of continuation and sustainability of interventions/ initiatives (e.g. impact and scaling up of ADE and B.Ed. Hons Programme)
		• Need for long-term vision and/or strategy at the provincial level, based on the concept of teacher development as life-long learning process, and use of constructivist philosophies and approaches for teacher development
		• Need to integrate all the various, existing plans and strategy documents to come up with a comprehensive, coherent and consistent plan to implement teacher education in Sindh

8.3.
Objectives, Targets and Strategies

Based on an analysis of the situation as well as suggestions and recommendations from key stakeholders consulted in this regard, the following objectives have been formulated.

Strategic Objectives
1. Enhance the provision and quality of Initial Teacher Education (pre-service) in Sindh

2. Enhance the provision and quality of Continuous Professional Development (in-service)
3. Enhance the provision of specialized teachers, especially for females, and in rural Sindh
4. Improve the overall management of Teacher Education and Development.

Next, Table 8.6 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table 8.6: Teacher Education and Development: Objectives, Strategies, Targets and Activities

GOAL: To improve the quality of teachers in Sindh through improving Teacher Education and Development			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
Strategic Objective 1 *Enhance the provision and quality of Initial Teacher Education (pre-service) in Sindh*	• Capacity building of teachers in the identified areas of need • Ensure minimum knowledge facilities at TEIs (physical infrastructure and learning resources) • Enhance TEIs' quality of intake, teacher educators, teaching and learning processes • Upgrading of GECEs into B.Ed. offering institutions • Expand the provision especially for females, and in rural Sindh	• Enhanced capacity of % teacher educators in the identified areas by 2016 - ECE - Conflict sensitivity, diversity management in classrooms, promoting social cohesion; - Non-formal Education (NFE) and Adult Literacy Centers (ALCs) - ICT - Evidence-based planning (monitoring, implementation and mentoring) • % of teachers capacity building plan in the identified areas is developed • TEIs mapping carried out against Provincial Standards for minimum knowledge	• Develop (enrich) ITE programmes in the following areas: ECE; conflict sensitivity, diversity management and social cohesion; NFE and ADLCs • Develop standards for minimum knowledge facilities at TEIs(NACTE standards could be adapted and piloted) • Map TEIs against identified standards • Develop plan for improving the physical infrastructure and resource provision based on the outcomes of mapping (prioritizing the lowest on the index) • Prepare capacity building programmes for TEI faculty/ teacher educators (e.g. language competence, IT, research knowledge and skills) • Develop mechanisms for entry performance test • Improve the quality of teaching learning processes (e.g. more integration of ICT, enhanced use of constructivist learning approaches, enhanced assessment procedures, etc.) • Detailed study is commissioned to assess system's current capacity to offer ITE programmes (e.g. ADE & B.Ed.) and develop informed plan for scaling up and upgrading of ITE programmes • Initiate ADE and B.Ed. programmes in the remaining TEIs, prioritizing female teacher-students, and rural areas • Commission impact studies and/ or internal and external evaluations of ADE & B.Ed.

GOAL:			
To improve the quality of teachers in Sindh through improving Teacher Education and Development			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
		facilities • Robust mechanism for marketing of ITE programmes is in place by 2014 • Use of a variety of relevant teaching and learning methods at % TEIs by 2016 • % of Teacher educators' capacity building in (content-specific and andragogy related) by 2016 (taking phased approach) • Scaling up of existing initiatives of ADE in all existing TEIs, and B.Ed. in selected TEIs by 2016	

Strategic Objective 2
 	
Enhance the provision and quality of provision of Continuous Professional Development (in-service)
	• Provision for on-going, need-based professional development of teachers based on a comprehensive CPD framework
	• Enhanced capacity of % teacher educators in the identified areas by 2015
	  - ECE;
	  - Conflict sensitivity, diversity management in classrooms, promoting social cohesion;
	  - Non-formal Education (NFE) and Adult Literacy
		• A comprehensive CPD Framework, based on teachers needs and Curriculum 2006, is developed and in use by 2014-15
		• Framework for bridging courses is developed and in use by 2016
		• Induction plan for newly recruited teachers (around 19,000) is in place by 2014 and in use by 2014-15 for phase wise induction of teachers
			• Identify teachers' CPD needs based on Curriculum 2006
			• Assess system's capacity to offer CPD (regular, bridging courses) or induction programme to inform planning for capacity building
			• Develop, pilot, approve and implement a comprehensive CPD Framework
			• Develop CPD as credit-based programmes, aligned with ITE programmes
			• Develop need-based, quality programmes for CPD
			• Develop (enrich) CPD programmes in the following areas: ECE; conflict sensitivity, diversity management and social cohesion; NFE and ADLCs
			• Design and implement bridging courses for in-service teachers along with mechanisms for offering these programmes (taking a phase wise approach to cater to the extensive needs of existing teachers)

GOAL:			
To improve the quality of teachers in Sindh through improving Teacher Education and Development			

Strategic Objective	Strategies	Targets (2013 – 2016)	Activities

	Centers (ALCs)
	- Evidence-based planning (monitoring, implementation and mentoring)
	- ICT
	• Provision of bridging courses to bring at par with ADE and B.Ed. degrees
	• Creation of opportunities for on-going school-based professional development opportunities (Mentoring and PLCs)
	• Capacity assessment for informed and realistic planning
	• Enhanced opportunities for relevant CPD are available for % female teachers and especially from rural areas
		• Variety of newly developed CPD programmes, based on emerging needs, are developed by 2015-16 (which could use alternative pedagogies and flexible approaches; for instance, through use of ICT)
		• Professional learning communities (PLCs) are developed and working at school/ TEI level by 2016
		• TORs for school level mentors and advisors are developed by 2015
			• Design, pilot and implement Induction Programme for newly appointed teachers, aligned with ITE and CPD programmes
			• Create and provide on-going support to the school-based professional development opportunities
			  - professional learning communities (PLCs)
			  - School-based mentoring and supervision

Strategic Objective 3
 	
Enhance the provision of specialized teachers, especially females, and in rural Sindh
	• Need-based and rationalized recruitment of specialized teachers, prioritizing female teachers and for rural areas	• Need assessment of specialized teachers to be completed by 2014
		• Initiate phase-wise recruitment for additionally required teachers through TPV by 2016
			• Carry out needs assessment, especially based on and informed by teacher rationalization exercises
			• Create SNEs for new appointees based on needs assessment
			• Department notification and advertisement
			• Recruit additional teachers through TPV in the following areas, for instance:
			  - Middle level subject specialist (Science, Math, English) male teachers for urban (%) and rural (%)
			  - Middle level subject specialist (Science, Math, English) female teachers for urban (%) and rural (%)
			  - ECE, female teachers (%)

GOAL:
To improve the quality of teachers in Sindh through improving Teacher Education and Development

Strategic Objective	Strategies	Targets (2013 – 2016)	Activities
			- Non-formal teachers (%)
Strategic Objective 4 *Improve the overall Management of Teacher Education and Development*	• Role rationalization, through consultative process, of BoC-EW, PITE, STEDA, BISE, STBB, TEIs (including DETRC, REEC), Universities, Directorate of school education and Director of colleges, especially, in relationship to each other • 18th Amendment to serve as a guiding framework	• Rationalize institutional roles, build capacity, and create synergy within TED System by 2015-16 • Institutional mandate and TORs are reflective of the requirements of the 18th Amendment Scenario by 2014-15	• Get the recommendations of existing committee (set up for the purpose of role rationalization) approved by BoG, STEDA and disseminate widely • Plan and implement stepwise capacity building of TE institutions vis-à-vis rationalized roles • Prepare MoU and comprehensive framework for university-GECEs' collaboration • Strengthen linkages between TEIs and schools • Enhance provision of school-based professional development component • Enhance and improved coordination between public and private TE service providers and institutions
	• Evidence-based, need-based and rationalized planning for teacher education and development	• Knowledge management infrastructure is in place by 2014-15 • Management's capacity for evidence based planning is enhanced by 2015 • Evidence-based planning is in practice by 2015-16 • Donor-funding and interventions in Sindh are synergistically integrated and linked to the education sector plan	• Develop, use and update teacher education and development data system (TEDDS) for need-based and rationalized teacher recruitment, teacher deployment, teacher education, and management • Reports are generated to indicate e.g. teacher demand and supply needs; placement, deployment or transfer needs; number and relevant details on professionally developed teachers, TE service providers, etc. • BISE data report is used (e.g. by PITE) to inform teacher education/ preparation in the areas of low performance by students • Identify research directions • Develop and implement plan for enhancing system's capacity for conducting research and making use of findings • In the meantime, commission TE specific studies and disseminate and use findings across the system for informed decision making • Hold donor coordination meetings more frequently to ensure that donor-funding and interventions in Sindh are synergistically integrated and linked to

GOAL:
To improve the quality of teachers in Sindh through improving Teacher Education and Development

Strategic Objective	Strategies	Targets (2013 – 2016)	Activities
			the education sector plan

	• Provide career laddering; improve recruitment and service rules, etc.	Revised recruitment and service rules and amendments for both, teachers and teacher educators are available by 2015
		
		SoPs for integrating gender sensitization are available by 2015
		
		SoPs for integrating conflict sensitization, diversity management and social cohesionare available by 2015
			• Create necessary provision for
			  - Strengthening linkages between professional development and career path
			  - Performance-based promotions
			  - Recruitment and professional development of teachers linked to rigorous professional standards
			• Review and revise policies and implementation framework to make them gender-sensitive
			• Review and revise policies and implementation framework to address issues related to conflict sensitivity, diversity management and social cohesion
			• Address ECE teacher recruitment related issues (e.g. create specific designation for ECE teachers, resolve issues of regular and ELP teachers in project schools)

	• Improve and strengthen the Quality Assurance mechanisms for teacher education	• Policy and implementation framework for QA is in place (by 2014) and in use by 2015
		• Agreed professional standards are available for use by 2014
		• M&E framework and implementation plan for TEIs and other TE institutions is in place by 2014 and in use by 2015
		• A number of programmes and TE service providers are accredited by 2015
		• Teacher licensing mechanism is in place by 2014 and in use by 2016
		• STEDA website and
			• Develop, approve, pilot and implement policy framework for QA for TE programmes and institutions
			• Put in place internal and external QA mechanism for TE
			• Develop, approve, pilot and implement Accreditation framework (taking guidance from NACTE standards); accredit a number of TE service providers and offer accredited programmes
			• Develop, approve, pilot and implement Teacher Licensing mechanism (policies, procedures) for system-wide use
			• Enhance STEDA's capacity for effective execution of its role as a Regulatory Authority (e.g. to ensure that policies are implemented and standards are maintained; e.g. do the following:
			  - Hire required human resource
			  - Notify Rules of Business for the authority
			  - Ensure effective use and updating of a comprehensive and functional website for

GOAL: **To improve the quality of teachers in Sindh through improving Teacher Education and Development**			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
		website management system is in place, updated and in regular use by 2014 • System wide capacity building plan for QA is in place by 2014 and in use by 2015	planning and dissemination - Put in place TEDDS • Develop and ensure phase-wise implementation of system wide capacity building for QA, e.g.: - human resource management and utilization, - infrastructure, including ICT and operational mobility - appropriate financial resourcing, alongside more efficient and effective utilization of existing resources - communication strategy and information sharing with stakeholders - mentoring and supervisory roles - knowledge management structure including research culture

9. CURRICULUM AND ASSESSMENT

Curriculum and assessment is core to any system of education including formal schooling as well as informal system of education

Curriculum sets the course that provides a framework for the entire learning experience, and assessment represents the outcomes of learning from these educational experiences. In case of public sector education system, the curriculum is understood and represented through textbook, which has implications for the assessment process, as it delinks assessment from curriculum (linking it more strongly to the textbook).

The process of assessing student learning outcomes, by and large, shapes the process of teaching and learning. Educational research provides sufficient evidence that education systems with more advanced, highly valid and reliable assessment system produces higher level of student learning outcomes.

For Sindh to its Vision 2030, it needs more systematic and systemic efforts to enhance the quality of students learning outcomes, particularly, in the public sector of education. Given the centrality of curriculum, textbooks and assessment in the educational processes and outcomes, this trinity has been put together in the Sindh Education Sector Plan.

9.1.
Policy Context and Situation Analysis

9.1.1 Current Policy Context

Among the most recent constitutional developments, the 18th Constitutional Amendment has major implications for curriculum processes, including textbook development and assessment. The 18th Constitutional Amendment has abolished the Concurrent List of the 1973 Constitution and inserted a new Article 25-A that obligates the state to provide free and compulsory education to all children of age five to 16 years in such manner as determined by law.

With the abolishment of the Concurrent List, the curriculum, syllabus, planning (and textbook development), policy, centres of excellence and standards of education/ Islamic Education, now fall under the exclusive purview of the provinces. These were being managed/ led earlier by the Federal Ministry of Education (MoE). Regarding textbook development, though each province has the provincial Textbook Board, yet final approval authority used to be the Federal MoE. Similarly, assessment at higher secondary level, before the 18th Amendment, was regulated by the Inter Board Committee of Chairmen (IBCC). This major shift in responsibility through the 18th Amendment has given rise to serious challenges, including institutional capacity to design and deliver on the processes related to education and its outcomes.

> **Box 9.1: Curriculum and Evaluation Procedures**
>
> a) Conformity with the values enshrined in the Constitution;
> b) Take care of all round development of the child;
> c) Build-up child's knowledge, potent and talent;
> d) Development of physical and mental abilities to the fullest extent:
> e) Learning through activities, discovery and exploration in a child friendly and child-centered manner
> f) Comprehensive and continuous evaluation of child's understanding of knowledge and his or her ability to

Through 'Joint Declaration of Education' (2011) signed by the Prime Minister and Provincial Ministries, the NEP 2009 has been

accepted as jointly owned national document subject to such adaptations as necessitated by the 18th Constitutional Amendment.

The Government of Sindh Act for Free and Compulsory Education (2013) describes principles for curriculum and evaluation procedures (see Box 9.1).

Within this context, now the key policy provisions are presented to situate the relevant priorities for the SESP.

Policy Actions for Curriculum – NEP 2009

The key policy actions proposed by NEP 2009 are given below:

Policy Action ➤ Curriculum development shall be objective driven and outcome based. It shall focus on learning outcomes rather than content. It shall closely reflect important social issues; provide more room for developing the capacity for self-directed learning, the spirit of inquiry, critical thinking, problem-solving and team-work

Policy Action ➤ The curriculum development and review process, as well as textbooks review process, shall be standardized and institutionalized within the framework of the Federal Supervision of Curricula, Textbooks and Maintenance of Standards of Education Act, 1976 [After the 18th Amendment, this provision may be adopted for provinces]

Policy Action ➤ Curriculum shall emphasize the fundamental rights guaranteed to the citizens of Pakistan [Sindh in this case], so that each individual shall develop within himself/herself and the society at large a civic culture strong enough to withstand any extra constitutional interference which threatens those rights

Policy Action ➤ Environmental education shall be made an integral part of education.

Policy Action ➤ Emerging trends and concepts such as School Health, Prevention Education against HIV/AIDS and other infectious diseases, Life Skills Based Education, Environmental Education, Population and Development Education, Human Rights Education, School Safety and Disaster and Risk Management, Peace Education and inter-faith harmony, detection and prevention of child abuse, etc shall be infused in the curricula and awareness and training materials shall be developed for students and teachers in this context, keeping in view cultural values and sensitivities

Policy Action	School Health Education and School Safety shall be infused within the curricula and learning materials with focus on improving school environment, enriching health education content, instituting regular mechanisms for health screening and health services of students and nutritional support to needy children in coordination with the Departments of Health, Environment and Population at the Federal, Provincial and District levels
Policy Action	Entrepreneurial Studies shall be introduced to develop entrepreneurial and business skills in students of general education to make them productive and self oriented citizens
Policy Action	There shall be an ongoing feedback and evaluation mechanism so that a continuous Improvement process is institutionalized. Feedback should flow from the primary providers of education to the curriculum development process with the full involvement of all intermediary players
Policy Action	Matric-Tech scheme shall be re-introduced at secondary level.

Next, the policy provisions related to textbooks are presented below:

Policy Actions for Textbooks – NEP 2009

Policy Action	A well regulated system of competitive publishing of textbooks and learning materials shall be introduced
Policy Action	Textbook Boards shall be transformed into competent facilitating, regulating and monitoring authorities. The Boards shall review and support the process of approval of textbooks for use in schools in their respective areas of jurisdiction
Policy Action	A Provincial /Area Committee comprising representatives of the education authorities, Textbook Boards, the private sector, teachers and other stakeholders shall be formed to select and prescribe textbooks for use in public schools in the respective province or areas of jurisdiction. Private sector schools shall be free to choose any of the books authorised by the respective Textbook Board
Policy Action	Federal and Provincial Governments shall arrange for the Textbook Boards to provide assistance in capacity development for the national and/or provincial publishing industry to become competitive players in an expanded education publishing market
Policy Action	Government shall ensure availability of quality paper at reasonable cost for printing of textbooks

Policy Action	Textbooks at primary level shall be developed within the context of local cultures
Policy Action	Special textbooks shall be prepared to cater to multi-grade environments. Alternately, supplementary reading material that helps self-learning must be developed for such environments
Policy Action	Curriculum Wing of Ministry of Education and provincial textbook boards shall ensure elimination of all types of gender biases from textbooks. Also adequate representation of females shall be ensured in all curriculum and textbooks review committees

Assessment systems are quality measures that cater to a number of requirements of the education system. These can be used to measure the overall system's efficiency as well as individual student's performance for progression in the education system. A comprehensive assessment design would provide feedback for improvement at all tiers, starting from changes in the classroom to improvements in the national systems.

Currently, the assessment system in Sindh suffers from several deficiencies in relation to promoting quality education. The one with more sinister outcomes is the practice of rote learning which stops the mental growth of the child and blocks innovative learning and the other is lack of provincial policy for conducting annual exams from primary to higher secondary levels. Efforts have to be made to address this issue and the need to inculcate critical and analytical thinking skills for developing life-long independent learners has to be emphasized. Assessment mechanism should be such that analytical thinking and critical reflections are tapped and encouraged.

Recently, the Government of Sindh, Education & Literacy Department has introduced annual Standardized Achievement Testing (SAT). The SAT will be used as a tool to transform input driven reform agenda to output/outcomes; to affect attitudinal changes in teachers, for instance helping them to graduate from rote learning model to teaching mode that help to inculcate problem solving and analytical skills in pupils; to inform parents, education administration, civil society and government and to gradually shift to result based accountability system. In addition to that, the results of the tests can also be used for curriculum review, inform teacher education and evidence based policy decisions (Ref: http://satsindh.net.pk/page/aboutsat)

Policy Actions for Assessment – NEP 2009

Policy Action 1	Education system needs to be internationally competitive and Pakistan shall make efforts to offer itself for international level academic assessments by 2015, participating in mathematics and science assessment conducted under the umbrella of Trends in International Mathematics and Science Study (TIMSS)

Policy Action 2	Student performance shall be based on assessing competence in a specialised area that requires a given skill set. There shall be periodic reviews of the assessment system
Policy Action 3	Multiple assessment tools in addition to traditional examinations shall be explored, to ensure the right balance between the uses of formative assessment approaches combined with the summative approach of high-stakes examinations
Policy Action 4	National standards shall be developed to reduce the differences in quality across regions. Assessment processes shall be standardised to become uniform across the Boards over time, so that students appearing in examinations under different Boards are assessed against standardized benchmarks
Policy Action 5	Examination systems shall be standardised to reduce differentials across students appearing in different boards of examinations, either through gradual reduction of the number of boards or any other mechanism deemed workable by the province/area government
Policy Action 6	The Examination boards shall be responsible for capacity building of paper setters and examiners
Policy Action 7	A comprehensive plan shall be prepared to eliminate cheating and use of other unfair means from examinations including addressing social attitudes towards the issue
Policy Action 8	A quality cycle management shall link the various systems of assessment and institutions involved in assessment (examinations, NEAS/ PEACE, continuous assessment) to provide feedback to curriculum development, textbooks development and teacher education and professional development

9.1.2. Analyzing the Current Situation

Curriculum

Though the 18th amendment has devolved the responsibility for curriculum development to the provinces, yet due to absence of new legislation and laws, the functioning of BOC has been facing hindrances in terms of delivering the outputs. The Provincial Curriculum Act is under review by the Legal Department, GoS. There is a legal requirement for an institution (in this case BoC) to function as curriculum authority in the province.

The National Curriculum 2006 has been adopted by Sindh, but it has not been implemented fully so far because of various reasons including institutional capacity, resources and expertise. Currently, the Bureau of Curriculum is deficient in human, material and financial resources. For

instance, there are only 6 subject specialists against 21 subject areas. There are then additional issues, such as, available competence in curriculum development and translations, especially in Sindhi language.

The overall top down approaches and limited curriculum continues to remain the norm for curriculum development, probably, due to limited resources and competence in curriculum.

Textbooks

The issue of textbook development and implementation is evidently interlinked with curriculum plans and their implementation. Since the Curriculum 2006 has not yet been implemented, the process of textbooks development also remains lagging to a large extent.

Within the context of the 18th Constitutional Amendment, Sindh has yet to come up with a comprehensive provincial policy and guideline for that could guide the development of textbooks and learning materials in the province. Non-existence of such policy and guidelines has implications for plans guiding textbook development and implementation. This also includes the capacity development plans for subject specialists, textbook writers and book reviewers.

The Government of the Sindh provides free textbooks to enhance enrolments, which entails another set of logistical and record keeping difficulties.

Assessment

There seems no comprehensive assessment policy and framework to guide the school assessment practices in the public education system, Sindh. This includes absence of large scale standardized testing of individual students prior to Grades 9 and 10 in the public education system. Even these large scale tests are often criticized in assessment reports for the low quality of items and that based on text-books based contents besides unfair means in examinations. At most levels/ grades, teacher developed tests are given to students but as these tests are not standardized, it is difficult to draw system wide inferences on the basis of students performance. In addition to that, there is little attention to systematize classroom-based assessment to help teachers and school leaders to focus on periodical progress of individual students.

Overall, the current assessment practices neither help students to improve (being summative in nature) nor enable the teacher to improve their practice. Similarly, there is a lack of systematic results analysis, reporting and feedback mechanism that could help the policy makers, decision makers, teachers and educational managers through providing information on what students have learnt during their school years. This information is very crucial for informed decision making and system's learning. PEAC was established to provide help in system improvement for assessment and through assessment data. However, PEAC still has a long way to go for effective

realization of this objective. The most recent assessment reforms (SAT) initiated by GoS can potentially contribute a lot in improving educational decisions and practices in the province.

There are some other assessment related initiatives in the province. For example, ASER does measure sample-based student achievements to construct a baseline of student outcomes; however, how this data is currently being used at system's level to improve educational situation in Sindh is not clear.

9.2.
Key Issues and Challenges

Curriculum

Curriculum guides on what needs to be learned and how learning can be facilitated and assessed. However, in practice, hardly any teacher has access to curriculum document. The access is further limited by the language barriers and also lack of conceptual skills to interpret the curriculum. The curriculum that reaches to the teacher is in the form of a textbook. As noted by NEP 2009, one implication of using a single textbook as representative of curriculum is: assessment becomes textbook-based (learning is limited to the contents of the textbook). On equity front, the curriculum-in-use is not responsive to the ethnic and social diversity in the province. Hence new textbooks should be developed as per guidelines of 2006 Curriculum which may addresses the learning outcomes rather than providing information about particular contents.

National Curriculum 2006 has not yet been implemented due to the challenges of capacity and limited resources. For example, BoC Sindh has only 5 subject specialists against a need of 21 subject areas. The capacity of human resource is also limited in certain critical areas, such as curriculum theory and research. The inter-linkages and interdependencies between and among BOC, STBB, PITE, STEDA, TEIs, HEIs, Scientific and Social Science Research Centers, Civil Society Organizations and Industry also need to be further developed and strengthened vis-à-vis curriculum development, implementation and improvement.

There are more than 70% schools with Sindhi as medium of instruction whereas the 2006 curriculum is in English language which should be translated into Sindhi as well as Urdu languages to make it more user friendly.

Moreover, revised and contextually more relevant curriculum for ECE, Primary, Adult Literacy, NFBE, and for Secondary classes is an urgent need. The Curriculum also needs to take up emerging interests (for example, ICT and entrepreneurial education) and consider pressing social issues, such as School Health, Prevention Education against HIV/AIDS and other infectious

diseases, Life Skills Based Education, Environmental Education, Population and Development Education, Human Rights Education, School Safety and Disaster and Risk Reduction and Management, Peace Education and inter-faith harmony, detection and prevention of child abuse, etc. In addition to that, there is no on- going feedback and evaluation mechanism to keep the curriculum updated.

Textbooks

Textbooks are a major tool used in teaching learning processes. Therefore, the quality of textbooks directly impacts the processes and outputs in public schools. As NEP 2009 has noted that with poor quality of teachers, the significance of textbooks gets more highlighted. A major issue related to textbook development, under modified legal context is: absence of comprehensive policy framework that can guide and lead textbook and learning materials development.

In addition to that, there are several issues with the quality of existing textbooks: content is poor, coverage is limited, presentation is boring and relevance of the contents with local context is weak. These problems have roots in inadequate processes of textbook development and dearth of quality authors as observed by NEP 2009. Another set of problems relate with more operational issues, such as management of the distribution of textbooks in the province. The distribution processes and monitoring of the processes need to be more systematized.

Also multi-grade classrooms are a reality and there is no curriculum, textbook and teaching learning materials to facilitate multi-grade teaching in context.

Assessment

The current practices of assessment in the public sector of education embrace a host of issues and challenges. These issues and challenges relate to its conceptualization, usage and implementation. Assessment, by and large, is summative, used to take decision about grade of the student at the end of the academic year, and whether they have passed or failed (in addition to this, there is hardly any student failing from primary to middle grade exams).

Research shows that formative assessment helps in the learning processes. In the context of Sindh, the major challenge is how to introduce and institutionalize formative and school based assessment.

In addition to that, as noted by NEP 2009, a comprehensive assessment system (including a policy framework and guideline) design would provide feedback for improvement at all tiers starting from changes at the classroom level to improvement at system's level.

The other issues related to assessment are: malpractices in examination and, therefore, credibility of assessment results and the whole process, as well as low quality of assessment tasks that, by and large, promotes only rote learning. Furthermore, there is absence of provincial regulating body to regulate policies of secondary and higher secondary examinations (as the IBCC was responsible before 18th Amendment). The provincial regulating body may oversee district examinations conducted by the districts from primary to middle grades.

Based on the analysis of policy context and discussions with key stakeholders, in this section, the key issues and challenges are summarized.

Table 9.1: Overview of Issues and Challenges

	Curriculum	Textbook	Assessment
Access and Equity	- Majority of the teachers do not have access to the curriculum document - The curriculum is not responsive to the ethnic and social diversity in the province (it must promote social cohesion) - National curriculum 2006 has not yet been implemented - Translation of curriculum in Urdu and Sindhi has not been implemented - BoC has only 5 subject specialists against a need of 21 subject areas - Challenges in undertaking research in schools due to non-availability of curriculum and research centre at the district level	- Lack of implementation of the National Textbook Learning Material Development Policy 2007 - Lack of comprehensive textbooks/ learning materials developing criteria to ensure social cohesion and harmony - Lack of subject specialists for review of the textbooks - Lack of textbooks and teaching learning materials for multi-grade teaching	- Lack of expertise in the area of assessment, measurement, reporting examination results, documentation of processes, data analysis and technology based assessment practices. - Non-availability of funds vis-à-vis assessment activities as it generally remains as a donor-driven initiative and mainly depends on external funding and technical assistance
Efficiency	Lack of coordination and communication between and among key relevant	No provincial policy for textbook development in	Lack of transportation and other financial resources

	organizations • Lack of role clarity among apex institutions such as BOC, STBB, PITE, STEDA and PEAC • Absence of legal framework for new roles of BoC, STBB, etc. • Financial resource constraints limiting effective delivery of outputs. For example, the following allowances do not reflect in the BoC budget: instructional, research and technical allowances • Lack of tools and processes for curriculum development, review , feedback and improvement	compliance with the 18th Constitutional amendment • Absence of textbook implementation plan	• Assessment centre does not have its own staff because of the approval being in pending for the recruitment rules • Short term action plan exists, but long term plan is required
Quality	• Relevance of contents to the prevailing social conditions in the province • Lack of an on-going feedback and evaluation mechanism • Lack of capacity and expertise in research based approaches to curriculum development.	• Capacity building needs of authors, designers and reviewers	• Malpractices in the assessment processes • Assessment is strongly text-books based not linked with learning outcomes identified in curriculum

9.3.
Objectives, Targets, Strategies and Activities

Based on an analysis of the situation as well as suggestions and recommendations from key stakeholders consulted in this regard, the following objectives have been formulated.

Objectives

1. Develop strong linkages and collaboration among organizations related with curriculum, textbook and assessment including key Higher Education Institutions, Social Research Centers and Civil Society Organizations.
2. Enriching the curriculum to make it more relevant to the needs of Sindh
3. Develop assessment policy, framework and process and enhance effective use of assessment data at all levels
4. Ensure teachers' access to revised curriculum and students' timely access to quality textbooks
5. Develop capacity of key institutions for improved curricular, provision of quality text-books/ learning materials and better assessment practices
6. Develop a Curriculum Implementation Framework and a mechanism for systematic and continuous curriculum improvement

Next, Table 9.2 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table 9.2: Curriculum and Assessment: Objectives, Strategies, Targets and Activities

GOAL: **Improving Curriculum and Assessment**			
Strategic Objective	**Strategies**	**Targets (2013-2016)**	**Activities**
Strategic Objective 1 *Develop strong linkages and collaboration among organizations related with curriculum, textbook and assessment including key Higher Education Institutions, Social Research Centers and Civil Society*	• Study of current practices of communication and collaboration among apex organizations • Development of institutional ToRs indicating 'transactions' between and among apex organizations • Development of a 3-year collaborative plan for organizational development • Use technology to increase collaboration and co-	• Govt. notifications are issued regarding clearly defined roles and responsibilities of apex organizations (RSU/ BoC/ PITE/ PEACE/ STBB/ STEDA/ BISEs) by 2013 • Strengthened communication and coordination mechanism is in place between STEDA, BOC, STBB, PITE, and TIEs by 2016	• Commission study on current practices of communication and coordination among key organizations • Disseminate report for identification of collaboration areas and best practices • Identify a lead group representing all apex organizations to lead the process • Develop and get approved new institutional TORs vis-à-vis collaborative roles • Identify areas of collaboration/ interdependence • Use the potential of technology to enhance collaboration among organizations • Prepare collaboration plan 2015-

GOAL: **Improving Curriculum and Assessment**			
Strategic Objective	**Strategies**	**Targets (2013-2016)**	**Activities**
Organizations.	ordination.		2017
Strategic Objective 2 *Enriching the curriculum to make it more relevant to the needs of Sindh*	• Identification of emerging needs of youth/ graduates in Sindh through research and wider consultation. • Development of curriculum enrichment framework, materials and strategies for curriculum relevance in the areas of social cohesion , economic development , EiE , technology integration and DRR	• Evidence based identification of emerging issues is available by 2013 • Enrichment materials in the area of ICT, EiE, Social Cohesion, emergency etc. are developed by 2015	• Approve resources for the committee/ consultant to study emerging issues • Develop a framework of curriculum enrichment • Identify thematic teams to develop learning materials for curriculum enrichment • Pilot and implement enrichment materials • Capacity building of teachers to use enriched materials
Strategic Objective 3 *Develop assessment policy, framework and process and enhance effective use of assessment data at all levels*	• PEACE to develop policy recommendation, framework and guidelines through a consultative process. • Formulate a plan for strengthening of PEACE • Develop systems capacity in assessment in improved utilization of assessment findings for improved classroom learning and evidence based decision making	• Assessment policy, framework and guidelines developed by 2013. • Institutional capacity building of PEAC by 2014 • % Capacity of teachers and examinations personnel in assessments and measurement. • % of educational managers professionally developed for using assessment data for educational decision making	• Putting in place a comprehensive assessment policy, framework and guidelines. • Putting in place strategies to make assessment data more valid and credible • Capacity building of PEAC • Capacity building of school teachers and examinations personnel in assessments and measurement. • Capacity building of school leadership for enhanced use of assessment data for school improvement • Enhance use of assessment data for TE programs, curriculum reforms and other educational decisions

GOAL: **Improving Curriculum and Assessment**			
Strategic Objective	**Strategies**	**Targets (2013-2016)**	**Activities**
Strategic Objective 4 *Ensure teachers' access to revised curriculum and students timely access to quality textbooks*	• Revision for contextualization of curriculum • Translation of curriculum in all languages of instruction in Sindh • Making curriculum available in different formats to ensure its reach to the teachers • School based and school initiated sessions on 'curriculum understanding' • Develop textbook and learning material policy • Develop system capacity for provision of quality textbook	• % of curriculum distributed to systems and teachers. • % of Teachers and Head teachers oriented to the new curriculum. • Textbook and Learning Materials policy developed and approved by 2015 • % of System capacity developed for writing, reviewing and publishing quality textbooks. • % of textbooks is delivered to school in time for academic session (prior to the start of the school year) • District-based accountability mechanism for curriculum functions is in place in all districts by 2015	• Identify curriculum that needs revision and revise according to the developed criteria • Translate curriculum document in all languages of instruction in Sindh to make it accessible to teachers • Making curriculum available in different formats to ensure its reach to the teachers • School based and school initiated sessions on 'curriculum understanding' • Develop and approve textbook and learning materials policy . • Develop and implement capacity building sessions on curriculum and textbooks • Develop mechanism to expand the access of BoC in the field • Conduct 3rd party validation on timely textbook delivery
Strategic Objective 5 *Develop capacity of key institutions for improved curricular, provision of quality text-books/ learning*	• Provision of already approved human and financial resources • Capacity audit of apex institutions vis-à-vis new leadership roles under the 18th Amendment • 5 –Year planning to develop institutional capacities for new	• 100% of HR posted against sanctioned posts by 2014 • New posts are created through SNEs (need based and rationalized) by 2014 • Institutional development plans are in place by 2014 • Plan implemented by	• Fill in the vacant positions in the apex institutions based on well-defined criteria • Allocate adequate financial resources in the head of curriculum development, research and assessment • Identify and approve SNEs for new positions • Ensure merit based recruitments for new positions

GOAL: **Improving Curriculum and Assessment**			
Strategic Objective	**Strategies**	**Targets (2013-2016)**	**Activities**
materials and better assessment practices	roles	2015	• Identify team to develop organizational plans • Develop and implement capacity building plan for curriculum developers, researchers, textbook writers and curriculum experts
Strategic Objective 6 *Develop a Curriculum Implementation Framework and a mechanism for systematic and continuous curriculum improvement*	• Study the current practices of curriculum improvement • Develop a holistic framework for curriculum implementation • Develop a framework for systematic and continuous curriculum improvement	• Study conducted and shared by 2013 • Curriculum Implementation Framework is developed by 2013 • Framework developed by 2014	• Review current practices of curriculum implementation and gaps in the implementation of Curriculum 2006 • Develop and implement plan for the enactment of Curriculum 2006 • Identify a core team to develop a framework for systematic and continuous curriculum improvement • Ensure that curriculum practices nurture and strengthen higher order thinking skills • Develop and implement a plan for systematic and continuous improvement of the curriculum

Special Note:

• Under SERP 2, a component deals with large scale students' assessment data. Capacity building of educational managers in the use of assessment data will be a good value addition and integration.

10. EDUCATION INFRASTRUCTURE DEVELOPMENT

With the goal of 'Education for All', school has become second home for child. Therefore, better planning, designing, construction, maintenance and repair of a school become the basic requirements for quality provision of education.

Keeping in view the current situation of school infrastructure and available resources in Sindh discussed earlier as a part of sub-sector review, the need for strategic planning is strongly felt to rationalize, consolidate, rehabilitate and construct additional infrastructure on the basis of

demographic trends, culture and socio-economic condition of district. It is important to optimize the number of schools and built only those schools in the first phase which are viable and feasible and in consonance with catchment areas' present and future demands.

This section in the sector plan, therefore, presents a quick recap, review and synthesis of School Infrastructure situation in Sindh and presents school infrastructure development plan. For instance, it includes a quick snapshot of the available number of schools in Sindh, wide primary and post-primary gap resulting in low enrollment in higher classes, available quality of infrastructure, missing basic facilities like water and sanitation, energy crises, indoor environment of school, furniture availability and quality, and an overall discussion on the issues related to education system's infrastructure.

The discussion on school infrastructure also sets out the key issues that should be considered when choosing a school site, layout of the building, and in designing appropriate buildings. Getting the location and design right is essential for the provision of effective spaces for teaching and learning, ensuring access for all, reducing risks from natural disasters, and achieving value for money.

With a focus to increase enrollments at all levels (especially, to cater for transition to elementary and secondary levels), in addition to indicating requirements for quality school infrastructure, rationalization of schools and consolidation of schools are two important strategies that will be discussed in detail in a separate section for special emphasis: a) School Infrastructure Development Plan-the plan will be district specific and will include community specific needs from ECE to grade X level, and b) School Consolidation as an important strategy to contribute to main goal of infrastructure development.

The information given in the next sections discusses the quality of infrastructure, its planning, design and execution phase, operation and maintenance procedures, consultation mechanism including community participation and other factors. The discussion provided will help in devising effective mechanism to improve the overall situation of Education in phases.

10.1
Policy Context and Situation Analysis

10.1.1 Policy Context

In order to guide districts to rationalize, rehabilitate and construct additional infrastructure on the basis of demographic trends, culture and socio-economic condition of district, the development of a District Wise School Infrastructure Development Plan is proposed. The basic

objective of the District Wise School Infrastructure Development Plan is to ensure the increase of enrollment, especially, that of elementary and secondary education as a main emphasis. Discipline wise Policy Context is discussed below.

District Wise School Infrastructure Development Plan (DSIDP)

The DSIDPs will be a guiding document for all concerned government department districts, local government, provincial and federal government, donor funding agencies, NGOs, MNA, MPA schemes and others for the selection of only need-based schools for infrastructure development. This DSIDPs will assist the Government of Sindh to avoid *ad hoc*, politically driven or biased (with vested interest) school schemes selection. The plans will be prepared and endorsed through Education & Literacy Department and Planning & Development Department to ensure that all education sector development schemes are in conjunction with the educational infrastructure development plans.

The education infrastructure development plans will be prepared after reviewing the socio-economic, demographic, cultural, and existing educational system e.g. through analysis of secondary data (SEMIS), field visits of at least 25% of infrastructure of each district to ascertain the current situation, meeting with key stakeholders to identify the gray areas, gap analysis of the existing education system's current infrastructure vis-à-vis current and future demands. The plans will be prepared keeping in view many variables, to roll out reform agenda so as to increase the enrollment rate, improve and increase the infrastructure to provide better environment to the school children, eliminate girls/ boys school discrimination, provide high and elementary schools, where required and improve the overall quality of education in Sindh. The plan will also guide the Government of Sindh in appropriate and effective allocation of the development budget for education sector.

Rationalization, Up-gradation and Whole School Development Concept Adaptation

The DSIDP will guide the Government of Sindh to select district wise schools for up-gradation from Primary to elementary, elementary to secondary or secondary to higher secondary schools, with a special focus on girls' education. This strategy is adopted to curtail the wide enrollment gap from primary to higher secondary. The DSIDP guides the reconstruction of dangerous buildings and consolidation of a number of schools into one school wherever physically and culturally possible (school consolidation is discussed in more details later in this chapter).

The construction of primary, elementary, secondary schools and/ or their up-gradation will be guided by the Whole School Development Approach i.e. to provide all facilities in school (infrastructure, utilities, furniture and fixtures, play area where possible, etc.) to cater to the needs of the next 05-10 years).

Architectural Planning and Design Standards

Prior to any construction preparation, testing and execution of generic designs of educational infrastructure for different topographical and climatic regions will be adopted with the help of consultancy services. These designs will be produced through a review and improvement of the national standards; to mitigate risk from hazards; incorporate features and flexibility to promote multi-functional use and ensure accessibility for all; to ensure durability and provide acceptable levels of light and heat and good acoustics; to incorporate materials and building techniques commonly used and understood by local contractors and players; presented in a range of formats depending on whether they will be constructed by contractors or communities; will have associated standard specifications, bills of quantities and/ or schedules of materials.

Province-wide water quality laboratory analysis will be carried out and with the help of consultancy services, design of efficient, affordable water treatment technologies will be initially piloted in a few schools and on successful of pilot project, the schemes will be introduced to all schools in a phase wise manner. Separate budget allocations shall be kept for school development (55-65%), for school building development and budget (25-40%) for school external infrastructure development, drinking and domestic water supply, sanitation facilities, provision of electricity, boundary wall, administration block and others. Separate monitoring mechanism for utilities to ensure they are well taken and developed shall be adopted.

Capacity Building

There is a need to hire an architect and design engineer with all allied services in the office of XEN Works and Services at district level for implementation of all infrastructure development related works. The XEN office will also hire top supervision of consultants for Ex-procurement and construction supervision services. Capacity building workshop shall be arranged at all levels – provincial, regional, district and taluka, to develop understanding for the proposed new standards requirement and implementation to improve the quality and standards of school infrastructure.

A Minimum Package of Facilities

The educational infrastructure that will have the most impact will vary from school to school and will include the provision of facilities such as classrooms, outdoor learning and play areas, furniture, water and sanitation, administration buildings and storage facilities. Water and sanitation facilities, boundary walls and furniture certainly need to be included on the priority list; basic spaces and outdoor play equipment can be provided at relatively low cost.

Resources can be targeted most effectively for individual priorities at schools if an effective process of participatory planning is used involving through community participation. This may take various forms but should result in a prioritized list of improvements discussed and agreed upon by the school, the pupils and the community. Then, as resources become available, the priorities can be addressed. To be effective, this process should be designed in a way that school and community members can be taken through it step by step, identifying the actual needs and at the same time build capacity.

Table 10.1: Design Parameters for Classrooms and other Basic Facilities

Classroom size	1 to 1.4 square meter per child means a class of 25-35 students requires an area of 25 -39 square meter or 260 to 500 square foot
Toilet Facilities	25:1 for girls students 40:1 for boys
Water Facilities	For domestic use: 45-100 liters per head Separate drinking water system 4-6 liters per head

10.1.2 Describing Current Situation

The government school system is extensive, comprising of roughly 43,000 functional schools, with a reported enrollment of 3.65 million students in grades 1–12 and 148,000 teachers (Annual School Census data 2011-12). Slightly more than 90% of functional government schools are primary schools (grades 1–5), and 72% of these primary schools have only one or two teachers. Roughly 20% of the schools have very low reported enrollment (less than 25 students), and 52% have poor-quality or no facilities and amenities.[3] Most schools have little or no educational inputs apart from assigned teachers and textbooks.

The number of primary schools versus post primary schools in percentage is 91-09% including almost 10,000 shelter-less schools, which creates an opportunity gap for the students passing primary school to get enrolled into elementary and secondary classes. The steep decrease in enrollment trend is evident through the figures provided in Table 10.2 below.

Table 10.2: NER at Primary, Middle and Secondary Level

Indicator	Latest Available Value (%)
Net Enrollment Rate (NER), Primary Level ages (6-10) years	61.6
NER Middle Level, ages (11-13) years	35.7
NER Matric Level, ages (14-15) years	23.1

[3]Having poor-quality or no facilities and amenities is defined as (1) lacking a school building, (2) having a school building but the building is reported to be in a dangerous condition, and (3) having a building but lacking toilets.

The SEMIS Data 2012 analysis shows that only 55% schools have toilets, 48% schools have water connections or ground water bore available and only 40% schools have electricity connections. There is no measurement for the quality of service and its efficiency. The infrastructure built is mostly load bearing/ wall bearing structure, which is now an obsolete technology; then, there are no standards available or followed for avoiding any unfortunate calamity. Many schools built before 1980's are quite old and have passed their design life and require a new structure.

These problems are often caused not by a lack of resources but as a result of inappropriate standards, lack of imagination, poor understanding of the links between infrastructure provision and education delivery, and an incorrect perception that alternative approaches increase costs.

Hence, the need for effective planning tools is felt more strongly than ever in order to overcome the situation. Various sources of funds are used to construct schools, for example: Annual Development Plan, Government of Sindh funding, Federal Government funding, members of legislative assemblies donor funding's non-government organizations; however, synergy in efforts is missing. The following section highlights key issues and challenges.

10.2
Key Issues and Challenges

Review of education related literature and field visits identifies the following key issues:

Infrastructure Planning and Design Related Issues

- *Ad hoc* planning for the establishment of schools, ignoring community participation, has been a trend in the planning phase. Some schools are located very near to each other within the distance of 500 meter while some are kilometers away from each other; this creates accessibility issues.
- There is a wide disparity in allocating the area of schools; some are below 100 square yard whereas others are over 5000 square yards, lacking any planning to upgrade the primary into elementary and/ or secondary schools on the basis of population growth and other factors. Allocating large areas are difficult in urban centers.
- 'Whole school environment' should be considered, not just the classrooms. The spaces provided should accommodate the required functions; buildings need to be accessible for all, appropriate in scale and attractive to the users; designs need to relate closely to the culture of the surrounding community and the local architectural tradition; designs should respond to the local climate, topography and any potential hazards; and construction should be simple and cost effective and must aim to minimize maintenance costs.

- Utilities management is not given due attention; drinking water standpoints are rarely available; if available, not functional, and in case they are functional, they have high quality issues. Toilets are not built as per the allocation (25:1 for girls and 40:1 for boys) and design standards; very limited awareness campaign drives to motivate children for proper use; moreover, promotion of health and hygiene practices is almost negligible.
- The common construction method is load bearing/ wall bearing technology that lacks protection against natural or man-made hazards.
- Usually, Sindh's climate is hot and during the planning and design phase, site specific climatic conditions need to be addressed while proposing the school layouts and selection of material for construction.

Design Standards Related Issues

The national standards for building construction are available for all types of structures for school building. The structures, however, are often inappropriate or non-existent. Moreover, the available standards do not provide clear guidelines and specification for the design and construction of school buildings in various districts of Sindh bearing varying soil capacities, wind flows, local material to be used in hot weather etc. The construction of load bearing structure is a follow up of a sequence of construction though the technology does not have any standards available.

Key Issues Relating to Site Sitting and School Layout

The size and shape of the site, the terrain and the prevailing climatic, economic and cultural conditions are not much considered during the sitting, design and layout of a school. In the recent past, the practice has been to acquire land for schools wherever it was available, resulting in inappropriately designed school compounds that are unattractive for children and do not support effective education system. Moreover, in schools where large spaces are available, the building is often placed near the road side without allocating buffer for traffic noise control.

Key Issues in Relation to Disaster Risk Reduction

The 2005 earthquake in northern Pakistan alone killed at least 17,000 and seriously injured 50,000 students and in total over 300,000 children were affected. An estimate of 6,500 primary schools were destroyed or badly damaged and in some districts, 80% of schools were destroyed. The poor seismic resistance of the existing building stock was a significant factor in the large death toll amongst children. The issue of 'school safety' incorporating adequate building standards and construction quality has now been put high on the reconstruction agenda. In Sindh, during the floods of 2010 and 2011, many schools were damaged and inundated in water for months. The hazards identification process is not well defined and adopted which results in

unfortunate loss of lives and national wealth/ resources in case of school damages. Hazards mapping should be part of school design during planning stage.
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Capacity Issues

Currently, there is no planning tool available for the key government offices responsible for civil works. Also, the position of an architect and design engineer is not sanctioned in the office of XEN Works and Services. Due to lack of standards, expertise and shortage of staff, the school infrastructure development trends in districts have wide disparity. In the absence of planning tools like School Infrastructure Development Plans at the district level, shortage of architecture and design engineer with all allied services in the office of XCN Works and Services, an old mindset when it comes to technology adaptation of local contractors, the quality of works cannot be improved.

Maintenance and Repair

Management and repair are overloaded with the theft of accessories culture, such as water motors, fans, lighting bulbs, water taps and others. Where the school administration is powerful, such practices are not common, but in schools located in outskirts, such practices are common.

Table 10.3: Synthesis of Issues and Challenges

Issues	Challenges
Need Assessment/ Prioritization	
According to the SEMIS data 2012, it is estimated that approximately 15000 schools in Sindh carry 70 percentile weightage of student's enrollment. This secondary data requires onsite validation, based on which a strategy for the priority investment for schools can be formulated. The elimination of schools which were politically driven is not an easy job to perform. People in Sindh are acculturated to live in groups/ cohorts and they want their own culture system. Consolidation of schools will only be possible after close community participation. Selection of schools for up-gradation needs social, cultural, economic and spacious assessment. The selection of schools to be up-graded shall be done through the development of District Wise School Infrastructure Development Plan which shall be	Political will may be a big challenge in accepting the reform agenda and in selection of upcoming schemes through the District Wise Education Infrastructure Development Plan. Policy Framework needs to be devised to work with the proposed reform agenda. The agenda is to invest in schools which have high number of enrollment and which could provide all facilities on priority basis.

endorsed by Government of Sindh through Education & Literacy Department.	

Duplication of Works	
Currently, there are a number of parallel school infrastructure development programs at the district level through ADP Funding, donor agencies, MNA, MPA, NGOs and Federal Government funded schemes. Such interventions only add additional infrastructure without taking into account the actual needs of the education system. These parallel programs have overburdened the Education & Literacy Department with thousands of schools which has huge recurring cost.	Approval of District Wise Education Infrastructure Development Plan and selection of schools for funding from various sources as specified in the DSIPD.

Status quo	
For years in Sindh, load bearing/ wall bearing structure for construction of school buildings is common. The estimates, procedures, contracting and procurement are set on a traditional note. It will be a big challenge to introduce new school sitting, architectural and building structure codes and guidelines to be adopted to build reinforced cement concrete frame structures, with all the utilities such as provision of drinking water system, toilets, boundary wall and related services.	Approval and notification of design standards for the construction of RCC frame structure building with all utilities. Acceptability to change will be a touch call and changing the mindset of the engineering staff working at the district level and managing contractors to bring in all new equipment for the construction of said structure will be a challenge. During the implementation of SERP-I, it is witnessed that capacity to build RCC structure, especially, in the rural part of Sindh requires much capacity building. Awareness and behavioral change to use safe drinking water and usage of sanitation facility in schools could also be a challenge.

Workmanship and Material Management	
Wide disparity in the availability of skilled labor across the districts. District *Mirpurkhas* has shown good strength for skilled labor as compared to District *Jacobabad*. Availability of material and logistics are issues, especially, in the outskirts/ rural area, where the metal roads are not available.	Improvement of workshop through trainings. A province wide skilled labor development program needs to be launched where any academy may impart certified trainings to all civil, mechanical, electrical, carpenting and plumbing personnel to increase the mass of skilled labor in Sindh. Material management plans at *taluka* Level shall

	be prepared and Works and Services Department could set specification accordingly in the tender document.
Standardization	
Currently the standards are not fully available to be adopted for school sitting and design. If the design standards had been available, the school structure would not have posed high disparity in shapes and designs.	Once all the said standards for school sitting, planning, design and execution are approved, their implementation is a real challenge. The standards will automatically standardize school looks and façade.
Operation and Maintenance	
Currently, the school administration has no power to repair even a small work amounting to Rs 1000/= or USD 10/=. The repair and maintenance budget is prepared by Works and Services which delays the process and, consequently, deteriorates the structure from time to time. If small repair is made on time, the durability of equipment and product will not be disturbed. A policy decision need to be taken to give a small repair and maintenance budget for cleaning, painting, repair of electrical and plumbing works of school and the account shall be operated by Headmaster.	Works and Services department will not accept this reform agenda. This needs to be taken seriously and a policy framework shall be devised for implementation of such mechanism.
Development of Annual Sector Plans and Allocation of Budget	
Currently, no basic planning tool is available to allocate annual School Development Budget. Once the District Wise Education Infrastructure Plans will be prepared, the districts are bound to invest and prepare budget as specified in the planning document.	Acceptability of budget and sticking to the allocated amount as mentioned in the planning document at all levels in the government with political will.

One of the key strategies to address issues related to school infrastructure and planning is School Consolidation. Therefore, the next section discusses school consolidation in detail.

SCHOOL CONSOLIDATION- an innovative reform

The Government of Sindh in recent years has introduced an innovative reform program to rationalize physical and human resources and to improve the overall management of schools.

The reform initiative is titled as school consolidation – converting two or more schools into a single school.

The need for school system consolidation has arisen due to the past proliferation of schools, precipitated by poor planning and arbitrariness. Many of the schools set up as a result of these practices are two-room, one-teacher schools, which tend to have the poorest quality of service delivery. The following table provides an overview of the situation by describing the number of teachers and students with respect to the number of classrooms in a school.

Table 10.5: Overview of Schools (No. of classrooms), Teachers and Students - Sindh

Rooms – School	Schools	Teachers	Students	Average Teacher /Students
0-2	35,021	50,224	1,666,633	1.43/48
3-4	4,679	15,294	458,320	3.26/98
05+	7,857	80,585	2,079,207	10.26/267

There are nearly 49,000 schools in the GoS's current inventory, most of which are non-functional, poorly located, undersized (one or two-rooms), understaffed, and/ or poorly constructed. Further, teacher absenteeism is chronic. In addition, it is now common to have several 'schools' situated on the same premises, each with separate administration personnel. Finally, there has been an under-investment in school facilities to provide for students beyond Class 5, which has left a few options for children to continue their education beyond the primary level, particularly for girls and in rural areas. The cumulative effect of these factors is: multi-tier poorly performing schools i.e., primary, middle, elementary, lower secondary, secondary and higher secondary schools.

Such school fragmentation has turned school management into a real challenge, especially with the current set of management abilities. The National Education Policy 2009 stipulates gradual phasing out of middle schools (Grade 6 – 8) and establishment of elementary schools (Grade 1– 8). The current School Consolidation policy will help in realizing this goal.

School consolidation covers three types of schools: (a) adjoining schools; (b) embedded/ same premise schools; (c) schools that are within a stipulated distance of each other and one strategic school among them having the horizontal and/or vertical space for expansion to accommodate students in merged schools. In other words, through this initiative, distinct government schools operating in the same campus, or catering to the same child population in the local community are converted into a single functional school.

The Box 10.1 gives some description of policy reforms for rationalizing school facilities and resources. As of December 2012, 1068 government schools have been consolidated in seven districts: 414 consolidated schools and 648 merged schools.

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Box 10.1: Policy Reforms

The first policy reform is to *consolidate* several small schools that exist in a village or neighborhood into a single, properly managed facility.

The second policy reform is to support the *merging* of several schools that are operating in a single location into a single school operating under a streamlined administrative structure.

The third policy initiative is to *upgrade* primary/ middle schools to include facilities and teachers for elementary and high school-age students.

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The Government of Sindh approved the policy of School Consolidation in 2012 in February 2012 as a major move. The purpose of the policy was to enhance the provision of quality education while ensuring the access to education at the same time. In the following exhibit, the policy framework is presented to contextualize the situation analysis.

Table 10.6: Policy of School Consolidation

Policy Section	Policy Provisions
(A) Campus School	*Campus School Definition:* A main, functional school formed by merging adjoining, embedded or nearby schools. *School Level:* The highest grade taught in the school will decide the 'level' of the campus school. *Principal:* Campus Schools will work under one principal. The Principal will be the administrator, instructional leader and manager of the merged schools. *SEMIS Code:* The campus school will have one SEMIS code. All merged schools will cease to have separate SEMIS codes and these will be surrendered to RSU-SEMIS. *Surplus Staff:* There will be NO surplus staff. All staff will be accommodated in the Campus Schools strategically. *SMC Funds:* Existing SMC funds will be used as planned. The remaining funds in defunct SMCs will be managed and spent by the old SMCs with the support of Academic ln charge(s). *Teaching and Non-teaching staff:* All teaching and non-teaching staff will report to Principal of the Campus School. *Seniority and Service matters:* Teaching and non-teaching staff will maintain their separate cadre and seniority as per existing rules. *School Medium:* If the schools merged had different medium of instructions, the campus school will be declared bi-lingual. Each medium of instruction will be assigned a different section within the Campus School.

	School Shifts: In case merged schools have afternoon/evening shifts, the headteacher/ headmaster of the merged schools will continue to act as 'Academic ln charge" of the afternoon shift of the school. The Academic ln charge will report to Campus Principal. *School Gender:* The merged schools will keep their 'gender characteristic'. Each gender will be treated as a section within the school. The head teacher/headmaster of the section will report to Campus Principal. *Notification:*On the recommendation of District Education Officer, Director Schools Education is the authorized officer to form and notify Campus Schools. Specimen is attached. *One time Grant:*Campus schools will receive one time grant from provincial government to carry-out necessary spatial changes and repair and renovate school. The grant amount will be calculated as per the following formula *Campus School Grant:*[Total Room *Rs. 25,000] +[Total Enrollment * 3,600]
(B) Powers of Campus Principal	*Campus principal* will be no less than BPS-17 officer. The appropriate grade for each campus will be decided on case to case basis. *DDO Powers:*Campus Principal will have DDO power. The principal office will be supported by an administrative section, comprising of Superintendent, Account Officer, Transport Officer, Nurse, and Computer Operator(s)/ Clerk(s). *Hiring/transferring powers:*Campus Principal will have the powers to surrender nonperforming teachers after due diligence. Campus Principal will also have the powers to hire "academic interns" from pre-screened pool.

The policy has provided clear directions related to the management of resources and powers of campus principle. The School Consolidation Policy has authorized Directors Schools Education to notify merging and consolidation of schools. The notification will be issued on the recommendations of respective district education officers. At provincial level, E&LD will assist regions and districts to identify feasible schools. Sindh Education Management Information System (SEMIS) conducts annual census of public schools. SEMIS will collect information from headmasters, principals, and sub-district officers for the schools that can be potentially consolidated. The list of such schools will be shared with field formations for further consideration.

Under Sindh Education Reform Program-II, the office of Chief Secretary, Sindh has notified Regional Reform Oversight Committees (RROCs). RROCs will oversee the implementation of SERP-II including school consolidation process. For every year, RROCs will set district targets for school consolidation and over the course of the year will notify consolidated schools.

To ensure that resources are realigned after the school consolidation, the SEMIS codes of the merged schools are surrendered to RSU-SEMIS. RSU-SEMIS will remove SEMIS codes within 60 days of the notification. All school inputs including teacher deployment will be according to the new consolidated status.

Box 10.2
Khairpur: An Illustrative Example of Policy Implementation

- 236 schools have been merged
- The majority of schools identified for merging were middle schools located within the primary school campuses (103 in numbers)
- With 103 middle schools merged, only 47 middle schools are left in the district
- This merger has raised the number of elementary schools in the district from 42 to 131.
- By adding two more class rooms, the elementary schools can be upgraded as high schools (currently, 103).
- Up-gradating of elementary will double the number of high schools in the district.
- Elimination of middle school reduces the serious issue of teacher shortage; it improves fiscal management by bringing in a principal and DDO to a school; and it also reduces the gap between primary to higher grades.
- With current progress and policy, in the next five years, Khairpur will have about 2000 schools from existing 3700.
- The policy will release the resources for better management and optimal utilization. Schools will have more teachers and more operational budgets.

Recognizing the need to reverse the past practices and existing situation of schools, in order to strengthen the service delivery and school performance and reduce inefficiencies, the Sindh government approved a School Consolidation Policy in February 2012 as a major move. The policy has been notified and communicated to the regions and districts along with guidelines. These guidelines provide a framework for school consolidation.

GoS has followed a phased approach in implementing the policy, holding consultations and maintaining communications with districts and schools to gather feedback in order to ensure that implementation is sensitive to local realities and to mitigate any potential risks.

Given the benefits of the policy and commitment of the GoS, USAID and the World Bank have committed to also support the School Consolidation Policy.

Table 10.7: Overview of USAID and World Bank Support to Consolidation Policy

Donor	Key Features
USAID	• GoS and USAID will invest USD 30 million to support school consolidation policy

(Sindh Basic Education Program)	• Mapping exercise in target districts to prepare an effective consolidation strategy • Support in constructing, furnishing and equipping an agreed number of schools in carefully selected locations in the seven focus districts in the Northern Sindh and selected towns in Karachi • School location criteria: where dangerous school buildings need to be demolished; where larger facilities that encompass a broader catchment area should be located; and where administratively it makes most sense to merge 'schools' operating in a single location, and include facilities for Grades 1-10. • Consolidation of schools affected by floods: The 2010 floods affected approximately 5,000 schools in Sindh of which approximately 2,500 schools were completely destroyed. The consolidation plan will include a mapping of flood damaged/ destroyed schools and offer recommendations for building better schools at suitable locations.
World Bank	• The World Bank has signed USD 400 million IDA credit with the Government of Sindh. • The Bank plans to promote the consolidation policy via Disbursement Linked Indicators. E&LD will have to consolidate identified schools every year to become eligible to access funds. • In terms of TA, while schools that operate in the same building or compound or more readily identifiable, project TA funds are made available for contracting a firm to provide technical, advisory, and monitoring support to districts and schools undergoing school consolidation.

The School Consolidation policy, however, is likely to face several challenges during its implementation. Some of the challenges are highlighted below:

a) *Resistance to Change*: The rationalization of schools and bringing them to one chain of command is expected to create some resentment and resistance among the staff. The Consolidation Policy has attempted to mitigate this by mandating that old In-charges of defunct schools will continue to work as section In-charges but will report to headmaster and principal of the school.

Though, in case of merging of embedded and adjoining schools, community of the area is not likely to feel any physical change they may feel the change when nearby smaller schools in dilapidated conditions are merged into a strategically located schools with additional classrooms. To address this challenge the School Consolidation Policy puts

emphasis on community ownership and readiness for consolidation. The third type of school consolidation can only happen with community's permission.

b) *Reversal of School Consolidation*: Another challenge to the policy is in its implementation. The policy can encounter challenges if it is not implemented adequately. School consolidation is likely to bring better managerial control over resources and thus improve the quality of education. However, if SEMIS codes are not removed or administrative staff is not posted or appropriate authority and powers not allocated (such as, drawing and disbursement powers), the policy may face reversal of the process.

c) Tribal, Clan and Religious Affiliations: There are localities in Sindh where schools are divided on the lines of tribal and communal affiliations. Though the long term objective is to bring these communities together in the schools to foster social cohesion in short-term, school consolidation policy will have to be sensitive to these differences and only areas where community shows willingness, schools should be consolidated.

In addition to the above set of challenges, mainly related to politics and power, there are additional challenges such as low quality/ access due to missing facilities, lack of monitoring system to ensure that school consolidation is maintained and issues are resolved efficiently, and inefficient use of resources due to irrational placement of schools is minimized. The objective of school consolidation policy is, thus, to improve access and quality of education by rationalization school facilities and resources. This will help to provide better resources to schools, such as school based management, improved facilities, and enhanced SMC and non-salary budgets.

10.3
Objectives, Targets, Strategies and Activities

Based on an analysis of the situation as well as suggestions and recommendations from key stakeholders consulted in this regard, the following objectives have been formulated.

Objectives

1. Improve the gap between no of primary and post primary schools to improve access at post primary level
2. Prepare District Wise School Infrastructure Development Plans to invest in only need-based schemes (and avoid duplication and adhocism)
3. Effective implementation of School Consolidation policy
4. Ensure provision of Safe Learning Environment and Education for All
5. Enhance provision of quality education through improved facilities

6. Ensure balanced and similar infrastructure facilities in the province and build capacity at all levels through dissemination of standards
7. Ensure the provision of construction supervision and quality assurance
8. Enhance operation and maintenance

Next, Table 10.4 presents the department's priorities for the next 3 years in terms of objectives, targets and key strategies.

Table 10.4: School Infrastructure and Consolidation: Objectives, Targets and Strategies

GOAL: **Improving the Provision and Quality of School Infrastructure in Sindh**			
Objectives	**Strategies**	**Targets 2013-2016**	**Activities**
Strategic Objective 1 *Improve the gap between no of primary and post primary schools to improve access at post primary level*	• Improve the access at post primary level through addressing the infrastructural gap	• Achieve primary and post primary balance from 91% - 09% to 70% - 30%	• Notify a high powered committee to integrate the measure the contributions of infrastructure related initiatives (such as school up-gradation, consolidation and whole school development through District Wise Education Infrastructure Plans) • Committee develop plan to achieve target and monitor on regular basis
Strategic Objective 2 *Prepare District Wise School Infrastructure Development Plans to invest in only need-based schemes (and avoid duplication and adhocism)*	• Prepare District Wise School Infrastructure Development Plans	• Development of Plans by April 2014 • Approval of Plans by June 2014	• Identify core teams to prepare District Wise School Infrastructure Development Plans • Develop plans and their implementation framework • Get the plans approved
Strategic Objective 3	• Enhancing community	• School consolidation plan with phase- wise	• Conduct a study on best practices of community

GOAL: Improving the Provision and Quality of School Infrastructure in Sindh			
Objectives	**Strategies**	**Targets 2013-2016**	**Activities**
Effective implementation of School Consolidation policy	participation for school consolidation processes • Schools consolidation, using different models/ strategies of consolidation • Studying impact of school consolidation on access	annual targets are developed by 2013 • % of achievement of targets as mentioned in SCP (%age/ number of consolidated schools)	engagement in Sindh • Using recommendation of the study, engage communities in school rehabilitation and consolidation • ASC every year with school consolidation mapping questions included • Identify potential schools for merging through ASC, SBEP mapping exercise and any other approved field survey • Share potential schools for consolidation policy with field offices and RROCs
Strategic Objective 4 *Ensure provision of Safe Learning Environment and Education for All*	• Elimination of unnecessary infrastructure • Conversion of unsafe building into safe building through rehabilitation • Policy for safe buildings	• Unsafe building are reduced to 0% in 03 years (by 2016)	• Develop criteria to identify unnecessary and unsafe buildings • Elimination unnecessary infrastructure • Develop plan to convert unsafe building into safe building through rehabilitation • Implement and monitor the plan
Strategic Objective 5 *Enhance provision of quality education through improved facilities*	• Improve facilities in schools that account for 70% of total enrollment for primary, elementary and secondary education in Sindh • Efficient utilization of non-salary and SMC funds	• The target is to provide all facilities in the selected 15000 schools in the next 5 years (2013-2018)	• Developed a phased plan to improve facilities in 15000 schools over the years • Improve learning environment using Environmental & Social Management Framework (ESMF) • Build capacity of schools for creative and improved utilization of available resources • Utilize SMCs funds for improving learning environment

GOAL: **Improving the Provision and Quality of School Infrastructure in Sindh**			
Objectives	**Strategies**	**Targets 2013-2016**	**Activities**
Strategic Objective 6 *Ensure balanced and similar infrastructure facilities in the province and build capacity at all levels through dissemination of standards*	• Develop infrastructural standards • Well defined budget allocations for school related facilities • Capacity building for the approved standards	• Elimination of disparity in quality of construction, testing and execution of generic designs for different topographical and climatic regions for all types of educational infrastructure by June 2014 • Approval of schools design framework and related services by December 2014 • Conduct regional level workshops for dissemination of information / standards developed with the key stakeholders by March 2015	• Carryout audit to analyze current situation and practices related to school infrastructure • Prepare proposal for approval of School Building Codes/ Standards related to building layout and placement, air circulation, natural lighting into the class rooms, sizing of class rooms, water facilities, toilets etc. • Prepare proposal for approval/ notification to stop building load bearing/ wall bearing obsolete infrastructure and to use instead framed structure with safety provision against any unfortunate natural calamity • Prepare proposal for well-defined budget allocations and get it approved (55-75% for classroom development while 25-45% for other facilities such as boundary walls with school gate, drinking and domestic water facilities, separate toilets for girls and boys, provision of alternate sources of electricity where required) • Conduct regional level workshops for dissemination of information / standards developed with the key stakeholders • Develop capacity to improve management practices related to for maintenance and repair
Strategic Objective 7	• Placement of a	• Sanctioning/ hiring of	• Develop standards for ex-

GOAL: **Improving the Provision and Quality of School Infrastructure in Sindh**			
Objectives	**Strategies**	**Targets 2013-2016**	**Activities**
Ensure the provision of construction supervision and quality assurance	qualified civil design engineer and architect in the office of XEN with all accessories at district level • Budget allocation for construction supervision	architect and design engineer with all allied services in the office of XEN Works and Services at the district level for the implementation of School Infrastructure • Development targets and quality assurance in 2 years (2014-2016)	procurement and construction supervision services • The XEN office to also hire top supervision of consultants for ex-procurement and construction supervision services • Prepare proposal for approval of budget allocation of 2.5 % for construction supervision
Strategic Objective 8 *Enhance operation and maintenance*	• Developing enabling context for school administration to maintain the institutional resources	• A mechanism to be drafted and approved by 2014	• Prepare a proposal for approval of annual 'operation and maintenance budget' to be utilized by the head of the institution/ school • Encourage HTs for utilization of these provisions effectively • The mechanism for monitoring school's progress on maintenance of resources

Budget and Cost

The estimated costs for the above two components (infrastructure development and school consolidation) is given in the following exhibit.

Component	Cost Estimates
DSIDP	The actual cost of total rehabilitation can only be calculated when the proposed survey is carried out and catchment area education need is calculated. However, under SERP-II, the GoS is expected to invest Rs. 20 billion, excluding ADP contribution.

School Consolidation	School Consolidation policy will require funding in the following heads:
	a. Headmaster positions in primary, middle and elementary schools GoS will be required to create at least 700 HM position in each financial year for newly consolidated primary or elementary schools which are estimated around 2000 for next three years.
	b. School Consolidation Grant The policy stipulates a one-time grant to schools consolidated under the policy. It is estimated that cost of this grant to provincial budget would be as following: Year 1 Year 2 Year 3 Rs. 1.4 billion Rs. 2 billion Rs. 3 billion
	c. Support and monitoring firm The exact costing will depend on the design of the support and monitoring program but it is estimated that cost will not exceed Rs. 1,000 per school.

11. CROSS-CUTTING ISSUES AND PRIORITIES

11.1. Management and Governance

> "Governance in the educational system is very weak. The Educational Policy, informed by the ideals of democratic governance, implying a partnership amongst the principal societal actors in the making and implementation of public policy, would try to effect a better allocation and management of public resources". (NEP 2009, section 1.3, pt. 19, p.4)

11.1.1
Policy Context and Situation Analysis

Within the context of educational policies in Pakistan, the management of education has been reflected as a serious concern in most of the education policies (e.g. 1970; 1972; 1992, 1998-2001). The National Education Policy 2009, a current policy document for Sindh, particularly, focuses on educational governance and considers failure in the commitment and implementation gaps as key reasons of poor performance of the education system. There is a gap between 'espoused' commitment and 'commitment in action'. This lack of commitment has been a major reason of persistent failure in achieving goals in educational policies in Pakistan.

The policy has identified the following governance issues, which need to be addressed:

1. Absence of a holistic view of sector
2. Lack of policy coherence
3. Unclear roles in fragmented governance
4. Parallel systems of education (public-private divide)
5. Widening structural divide
6. Weak planning and management
7. Lack of stakeholder participation
8. Lack of accountability, capacity to deliver and manage
9. Weak monitoring and evaluation system

The following matrix provides the proposed policy actions against each governance issue:

Policy Actions for Education Management and Governance – NEP 2009

(Synthesis of Policy Actions against Key Issues relating to Educational Management)

Issue	*Developing a Whole-Sector View*
Policy Actions	1. A comprehensive Human Resource Development (HRD) policy shall be developed integrating all types and branches of HRD institutions from Early Childhood Education (ECE) to tertiary education. The policy must keep market needs in view, including the flexibility in market trends, for Higher and Technical and Vocational Education. 2. Organizational fragmentation of education at federal and provincial levels shall be assessed for rationalisation and where feasible various streams, including literacy, shall be managed by one organization. 3. Sector-wide planning shall be co-ordinated by the Ministry of Education in order to bring together responsibilities for different sub-sectors of education, training and learning.
Issue	*Ensuring Policy Coherence*
Policy Actions	1. The Ministry of Education shall be responsible for ensuring coherence with other socioeconomic policies of the Government 2. Inter-Provincial/Area exchange of students and teachers shall be encouraged with a view to promote cultural harmony, mutual understanding, tolerance, social integration and brotherhood. 3. A mechanism for a strong coordination among different entities at the Federal and Provincial levels shall be developed to ensure harmony amongst different sub-sectors of education, training and learning.
Issue	*Overcoming Fragmented Governance*

Policy Actions	1. To remove ambiguities between the different roles of Federal and Provincial Governments in the field of education, their respective role and responsibilities shall be mapped and clarified through national consultative processes involving the federal governmentas well as provincial/area governments.
	2. The Federal role shall be that of a facilitator and coordinator. This should apply not only to the school level but also other levels and streams of education, including technical and vocational education.
	3. The Federal Ministry of Education shall be the focal point for development of the National Education Policy through feedback from and consultations with the provincial and area governments within the Implementation Framework described in Chapter 9.
	4. The IPEM shall oversee the implementation of National Education Policy and review its progress periodically.
	5. An overarching framework shall be developed to aggregate the initiatives taken by the Federal Education Ministry, provincial/areas education departments and organizations. All these initiatives shall be coordinated to leverage their outputs in a manner that these respond to the emerging challenges of society and the economy including globalization, in a concrete way.
	6. Decentralisation shall be pursued at each level of governance to devolve decision making closer to the point of implementation and shall eventually move to the school level, which shall become the basic unit for planning, including school based budgeting.
	7. Decentralisation within the framework of devolution shall focus on delegation of educational functions and not merely on delegation of administrative powers.

Issue	*Bridging the Public-Private Divide*

Policy Actions	1. Available educational resources in the private sector shall be mapped and information made available to all. The resources in this case would include more than simply private schools which are already part of the overall education census.
	2. Transparent and clear procedures shall be initiated in the education sector to allow utilization of private sector inputs. Systems shall be developed through involvement of all stakeholders: the public sector, the private sector and the community; keeping in view Ministry of Education's document "Public Private Partnerships in Pakistan's Education Sector" [8].
	3. Provincial Governments shall encourage private education at the school level as an option available to those who can afford such education. At the same time, Governments shall take steps to encourage public sector institutions to draw benefit from the resources available in the private sector.
	4. A common curricular framework in general as well as professional education shall be applied to educational institutions in both the public and the private sector. Government shall take steps to bring the public and private sectors in harmony through common standards, quality and regulatory regimes.
	5. Where a private school already exists with additional admission space, the children shall be accommodated in it, through public financing and the public sector new school shall either be developed in separate vicinity or for different levels. Private sector schools shall be provided permission to operate on a need-cum-quality basis.
	6. Provincial and Area Governments shall develop regulations for establishing and running private sector institutions that include transparent accountability procedures. Where such

regulatorybodies have alreadybeen developed,thoseshallbereinvigorated.

7. ProvincialandAreagovernmentsshalltakestepstobuildcapacityoftheregulatorsto enable themto effectivelymonitorcompliancebyprivatesectorinstitutions.

8. Non-profiteducationalinstitutionsshould be providedtaxincentives.

Issue	*Overcoming Structural Divides*

Policy Actions

1. The state shall provide greater opportunities to the citizens and areas that have been largely excluded from mainstream development and participation in the national processes, by ensuring even and equitable human development across Pakistan.

2. Governments shall identify schools in less developed areas for prioritisation in resource allocation and management for improving quality.

3. Ministry of Education, in consultation with Provincial and Area education departments, relevant professional bodies and the wider public, shall develop a comprehensive plan of action for implementing the English language policy in the shortest possible time, paying particular attention to disadvantaged groups and less developed regions.

4. The curriculum from Class I onward shall comprise of English (as a subject), Urdu, one regional language and mathematics, along with an integrated subject.

5. The Provincial and Area Education Departments shall have the choice to select the medium of instruction up to Class V.

6. English shall be used as the medium of instruction for sciences and mathematics from class IV onwards.

7. For the first five years, Provinces shall have the option to teach mathematics and science in English or Urdu/ official regional language; but after five years the teaching of these subjects shall be in English only.

8. Opportunities shall be provided to children from low socio-economic strata to learn English language.

9. A comprehensive school language policy shall be developed in consultation with provincial and area governments and other stakeholders

10. Federal, provincial and area governments shall develop joint strategies with main Madrassah systems, through consultations, to formally integrate market-oriented and skills-based subjects in the Madrassahs' curricula - subjects that would enable the children graduating from Deeni Madaris to have wider employment options.

Issue	*Building Management and Planning Capacity*

Policy Actions

1. A management cadre for education, with specific training and qualification requirements, shall be introduced.

2. Education sector management shall be left to the Education managers without any intervention from politicians and generalist civil servants; only then the education managers can be held accountable for outcomes.

3. Education planners and decision makers shall be trained in the use and analysis of educational statistics to develop the practice of information-based decision making and planning.

4. Conformity with the national standards shall be the criterion for a realistic assessment of resource requirements as well as a fair and equitable basis for

allocation across institutions.

5. A Personnel Management Information System (PMIS) as well as Financial Management Information System (FMIS) shall be developed to support the planning, implementation and evaluation function. These shall be linked to the existing Educational Management and Information System (EMIS).

6. Besides collection and dissemination of education statistics of Public sector education institutions, its jurisdiction shall be extended to private education institutions as well as Non-formal schools all over Pakistan

7. A National Standards and Certification Agency for EMIS shall be established to set, monitor and evaluate the quality of education, data collection, analysis and use across all levels and tiers of education management. This can be part of a National Standards Authority for Education, proposed earlier (ref: policy action No. 7 under Section 2.4).

8. The Provincial and Area EMIS shall cater to the data needs of all tiers of the local governments. It shall also provide data to NEMIS for national aggregation on a routine and timely basis.

9. A separate data base for literacy shall be developed.

Issue	*Getting the Community Involved*
Policy Actions →	1. School Management Committees (SMC) shall be strengthened through involvement of students, teachers, educationists, parents and society (STEPS).
	2. The tenure of the SMCs shall be enhanced, so that the members are able to make use of their experience.
	3. To promote greater utilisation of allocated funds, Governments shall move from financial audit to performance or output based audit system for SMCs.
	4. Head teachers shall be trained in social mobilisation to involve the community effectively.
	5. Awareness campaigns shall be launched, at the District, Tehsil and Union levels to sensitise communities about their role in school education.

Within the context of 18th Constitutional Amendment, the key features of the overall structure of management of education in Sindh are captured in the following exhibit.

Table 11.1.1: Key Features of Overall Education Management Structure in Sindh – Post 18th Amendment Scenario

Management level	Key Features	Comments/ Capacity Development Needs
Provincial level	• Overall policymaking and providing leadership in curriculum, educational standards, assessment, textbook development, program design and implementation. • The provincial Education Departments are	• These are the new roles, andreconceptualization of roles and capacity development is required

	headed by their respective Provincial Education Ministers. The provincial Education Secretary is In charge of the department. • The provinces are further divided into districts for the purpose of administration	
District level (23 districts and sub districts)	• The head of the Education Department in a district is District Education Officer (DEO). • The hierarchy, then, runs down to the District Officer, Education, Supervisors or Assistant Sub-district Education • At the grass root level (the union council level), Learning Coordinators (LCs) provide academic guidance as well as supervise the schools	• Designing and developing an integrated system of governance • Planning and implementation • Evidence based decision making – use of assessment data • Standards based management and accountability • Fiscal management
School Based Leadership	• Mainly responsible for provision of learning resources and academic supervision for improved learning outcomes	• Community mobilization • Supervision of learning processes • School based accountability and performance

Educational planning as well as implementation is, generally, characterized by disconnected, isolated and fragmented approaches. Such approaches will continue to have limited impact if a holistic view of sector view is not developed and implemented.

NEP 2009 has observed that the current educational governance is alien to the 'standardization culture'. Standards or statements of minimum requirements help to manage the process and outcomes objectively. With the Eighteenth Constitutional Amendment, the responsibility of developing relevant standards for educational process and their outcomes has become an important provincial role.

On the one hand, planning and management need to be guided by standards and on the other hand, the decision related to planning and implementation decisions need to be informed and evidence-based (e.g. decisions taken on the basis of data or information that is comprehensive, accurate, valid and reliable) has long been identified and acknowledged. The current efforts at developing data management systems (e.g. EMIS data) exemplify this emphasis. No doubt, the existing efforts are acknowledged and appreciated. There is, however, a need to further enhance the potential of the data generation, its management and utilization, to meaningfully, effectively

and consistently inform planning efforts and reform initiatives. This comes across as an important priority.

11.1.2
Key Issues and Challenges

Listed below are some of the key issues relating to educational management in the province:

Table 11.1.2: Synthesis of Key Issues relating to Educational Management in Sindh

Issue	Details
Lack of wholesector approach	• Limited inter-departmental coordination (e.g., with finance, civil service commission, health) and uneven flow of communication
Absence of standards and minimum criteria for educational inputs, processes and educational outcomes	• Lack of clear performance and quality standards (some examples): - Learning environment - Lack of job description; no criteria for recruitment, selection and placement nor performance audit - Standards for teaching-learning processes - School ranking
Limited capacity for evidence based planning	• Lack of data skills resulting in absence of evidence based decision making
Limited professionalism among educational managers	• There are no special requirements for a teacher to be inducted as educational manager in the system • The retention and promotion as educational managers do not get, by and large, informed/ influenced by any professional criteria – only the length of service matters

11.1.3.
Objectives, Strategies, Targets and Activities

Based on an analysis of the situation as well as suggestions and recommendations from key stakeholders consulted in this regard, the following objectives have been formulated.

Objectives

1. Developing whole of sector approach
2. To develop and implement standards for educational inputs, processes and educational outcomes
3. To strengthen the capacity for evidence-based planning and accountability
4. Professionalizing educational management

Next, Table 11.1.3 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table11.1.3: Management and Governance: Objectives, Strategies, Targets and Activities

GOAL : **To strengthen management capacity at all levels: Provincial, District and School**			
Strategic Objective	**Strategies**	**Targets (2013-2016)**	**Activities**
Strategic Objective 1 *Develop whole sector approach*	• Review of current management policies and practices • Developing governance framework with whole sector approach • Capacity building for district sector planning	• Study report on current practices is available by 2015 • Legal framework with whole sector approach is in place 2015 • District Sector Plans are developed and in place by 2015	• Identify a core team to review current policies and management practices • Develop ToRs for the core team • Team submits findings • Based on the findings, develop an integrative framework for governance • Develop capacity for district sector planning • Develop and implement district sector plans
Strategic Objective 2 *Develop and implement standards for educational inputs, processes and educational outcomes*	• Capacity building for preparing standards for managing and monitoring educational programs • Standards identification • Pilot testing in both, rural and urban settings	• Standards for managing and monitoring educational programs identified by 2016	• Develop minimum standards on school infrastructure • Develop performance standards and benchmarks for teachers'/ managers' recruitment and performance • Develop a school ranking system • Facilitate the development of academic calendar for all schools
Strategic Objective 3	• Capacity building of district based	• Procedure and protocols for	• Plan to improve processes of data collection

GOAL :			
To strengthen management capacity at all levels: Provincial, District and School			
Strategic Objective	**Strategies**	**Targets (2013-2016)**	**Activities**
Strengthen the capacity for evidence-based planning and accountability	educational managers in the use of SEMIS data • Identification of data needs of educational managers • Development of procedure and protocols for collecting data on new measures • Use of data for decision making, planning and implementation	collecting data on new measures in place by 2015 • 20 % of educational managers at district level have started to use SEMIS data for educational decision making	• Identify new measures for data collection such as nature and kind of professional training received • Identify needs of managers in the use of data • Build capacity on the use of data • Follow up progress in the use of data • Link decision making to data in matters, such as transfer and posting; appointment; finance and budgeting; and selecting personnel for professional development initiatives
Strategic Objective 4 *Professionalizing educational management*	• Creation of a special cadre for educational managers • Development of a mechanism for continuous professional development for educational managers	• Create a special cadre for educational managers by 2015-16	• Develop strategy paper outlining plan to create management cadre • Achieve consensus among key stakeholders • Develop service rules • Recruit managers in the new cadre • Assess needs of educational managers on an on-going basis • Develop and implement CPD programs for educational managers • Ensure that educational managers understand and implement policies, rules and regulations

Note: Management issues related to a subsector specifically are discussed in the relevant section

11.2. Gender Equity

The Constitution of Pakistan affirms an egalitarian view of education based on values responding to the requirements of economic growth…instilling moral values and of providing education to all citizens irrespective of gender, caste, creed, or race…"

(NEP 2009, Section 2.1, point 43, p.9)

The significance of female education and participation in educational processes is well-established and recognized widely. The focus has emerged repeatedly, though with varied emphasis, in various policies and plans in past. The very first conference on education in Pakistan (November 1947) takes it up as a focus and formulates sub-committees for recommendations on 'Women's Education' though it was not identified as an issue as such due to weak gender awareness (White Paper 2007). In essence, it was in mid-60's that gender was taken as an issue, with special reference to the existing co-educational context and need for segregated provision to address the orthodox views and concerns. The focus and emphasis kept shifting in the subsequent policies, including, for instance: gender segregated provisions and special arrangements (e.g. separate girls schools and universities) to ensure female participation; linking girls' enrolment to the availability of female teachers and, consequently, increasing number of female teachers, providing training to female teachers and allowing some flexible policy provision for hiring of female teachers).

However, despite this emphasis and recognition, gender inequalities continue to plague education, in general, and society at large. The current structural arrangements in Sindh have promoted gender disparities, which have also contributed to the vicious cycle of sustained poverty in the province. Gender inequalities are present in different forms, requiring a comprehensive plan and implementation strategy so as to meet the needs of the girls having no/ limited access to educational provision and related opportunities, and for female teachers working in the Department of Education (including females working at the management positions). Low female literacy rates contribute significantly to the negative social conditions causing further gender inequalities and disparities. Therefore, one important strategy is to improve female adult literacy on a war footing.

11.2.1
Policy Context and Situation Analysis

The current policy, the National Education Policy 2009, has placed due emphasis on the significance on the gender inequality issue, and takes a strong and committed stance on this issue. For instance, some of its key aims and objectives include:

> ### Box 11.2.1. Aims and Objectives
>
> To equalize access to education through provision of basic facilities for girls and boys alike, under-privileged/ marginalized groups and special children and adults.
>
> To organize a national process for educational

Likewise, the international commitments (Millennium Development, MDGs-Ed and EFA Goals) also require enhancing female participation and gender parity as key

objectives set for 2015. However, despite all the emphasis, Pakistan is still very far from fulfilling its commitment in relation to Universal Primary Education by 2015. With low retention rates and high drop-out rates, Gender disparities continue to increase. Moreover, females in the rural areas are further disadvantaged.

The data indicates that at primary level, the gender parity index is very low and the lowest at the higher secondary level. To address this concern, there is a general consensus among educational planners and managers in Sindh that female education is important. The overall national and international policy context is supportive, too. The policy directives are to ensure elimination of all types of gender biases from textbooks, and that there is adequate representation of females in all curriculum and textbooks review committees. Likewise, SEMIS collects gender segregated data. The Government of Sindh has taken some effective measures to reduce gender disparities through stipends/incentives for girls. So far, approximately Rs. 1.2 billion has been spent on the programme; its impact, however, needs to be assessed.

Table 11.2.1: Gender Parity Index (GPI), 2010-11

Indicators	Value
GPI: Grade 1-5	0.69
GPI: Grade 6-8	0.99
GPI: Grade 9-10	0.70
GPI: Grade 11-12	0.57

Source: Statistical Bulletin Annual School Census (2010-2011)

11.2.2
Key Issues and Challenges

Listed below are some of the key issues relating to gender education in the province:

Table 11.2.2: Synthesis of Key Issues relating to Gender and Education

Issue	Details
High gender disparities	• Primary NER gender gap is 28 % (boys 64% vs. girls 36%); Secondary NER gender gap is 19.6 % (boys 59.8 % vs. girls 40.2%)
High female dropout rates at all levels of	• Possible factors include: (i) early marriages; (ii) lack of awareness amongst parents and guardians; (iii) opportunity cost; (iv) lack of school

education	facilities, especially separate toilets for girls; and (iv) non-conducive environment for professional development of female staff
Quality and relevance of education for girls	• Need to improve this dimension; especially because (i) teachers are not gender-sensitized and use ineffective pedagogy; (ii) teachers are not seen as role models in the community; and (iii) curriculum as well as the overall teaching and learning environment is not gender-sensitized
Budget provision/ Appropriate resource allocation	• The overall resource allocation needs to be made in a way that gender equity can be promoted, and related issues and concerns can be addressed
Promotion and professional development of women	• No clear policy for promotion and professional development of women to be posted at management cadre level.
Harassment	• Bias perception of female officials and harassment of women at work place and school level due to absence of gender policy by government for this issue
Coordination	• Lack of coordination with department i.e. ministry of women development
In addition to the above, issues such as those of ghost schools, cultural complexities, inefficient governance and management, capacity deficits and lack of political will due to Feudal and tribal system further contribute to gender inequalities.	

All the subsectors have identified gender sensitive objectives and strategies, discussed separately within each sub sector, some specific examples of which are provided below.

Table 11.2.3: Some Examples of Gender related Objectives Identified in the Sub-sector Plans

Sub-sector	Strategic Objectives
Early Child Education	• Recruiting qualified female teachers for ECE programs • Enhancing use of child centric approaches and • Ensure provision of better opportunities for girls
Secondary and Higher Secondary Education	• Concerted efforts for increased girls' enrollment, broad based curriculum to make it more relevant to female interest, and improving schools' capacity to retain the female students (which includes, for instance, provision of necessary facilities and sufficient infrastructure, appropriate and effective learning environment)

Literacy and Non-formal Basic Education	• Enhancing access for females especially in rural areas (e.g. through provision of non-formal learning facilities i.e. centres and community schools for girl child), developing contents of learning materials of literacy curriculum that are more relevant to women's needs, and recruiting and training more female literacy teachers to promote literacy
Teacher Education andDevelopment	• Teacher deployment is an important dimension to ensure gender balance. Enhancing teacher education opportunities for female teachers, provision of scholarships females enrolled in pre-service teacher education institutions, recruiting more female teacher educators to support teacher education, upgrading qualification of female teachers, and mainstreaming gender awareness and sensitization in the design and development of teacher education programs

The current section, therefore, deals only with issues related to gender equity at a more systemic level, such as developing gender sensitive policies. These systemic issues are also part of the overall educational governance and sub-sector planning, however, dealt separately here to highlight its significance and special attention in the sector planning. The following are the key strategic objectives for the next 3 years, along with the LFA.

11.2.3.
Objectives, Targets and Strategies

Based on an analysis of the situation as well as suggestions and recommendations from key stakeholders consulted in this regard, the following objectives have been formulated, which address issues concerning gender equity at a more systemic level. For specific objectives and strategies related to enhancing, learning infrastructures and environment for both, formal and non-formal education, see sections on Sub-sectors.

Objectives
1. Ensure implementation of national laws and policies that deal with gender inequities/ violence (including development of anti-harassment policies for Education & Literacy Department)
2. Develop management capacity to promote gender equality and empower women
3. Ensure that the content, language and pictorial representation in textbooks is free from gender biases
4. Mainstream gender theme as part of the teacher education and development
5. Designate gender-based budgeting for promotion of gender equity in education
6. Strengthen linkages and coordination with governmental agencies line departments on gender issues

7. Formulate affirmative action policy in personnel management by initially setting a minimum quota for females at administrative level.

Next, Table 11.2.4 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table 11.2.4: Gender Equity: Objectives, Strategies, Targets and Activities

GOAL: **To enhance Gender Equity across the provision of education in Sindh**			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
Strategic Objective 1 *Ensure implementation of national laws and policies that deal with gender inequities/ violence (including development of anti-harassment policies for Education & Literacy Department)*	• Regular gender audit at the provincial level for informing policies and standards • Redressing cases relating to anti-harassment • Review of gender discriminatory legislation and its implementation at all levels of education in the province	• Gender unit is established at the provincial level by 2015 • Anti-harassment policy for females students and teachers/ managers at workplace is developed by 2015 and implemented by 2016 • Review of gender discriminatory legislation and its implementation at all levels of education in the province by 2016	• Gender unit is established at the provincial level that conducts gender audit for policy and standards, and develops guidelines for curriculum development, teacher development and HR management • The unit also serves as redresser of cases relating to anti-harassment • Develop and approve comprehensive ToRs for the unit • Approval of SNE's for induction in the Gender Unit • Hire relevant and competent staff to address gender related issues in the province • Develop, approve and put in place anti-harassment policy for females • Develop relevant legislative framework and plan for implementation at all levels of education in the province
Strategic Objective 2 *Develop management capacity to promote gender equality and empower women*	• Relevant planning for promoting gender equality at all levels in the system • Establishment of Gender Focal Points at district level • Gender sensitization	• District plans reflect their gender equity related targets and measureable indicators by 2015 • Gender Focal Points are established at district	• Develop district plans for promoting gender equality • Establish gender focal persons • Assess the effectiveness of stipends to females and other gender-sensitive initiatives in place • Notify and establish Gender Focal

GOAL:			
To enhance Gender Equity across the provision of education in Sindh			

Strategic Objective	Strategies	Targets (2013 – 2016)	Activities
		level by 2016 • Capacity building of managers in targeted districts by 2016 to sensitize them	Points at district level • Develop and implement programmes for managers' capacity building in terms of gender sensitization

Strategic Objective 3
 	
Ensure that the content, language and pictorial representation in textbooks is free from gender biases
	• Establishment of Gender Unit (as mentioned above)
	• Review of the curriculum in relation to gender biases
	• Ensure provision/ use of gender sensitive textbooks and teacher guides by removing gender biases
	• On-going capacity building of curriculum designers, textbook writers and teacher educators to promote gender equity
		• Prepare the guidelines for identification of gender biases in curriculum by 2015
		• Revise curriculum documents, textbooks and teachers guides by 2015-16 to remove gender biases (wherever noticed)
			• Hire experts for comprehensive review of textbooks from gender perspectives
			  - Stage One: Primary level textbooks
			  - Stage Two Secondary level textbooks
			  - Stage Third: Higher Secondary textbooks
			• Disseminate findings to relevant stakeholders
			• Formulate and execute implementation strategy

Strategic Objective 4 *Mainstream gender theme as part of the teacher education and development by 2015*	• Ensure that gender is included in teacher education programmes as one of the themes for teachers' capacity building	• Gender is included as a subject in teacher education programmes by 2015	• Make gender an integral part of ITT and CPD courses • With involvement of the relevant stakeholders (i.e. BoC, PITE, GECE, College of Education etc.), a separate section on gender will be written and included in curriculum for teacher education programmes • Teachers' capacity building with reference to andragogy • Develop a follow up mechanism to assess the impact of training • Periodic M & E
Strategic Objective 5 *Allocate budget for promotion of gender*	• Sufficient budget is allocated and used for implementation of all activities relating to gender equity, including, e.g.	• Ensure gender responsive budgeting, starting from the fiscal year 2015-2016	• Proposal submission on gender-based budgeting including request for making it permanent feature of the annual fiscal budget.

GOAL:			
To enhance Gender Equity across the provision of education in Sindh			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**

equity in education by 2015	-		• Proposal approval and implementation:
			  - to launch public awareness campaigns for reducing gender disparity at community level
			  - to initiate series of programs for ensuring women's participation in social, economic and political life
			  - ensure special provision for TA/DA for those female teachers and SMC members, who travel along with family members for participation in PD programmes

Strategic Objective 6 *Strengthen linkages and coordination with governmental agencies line departments on gender issues*	• Strengthen cooperation and linkages of the Educational Department on gender planning and action with key governmental agencies, e.g. Ministry of Women Development, Finance, Planning & Development, Female Parliamentarians, Ministry of Finance, Ministry of Health, Government of Sindh	• Strengthen cooperation and linkages on gender planning and action with key governmental agencies by 2016	• Meeting with relevant departments (e.g. Departments of Women Development, Finance, Health, P&D, local government) • Developing mechanism for coordination and working together with these departments • Special fund allocation for related activities
Strategic Objective 7 *Setting a minimum quota for females at administrative level*	• A committee comprising of senior and retired officials from education department should be setup to review and revise policies in a way to ensure equitable representation at administrative position within Education Department	• 33% of women will be posted at Executive post within education department by 2016	• Conduct sector-wide gender situation analysis • Formulate policy in the light of analysis • Phase-wise implementation of schemes and programs to promote gender equality in sector management, including anti-gender discrimination policies and activities

11.3. Public Private Partnership

Existence of insulated parallel systems of public and private education in Pakistan remains a cause for concern as it creates inequitable social divides. (NEP 2009, p.17)

The education scenario in Sindh is not only disappointing, but also lacks hope of future betterment. Even though during the last decade, there have been numerous education initiatives and projects for the improvement of education status in the province, but, ironically, despite all efforts, the crises of the educational scenario have further intensified.

Despite the government's concerted efforts to make education free and compulsory (with free textbooks, stipends and, in some cases, uniforms and food provisions), the crises in the sector continue to remain limited to issues of 'access' and 'poor quality education' in both, public and mushrooming low-cost private school systems. In a situation where the system's mechanisms have weakened and there is a dearth of resources, partnerships between key stakeholders is a key strategy to join forces and resources for improving the state of the education sector. The role of public-private partnerships for providing access to quality education cannot be ignored in the current scenario. Since mid-1990s, public private partnership has become an important part of Pakistan's education policy discourse and the government started to encourage involvement of the private sector and civil society organizations (CSOs) in the financing, management and delivery of education services in Pakistan.

11.3.1
Policy Context and Situation Analysis

Historically, the provision of education through Public Private Partnership has been supported by the education policies and plans such as education policy of 1992, ESR-Action plan, MTDF (2005-2010) and 2009 Education Policy. Especially, the NEP 2009 puts some extra emphasis on public private partnership.

Policy Actions for Enhancing Public Private Partnership – NEP 2009

Policy Action 1   Available educational resources in the private sector shall be mapped and information made available to all. The resources in this case would include more than simply private schools which are already part of the overall education census.

Policy Action 2   Transparent and clear procedures shall be initiated in the education sector to allow utilization of private sector inputs. Systems shall be developed through involvement of all stakeholders: the public sector, the private sector and the community; keeping in view Ministry of Education's document "Public Private Partnerships in Pakistan's Education Sector"

Policy Action 3

Provincial Governments shall encourage private education at the school level as an option available to those who can afford such education. At the same time, Governments shall take steps to encourage public sector institutions to draw benefit from the resources available in the private sector.

Policy Action 4

A common curricular framework in general as well as professional education shall be applied to educational institutions in both the public and the private sector. Government shall take steps to bring the public and private sectors in harmony through common standards, quality and regulatory regimes.

Policy Action 5

Where a private school already exists with additional admission space, the children shall be accommodated in it, through public financing and the public sector new school shall either be developed in separate vicinity or for different levels. Private sector schools shall be provided permission to operate on a need- cum- quality basis.

Policy Action 6

Provincial and Area Governments shall develop regulations for establishing and running private sector institutions that include transparent accountability procedures. Where such regulatory bodies have already been developed, those shall be reinvigorated.

Policy Action 7

Provincial and Area governments shall take steps to build capacity of the regulators to enable them to effectively monitor compliance by private sector institutions.

Policy Action 8

Non-profit educational institutions should be provided tax incentives.

(cf. NEP 2009, Section 3.4, p. 18-19)

In province Sindh, the Sindh Education Foundation (SEF) has played a frontline role in engaging private entities to come together and work for the improvement of the education sector. The Sindh Education Foundation initiated several public private partnership programs as part of its core mandate since 1990s and various programs, such as, Adopt a school Program (AASP), Community Based Education School (CBES) program, Support to Private Education Institutions Program (SPIEP); and most recently Promoting Private Schooling in Rural Sindh (PPRS) and Integrated Education Learning Program (IELP) – all these have been run by the foundation. However, the foundation's efforts are mostly confined to the provision of primary education in Sindh and access to children of rural areas. Some other examples of public private partnerships can be seen through some CSR activities of corporate firms and through donor initiated projects through which managers, teachers and policy makers gain access to more specialized professional competencies from the private institutions. AKU-IED is one such example through which hundreds of public sector education personnel received specialized training. Important initiatives are also taken by the Reform Support Unit through which the management contracts were awarded to private institutions, in order to run and manage the public schools.

> **Box 11.1: Where the private sector can assist?**
>
> 1. School construction
> 2. Textbooks development
> 3. Libraries development including provision of supplementary reading material
> 4. Teacher education
> 5. Transportation
> 6. Food supplement to poor children
> 7. Literacy programmes
> 8. Information Communication Technology (ICT)
>
> (NEP 2009, p.18)

There is, thus, a need is to broaden the scope of the public private partnership in every aspect of the education system, i.e. from establishing schools with the partnership of private sector, capacity building of education managers and teachers, provision of services like IT services, and supervision of schools systems – all shall be initiated with defined rules of engagement and operating procedures.

11.3.2
Key Issues and Challenges

Listed below are some of the key issues relating to social cohesion in the province:

Table: 11.3.1: Public Private Partnership – Synthesis of Key Issues and Challenges

Issue	Details
Lack of database/ mapping of educational	There is no comprehensive database that maps the available educational resources in the private sector. This database should be available

resources in private sector	publically.
Lack of comprehensive framework for broad based public private partnership in education	There is a need to develop models of PPP through a participative process and establish rules of business to engage and work with private partners. The framework needs to be disseminated to help each sector in the partnership processes.
Ownership and sustainability of public private partnership processes	No institution is made responsible for Public-Private Partnership (PPP) with proper TORs and structure. The participation of key stakeholders needs to be further developed and nurtured through understanding the benefits of the partnership.

Based on the issues and challenges identified, the following developmental objectives have been identified.

11.3.3
Objectives, Strategies, Targets and Activities

Based on an analysis of the situation as well as suggestions and recommendations from key stakeholders consulted in this regard, the following objectives have been formulated.

Objectives
1. Mapping of educational resources in private sector
2. Develop broad base public private partnership framework in education
3. Ensure sustainability of existing successful PPP initiatives

Next, Table 11.3.2 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table 11.3.2: Public Private Partnership: Objectives, Targets, Strategies and Activities

GOAL:			
Develop Public Private Partnership for enhanced access and improved quality of education provision			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
Strategic Objective 1 *Map educational resources in*	• Design of a comprehensive MIS for mapping educational resources in private	• MIS is ready by 2015 and used the stakeholders whenever required	• Identify information needs for productive public private partnership for quality provision of

Strategic Objective	Strategies	Targets (2013 – 2016)	Activities
private sector	sector • Centralized data collection and record keeping of all the data and related information on PPP through information management software		education • Design a MIS • Plan for data collection, pilot and implement the plan • Disseminate and create advocacy for evidence based planning in PPP
Strategic Objective 2 *Develop broad base public private partnership framework in education*	• Development of PPP models through a participative process • Establishment of rules of business to engage and work with private partners • Dissemination of guidelines helping each sector in the partnership processes	• 10% increase in number of PPP initiatives in key priority areas such as ICT, NFE	• Study current models of PPP to identify best practices • Identify core team comprising of key stakeholders in both sectors • Form a review committee to further ensure stakeholders participation • Develop a guide book containing all necessary information regarding PPP • Document and disseminate the policy, concepts, SOPs, criteria for PPP
Strategic Objective 3 *Ensure sustainability of existing successful PPP initiatives*	• Creation of long term partnerships based on non-development funding	• 5 % increase in number of PPP programs initiated through regular funding	• Institutionalize public-private partnership as an autonomous body having proper structure and Terms of Reference • Improve and enforce regulations to manage private sector • Conduct on-going study of partnership issues and challenges

11.4. Social Cohesion

"The imperative of uniformity in Pakistan's educational system flows from the Constitution of Pakistan, which entrusts the State with the responsibility of organizing an

equitable and effective education system, with an aim to enhance the overall well-being of Pakistanis" (NEP 2009, section 1.3, pt. 16, p.3)

The Constitution of Pakistan obligates the state to provide equal educational opportunity for all. Article 38 (d) of the Constitution, particularly, refers to equal provision of education to all citizens irrespective of gender, caste, creed, or race. In Sindh, there are various distinct ethnic, social, economic, religious, political groups and communities that form a broad spectrum of diversity in the province. This diversity, with careful and comprehensive planning and effective implementation, can lead to enhanced educational outcomes in the province. Failure in building on the potential of diversity, on the other hand, can be divisive and can result in social conflicts and disintegration. Hence, the issue needs to be attended, and that also on urgent basis.

11.4.1.
Policy Context and Situation Analysis

One of the key aims of education is social transformation, that is, through reducing social inequalities. This emphasis as well as the urgency of the matter is evidently reflected in the current National Education Policy 2009; for instance, in the following comments:

> "Education is not only about the individual; it has a societal role --a societal role of selecting, classifying, distributing, transmitting and evaluating the educational knowledge, reflecting both the distribution of power and the principle of social contract. In a country with alarming inequities of income and opportunities, reducing the social exclusion needs to be one of the principle objectives of the Policy." (NEP 2009, section 1.5, pt. 26, p.5)

> "Educational system is supposed to ensure the right of an individual to grow in income and stature on the basis of his/her excellence in education and training." (NEP 2009, section 1.5, pt. 27, p.6)

However, as noted by NEP 2009, most of the educational policies and plans, by and large, have failed to promote social inclusiveness by reducing social stratification and ensuring social mobility through education and training. There are various factors that have contributed to the current social fragmentation, which includes differences related to faith, poverty, unequal distribution of power and access to resources, and lack of political stability. Besides the socio-economic structures, two more issues, as identified by NEP 2009, have impacted social cohesion very badly: Parallel system of education and language issue. There are parallel systems of education (public, private and Madrassahs) and within each category also, there are multiple layers that exist. Each category of school is accessible to a particular social group only, and is rigidly bound so as to discourage any social mobility. Moreover, the role of language in social cohesion is very crucial. In addition to parallel school system, another crucial factor creating social inequality and disintegration is the language of instruction. The issue of language of instruction has remained a burning issue for quite a long time now. There are several languages

besides Sindhi and Urdu language that are spoken in Sindh. The key challenge is achieving a creative balance between the use of mother tongue and other languages that have national (such as Urdu) or international relevance (e.g. English).

The other dimensions of social inequality that also needs to be addressed include whether some other marginalized groups get an equitable access of educational provision and opportunities – e.g. the minorities, the children with special needs, and females. The list also includes children from rural and extremely disadvantaged contexts. The issues facing each kind of group may differ in nature and scope; however, primarily, the issues relate to access and equitable provision, the absence of which has been contributing to societal disintegration and fragmentation.

In order to address the issue of social inequality, the National Education Policy the National Education Policy 2009, which is the current policy document for Sindh, takes a very clear and firm stance on it: The broader aims and objectives, for instance, include:

Box 11.4.1:Aims and Objectives

"To promote national cohesion by respecting all faiths and religions and recognise cultural and ethnic diversity.

To promote social and cultural harmony through the conscious use of the educational process.

To provide and ensure equal educational opportunities to all citizens of Pakistan and to provide minorities with adequate facilities for their cultural and religious development, enabling them to participate effectively in the overall national effort.

To equalize access to education through provision of basic facilities for girls and boys alike, under-privileged/marginalized groups and special children and adults.

To organize a national process for educational development that will reduce disparities across provinces and areas and support coordination and sharing of experiences."
(Section 2.3, pp. 9 -1 0)

These broader aims of equity and social cohesion get translated into the following specific policy actions:

Policy Actions for Enhancing Social Cohesion – NEP 2009

Policy Action 1 → The state shall provide greater opportunities to the citizens and areas that have been largely excluded from mainstream development and participation in the national processes, by ensuring even and equitable human development across Pakistan

Policy Action 2 Governments shall identify schools in less developed areas for prioritisation in resource allocation and management for improving quality.

Policy Action 3 Ministry of Education, in consultation with Provincial and Area education departments, relevant professional bodies and the wider public, shall develop a comprehensive plan of action for implementing the English language policy in the shortest possible time, paying particular attention to disadvantaged groups and less developed regions.

Policy Action 4 The curriculum from Class I onward shall comprise of English (as a subject), Urdu, one regional language and mathematics, along with an integrated subject.

Policy Action 5 The Provincial and Area Education Departments shall have the choice to select the medium of instruction up to Class V.

Policy Action 6 English shall be used as the medium of instruction for sciences and mathematics from class IV onwards.

Policy Action 7 For the first five years, Provinces shall have the option to teach mathematics and science in English or Urdu/ official regional language; but after five years the teaching of these subjects shall be in English only.

Policy Action 8 Opportunities shall be provided to children from low socio-economic strata to learn English language.

Policy Action 9 A comprehensive school language policy shall be developed in consultation with provincial and area governments and other stakeholders.

Policy Action 10 Federal, provincial and area governments shall develop joint strategies with main Madrassah systems, through consultations, to formally integrate market-oriented and skills-based subjects in the Madrassahs' curricula - subjects that would enable the children graduating from Deeni Madaris to have wider employment options.
(cf. NEP 2009, Section 3.5, p. 9)

11.4.2
Key Issues and Challenges

From the recent and continued incidents of violence and conflicts in Karachi and in other parts of Sindh, it is quite evident that the situation continues to deteriorate and that education needs to take on a more proactive role than it currently does in promoting social cohesion. Despite various efforts for educational reform, access remains a persistent issue and, especially, in case of the socially disadvantaged groups and far flung areas in rural parts of Sindh. The divide created through parallel system of schooling continues to widen – the situation gets exacerbated with the public schools not being able to lift their quality standards to required level, and the general opinion about public schooling continue to be not very positive.

Initiatives such as the 'Adopt a school' (SEF), or 'voucher scheme' enabling parents to send their child to a LCPS in the locality (DFID), or other examples of public-private partnership are there, however, the overall situation is in much need for urgent attention and improvement. Hence, the gap continues to widen. Then, language, no doubt, continues to remain an issue that needs to be addressed to respond to the issues of social divide and disintegration: the debates about medium of instruction continue to grow more extensive and heated; likewise, the place for other languages spoken in Sindh and that children bring to schools still needs to be decided. Furthermore, the outdated and conflict insensitive content of the existing textbooks further exacerbates the situation. As already discussed, textbooks developed under the 2002 curriculum promote material that causes disharmony; these need to be replaced with the ones based on 2006 curriculum. The technical personnel associated with the development and approval of textbooks should be sensitised to the issue of social cohesion and their capacity needs to be built to recognise material that promotes disharmony.

Similarly, the issue of streamlining 'Madrassah' education is yet to be addressed – though due to the sensitive nature of the issue, it needs very serious planning based on consultative process. Finally, the policy provisions establish minorities' rights against any discriminatory behavior against minorities and opportunities for their religious development; however, the situation on ground needs to be studied in some depth. Anecdotal evidence indicates that minorities do face some difficulties when it comes to religious education. For instance, there is, generally, a provision for the minorities that they can opt out of studying Islamiat as a subject and can take ethics or the like instead as an alternative. However, in many cases, the schools do not have any provision for these alternate subject teachers, thus, leaving them with not much choice in this matter.

Based on the situation analysis, listed below are some of the key issues relating to social cohesion in the province.

Table: 11.4.1: Social Cohesion – Synthesis of Key Issues and Challenges

Issue	Details

Issue of Curriculum Standardization and Outdated and Insensitive nature of Textbook contents:	• 2006 Curriculum has been approved but an outdated (2002) curriculum is being used in Sindh • Textbooks developed under the 2002 curriculum promote material that causes disharmony • Need for sensitization of technical personnel associated with the development and approval of textbooks to the issue of social cohesion and disharmony
Teachers Training:	• Lack of teacher capacity and awareness in terms of conflict sensitivity and management of diversity in classrooms • Teachers' potential to promote social cohesion is under-utilized
Parents and community:	• Lack of awareness as well as lack of trust among parents and communities regarding social cohesion and mobilization, which has a negative impact on community progress • Lack of democratic values in the societies
Students:	• Students do not have a voice; need for connection/ communication between the students and the local governing bodies • Students face bullying during their education; there are no unions/ associations to represent students • Lack of student led activities and the code of conduct for teachers and students to participate in these activities
Infrastructure, environment and security:	• The existing infrastructure does not address the hard and soft needs of the students and lacks in giving a vibrant and protective learning environment
Governance in education system:	• Lack of proper mechanism of coordination between community and the education department/ government

One important emphasis that is evident in the current educational reforms and past efforts is to involve community, enhance their participation and ownership in the educational processes. School Management Committees (SMC) is an important initiative in this regard to not only involve parents and community in the decision making process for more ownership and accountability, but as a means to achieve social cohesion through developing a self-reliant, resilient and socially responsible community. The community participation initiatives also aim to ensure success and sustainability of initiatives.

Box 11.4.2: Policy Actions for Strengthening SchoolManagementCommittees(SMCs)

The Department of Education and Literacy has also made efforts in this regard; for instance:

- 40,000 SMCs were established/ made functional all over Sindh (which were not active until 2008)
- Capacity building done for selected SMCs in 8 districts, last year (2012) – capacity building for these SMCs to work as ideal SMCs and to, consequentially, build capacity of other SMCS through them (Cf. Minutes of RSU meeting, dated..)

Although the policy directives for "marginalized groups of society" include "females", the Education Sector Plan deals with it separately for special emphasis, addressing gender related disparities being an important goal and commitment at both, national and international level.

11.4.3.
Objectives, Targets and Strategies

Based on an analysis of the situation as well as suggestions and recommendations from key stakeholders consulted in this regard, the following objectives have been formulated.

Objectives
1. To ensure that the Curriculum and Textbooks adequately address the issue of Social Cohesion
2. To enhance community participation and ownership, and strengthen school-community linkages
3. Develop students charter and mechanism for its implementation
4. Ensure that overall environment of schools should meet the Child Friendly School (CFS) Standards, and support safe, protective and peaceful learning environment
5. Develop mechanism for mainstreaming literacy and non-formal students

6. Understand and assess the capacity of the system to take a decision regarding mainstreaming children with special needs in education
7. Develop a comprehensive school language policy through consultative process with key stakeholders
8. Prepare a comprehensive plan to implement English Language Policy
9. Promote respect for all faiths and religions, and provide adequate opportunities to minorities for their cultural and religious development

Next, Table 11.4.2 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table 11.4.2: Social Cohesion: Objectives, Strategies, Targets and Activities

GOAL:			
To provide education in a manner that it leads to social cohesion			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
Strategic Object 1 *Ensure that the Curriculum and Textbooks adequately address the issue of Social Cohesion*	• Curriculum review, enhancement and enrichment through adding some relevant sections on social cohesion • Textbook development in light of the revised curriculum	• Curriculum enrichment of 2006 curriculum to be done by 2014-15 to include social cohesion as a cross cutting theme from Classes 1 to 12 • Textbook development in accordance with 2006 Curriculum (enriched) to be completed by 2015 • Necessary legislation (if it does not exist) to be put in place for implementation in all school systems by 2016	• Notify and constitute Curriculum review and enrichment committee, based on a social cohesion experts • Literature review of the existing studies is conducted by the social cohesion experts • Carry out curriculum review • Prepare supplementary reading material • Put in place implementation plan • Review, develop, disseminate, pilot and accordingly implement the revised curriculum and textbooks and pedagogy in selected districts (prioritized as being conflict-ridden) • Make available the revised textbooks to schools and teachers
Strategic Object 2 *Enhance community participation and ownership, and strengthen school-community linkages*	• Sensitizing, capacity building and awareness raising programmes for SMCs, parents and community at large in targeted districts (prioritized as being conflict-ridden)	• Community mobilization in targeted areas by 2016 • Student representation in all SMCs achieved by 2014-15 • Female participation enhanced in SMCs in all schools by 2016; ensure that all or most of the members in	• Conduct needs assessment, selecting two districts (representing rural and urban) • Develop supplementary material for capacity building and awareness raising • Capacity building and awareness raising of General Bodies of schools of targeted districts • Capacity building and awareness raising of

	• Review and revision of SMC membership • Development of SMC funding formula for more equitable distribution among schools. • Planning and implementation of complaint management system	the girls' schools are females • Increased SMC grant by 2016 • More equitable distribution of SMC funding among all schools achieved by 2016 • Complaint management system is in place by 2015	all SMCs of targeted districts related to coping with disaster • Conduct awareness raising sessions for parents and community in targeted districts to promote peace education and disaster risk reduction as a 'life skill' • Conduct SMC village meetings • Revise existing SMC membership for mandatory inclusion of 2 students (increase from 5 to 7 members) and enhance female representation • Review SMC Act 2007 for SMC revenue raising, and develop SMC funding distribution formula • Plan and implement the development of complaint management system and carry out regular review of the efficiency and effectiveness of the system
Strategic Object 3 *Develop students charter and mechanism for its implementation*	• Introduction of student charters in all schooling system	• Preparation of student charter by 2015 • Protection of student charter for all school system through necessary legislation by 2016	• Constitute experts team to design student's charter • Test and pilot students' charter • Review and modify charter through workshops and focus group discussions • Create (and revitalize existing) student counsels • Design school activity calendar including sports activities • Enable students' interaction with school authorities/ communities relating to school affairs once in 2 months activities; the points of interaction to be shared with higher authorities • Provide designated student display corners in schools
Strategic Object 4 *Understand and assess the capacity of the system to take a decision regarding*	• Assessment of the current capacity of system to cater to the needs of special needs children • Understanding the current number and	• Capacity audit of the system is completed by 2015 • Needs analysis of existing situation is completed by 2015-16	• Commission studies to - assess the current number and profile of special children at, for instance, public school, schools for special children, school going age of out-of-school special needs children - understand existing models at

mainstreaming children with special needs in education	profile of special children to be catered for) • Strategize based on system's capacity and available models		local/regional level for integration of special children into mainstream education • A comprehensive framework and feasibility plan is developed in relation to possible integration of the children with special needs into mainstream education
Strategic Object 5 *Develop a comprehensive school language policy through consultative process with key stakeholders*	• Develop policy through rigorous and systematic consultative process (given the sensitive nature of the issue)	• Comprehensive language policy is prepared, approved and its implementation process is initiated by 2016	• Develop detailed plan for carrying out consultative process • Relevant groups of key stakeholders formed for consultations • Meeting and deliberations of stakeholders' groups • Consolidate, pilot, approve, and disseminate recommendations of the groups • Develop implement Language Policy and implementation plan

Strategic Object 6
 	
Prepare a comprehensive plan to implement English Language Policy
	• Understand and analyze existing situation and strategize to build capacity	• Understand the existing situation and challenges faced in relation to teaching and learning of English by 2015
		• Carry out detailed assessment of the existing capacity of the system to teach English as a language by 2015
		• Develop a comprehensive strategic plan to enhance system's capacity to teach English as a language by 2016
			• Commission studies to
			  - conduct situation analysis
			  - carry out system's capacity audit
			  - understand existing models at local/regional level for accelerated learning of as a language
			• For implementing language policy based on capacity assessment, develop detailed and comprehensive plan, inclusive of strategies, for instance:
			  - for ensuring equitable access for improving the English language skills of children from low socio-economic strata, girls, and children from rural areas
			  - for using English as the medium of instruction for sciences and mathematics from class IV onwards
			  - for teacher rationalization for English language teaching

Strategic Object 7	• Understand existing situation	• Carry out situation analysis in relation to the treatment of	• In-depth study is conducted on the existing - practices in the education system

| Promote respect for all faiths and religions, and provide adequate opportunities to minorities for their cultural and religious development | • Informed planning for promoting respect for all faiths and providing the minorities with adequate opportunities for growth | minorities in the overall education system by 2015
• Develop plan to promote respect for all faiths and to provide adequate opportunities to minorities through extensive consultative process | towards promoting respect and faith for all faiths and religions – analyzing issues and opportunities
- opportunities available to minorities for their cultural and religious development and whether these are adequate or not
• Based on extensive consultative processes with representatives of minorities and findings of research, put in place a Comprehensive Plan to promote respect for all faiths and provide adequate opportunities to minorities for their cultural and religious development |

11.5 Education in Emergencies

> Situations such as conflicts, wars, floods and droughts are formidable barriers to attaining the EFA goals – acknowledged by the World Education Forum (2000)

The above comment, to a great extent, is also reflective of the situation of education in Sindh. In past also but, especially, during recent years, natural and man-made disasters have hit the province hard; the examples for which include: earthquake, heavy floods and ethnic strives/ conflicts leading to violence.

Given the context, there is a growing realization that education should prepare well the individuals as well as the systems to deal with the demands of emergencies and disasters. The NEP 2009, as the current policy document for the province, provides relevant guidelines for education in emergencies, which are discussed in the following paragraphs.

11.5.1.
Policy Context and Situation Analysis

The National Education Policy 2009 identifies the following policy actions for education in emergencies:

Policy Actions for Education in Emergencies – NEP 2009

Policy Action 1	Awareness shall be raised amongst the students regarding emergency situations, natural disasters and school safety so as to enable them to take appropriate preventive measures and informed decisions in emergencies or crises.
Policy Action 2	Curriculum, especially of Social Studies, Geography, Languages, and Literacy shall include themes on emergencies, natural disasters and trauma management based on latest international best practices and shall also include information about response in an emergency or disaster.
Policy Action 3	Teacher education and training curricula shall include provisions to enable the teacher to address education in emergencies.
Policy Action 4	A repository of all emergency related materials, manuals, guidelines, minimum standards and research pertaining to education shall be maintained at the teachers training institutions, schools, colleges and universities.
Policy Action 5	National Disaster Management Authority shall provide guidelines and code of conduct to the building departments to construct school infrastructure according to the international standards.
Policy Action 6	The authorities in planning (at Federal Ministry of Education, Planning Commission and Provincial Planning & Development Departments) shall ensure that guidelines and code of conduct for construction of school infrastructure regarding disaster have been followed while recommending the education projects for approval.
Policy Action 7	National Disaster Management Authority shall make available the Standard Operating Procedures (SOPs) for the educational institutions to follow pre and post emergency situations.
Policy Action 8	Disaster Management Plans shall include education delivery mechanism for rehabilitation.

Due to its geographic location, Sindh is suffering from the shift of monsoon rains towards the western parts of Pakistan, resulting in heavier and more frequent floods all over the province. Between 2010 and 2012, all 23 districts of Sindh have been affected to one extent or another by the floods. By late 2012, 19 out of the 23 districts had been hit twice or even three years in a row, virtually leaving no area without risk of having its infrastructures destroyed, roads blocked and hundreds of thousands of people displaced. Besides, the coastal areas of Sindh, especially

Karachi and its more than 20 million people population, can be affected by cyclones, such as the one which hit the southern districts of Thatta, Badin and Tharparkar in 1999, displaced 50,000 people and damaged more than 100,000 buildings.

As for earthquakes, while the majority of Sindh risks only low to moderate hazard, Karachi sits close to a plate boundary and south-eastern parts of the province around Thatta have suffered from severe earthquake damage in the past. Being in a seismically active region, coastal areas of Sindh are also at risk of tsunamis, such as the one which killed more than 4,000 people and destroyed entire villages only 50 km west of Karachi in 1945.

Sindh is also home to increasingly frequent and deadly sectorial violence in Karachi and northern districts of the province. While targeted attacks, bombings and civil unrest in Karachi are usually accompanied by shut down of public services for a few days, long term tribal/ethnic feuds in the districts of Kashmore, Shikarpur, Jacobabad, Gothki, Naushahro Feroze and Dadu result in closing down of schools for periods ranging from a few days to several months, or in parents not sending their children to school due to fears for their security.

The normal state of education in Sindh already being an emergency, the impact of disasters can only bring already low baselines to lower levels. For example, 45% of the province's 50,500 schools do not have functional toilets, 52% do not have access to drinking water, 19% are shelter-less and more than 1,100 schools are closed on a permanent basis. The adult literacy rate across the province stands at an appalling 57% with strong disparities between urban and rural areas (where it stands at 34%). Gender disparity is also very high with primary school net enrolment ratio standing at 48% for women (57% for men)[4] and 16 districts where more than 50% of girls are out of school. Dropout rates at the primary level are also extremely worrying as they stand around 20% from one grade to another[5].

11.5.2
Key Issues and Challenges

Below, some of the key issues and challenges are discussed in relation to education in times of emergency.

The recurrent nature of natural and man-made disasters in Sindh have had and will continue having a devastating impact on already low pre-existing figures, such as, decrease of the number of functional schools, displacement of teachers and families – all resulting in large increase of the number of out-of-school children for several months and sometimes affecting the same districts for a few years in a row.

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[4] PSML baseline for 2011.
[5] SEMIS 2010-11.

Table 11.5.1: Key Issues related to Education in/ for Emergencies

Issue	Details	Implications for Planning

Damaged School Buildings:	Following floods:
	• Roads are impracticable,
	• School buildings are either partially or completely damaged,
	• The remaining safe schools are used as temporary shelters by IDPs, who often burn school furniture and infrastructure, thus indirectly damaging more schools than the ones originally destroyed by waters
	• More than 10,600 schools were damaged by floods in the last three years and 27% were used as IDP shelters
	• In 2011-12, 4,150 schools were still reported to be closed as a consequence of the preceding floods6
	• Floods and occupation of schools also result in the destruction of teaching and learning materials[7]
		Education in emergencies response should focus on
		
		• quickly solving issues of access, e.g., through
		  - Rehabilitation of partially damaged schools;
		  - Set up of Temporary Learning Centres (TLCs);
		
		• also on rebuilding infrastructures able to resist future floods and earthquakes

Interruption of learning	• As a result of natural disasters or tribal/ ethnic violence, children's education is interrupted for periods ranging 2-3 months (high waters) to several months/ years (when schools have been destroyed or in the case of tribal/ ethnic clashes) • Children's education can also get disrupted because their families move to provinces where the language of instruction is different; in this case students either drop out school or sit in classes but do not understand content of the lessons • Most often, once education services have started again, students resume their studies directly to the next level, without benefiting	Coordination by department needs to focus on • monitoring of teachers' presence; • informing families, students and teachers about reopening of the schools; • lessons by teachers knowing the language of the province of origin of the students (if numbers allow); • remedial classes for those who missed education for a long time; and • catch up lessons for those who had their education interrupted for a

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[6] In addition to the 1,100 existing schools which are closed on a permanent basis.
[7] MIRA 2012 revealed that in the district of Jacobabad 86% of the educational materials had disappeared or been destroyed by the floods.

	from catch up lessons	few weeks only
Issue of Girls' Education :	• When roads and schools have been damaged, in areas where insecurity prevails, girls are the ones who stay longest out of school due to their parents' fears for their safety • During past disasters, displaced girls have suffered from harassment and assault when on the move and in temporary shelters	Coordination by department needs to focus on • prioritizingthe rebuilding of rural girls' schools first, then, mixed rural schools; and • coordinating interventions with the authorities/ cluster in charge of logistics to prioritize reopening of roads leading to girl's and mixed schools • For this purpose, female and rural educational facilities should be surveyed first

With reference to the issues discussed above, the following are some of the key challenges faced:

Table 11.5.2: Education in Emergencies: List of Key Challenges

Key Challenges	
Management related	• Lack of management capacity at various levels • Lack of comprehensive data that provide solid basis of planning and action
Teachers related	• Lack of awareness regarding need for teacher preparation and preparedness to deal with emergency
Commitment related	• Lack of commitment from key stakeholders • Lack of budget to respond to emergency situations
Awareness related	• Lack of general awareness

In effect, lack of systematic mechanism to help in understanding the impact of emergencies on dropout and enrolment rates, their contribution to social disparities as well as to the overall education status – this is a key challenge in preparing a well-integrated response for emergency situations.

Given potential disasters and their effect on education, but also because of its limited resources, the Education Department will need to focus on preparedness and coordination of education activities, addressing the key issues and challenges listed above. For this purpose, an Education in Emergencies (EiE) Cell (or alternatively, a Provincial Disaster Management Authority – PMDA, as indicated by the NEP 2009) will be created within the Education Department with

two dedicated staff[8]: one Coordinator and an Information Management Officer (for specific roles and responsibilities of the Education Department EiE Cell, see Appendix #).

Objectives and activities will be implemented by using the Minimum Standards for Education in Emergencies to achieve decent levels of access to education for all, improve quality of teaching and learning, and to ensure the accountability of all stakeholders. The following action plan will be reflected and adapted in the department's upcoming 'Education in Emergencies Policy Framework'.

11.4.3.
Objectives, Targets and Strategies

Based on an analysis of the situation as well as suggestions and recommendations from key stakeholders consulted in this regard, the following objectives have been formulated.

Objectives
1. Developing capacity of educational managers and school management committees to manage education in emergencies
2. Preparing teachers for education in emergencies
3. Large scale and broad-based awareness on education in emergencies

Next, Table 11.5.3 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table 11.5.3: Education in Emergencies: Objectives, Strategies, Targets and Activities

GOAL: **To ensure provision of and preparedness for Education in/ for Emergencies**			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
Strategic Object 1 *Develop capacity of educational managers and school management*	• Creation of a Special Unit or Cell in the education department • Capacity building of management and SMCs • Development of an	• Creation of a Special Unit or Cell in the education department by 2014 • Capacity building of management and SMCs by 2015 • Development of an Emergency Response Plan (ERP) at district	• Create a Disaster Management Unit/ Cell in the education department • Identify personnel for the Disaster Management Unit/ Cell with clear ToRs • Identify focal person at taluka

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[8] Funding by UNICEF - Education Department multi-year work plan or World Bank until GPE is approved.

GOAL:			
To ensure provision of and preparedness for Education in/ for Emergencies			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
committees to manage education in emergencies	Emergency Response Plan (ERP) at district level	level by 2015	level • Develop and implement a plan for capacity building of managers and SMCs • Conduct capacity development programmes at taluka level, prioritising talukas that are more likely to be affected by emergencies • Prepare an updated ERP for each district
Strategic Objective 2 *Prepare teachers for education in emergencies*	• Preparation/ professional development of teachers and teacher educators through CPD Programmes	• % of teachers is better prepared for handling education in emergencies by 2014	• Design CPD programme for preparing teacher educators in handling education in emergencies • Develop 1-2 teacher educators per TEI in handling education in emergencies • Design CPD programme for preparing teachers in handling education in emergencies • Offer CPD to % teachers in handling education in emergencies, prioritizing based on gender and talukas that are more likely to be affected by emergencies
Strategic Objective 3 *Large scale and broad-based awareness on education in emergencies*	• Understanding existing best practices in EiE at national or regional level • Conducting awareness raising sessions • Curriculum enrichment on EiE	• Awareness raising on education in emergencies by 2016, prioritizing *talukas* that are more likely to be affected by emergencies	• Commission study of best practices in EiE, and put in place plan for its wider dissemination • Undertake curriculum enrichment exercise to include information on EiE, especially, strategies to handle disaster • Special and focused adult literacy programs to raise awareness • Conduct awareness sessions for

GOAL: To ensure provision of and preparedness for Education in/ for Emergencies			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
			parents and community on Disaster Risk Reduction (DRR), prioritizing talukas that are more likely to be affected by emergencies

11.6. Information, Communication and Technology (ICT)

> There is need to fully integrate ICT in education to exploit its potential to overcome any challenges to expansion of quality education (White Paper 2007, p. 55)

Information Communication and Technology (ICT) has a huge potential to help in meeting the development challenges and in realizing Sindh's Vision 2030. In the Knowledge Era, ICT is, no doubt, one of the key defining factors that distinguish between a developed and a developing country. For the sector plan also, ICT has been identified as a key priority area for the following important reasons:

a) Expand access for children from all socio-economic strata;
b) Support the delivery of quality education by providing a variety of learning resources;
c) Develop graduates with relevant market oriented skills; and
d) Use as a management tool at all levels of the education system.

In order to meet the ICT resource requirements, NEP 2009 has identified ICT as potential area for collaboration with the private sector. In the following section, some important policy actions outlined by NEP 2009 are presented.

11.6.1.
Policy Context and Situation Analysis

The National Education Policy 2009 has suggested the following policy actions in relation to ICT in education:

Policy Actions for ICT - NEP 2009

Policy Action 1	In-service training shall cover a wide range of areas: pedagogy and pedagogical content knowledge;… and programmes to cater to emerging needs like trainings in languages and ICT (cf. p.34)
Policy Action 2	Use of Information Communication Technologies (ICTs) in Education shall be promoted in line with Ministry of Education's "National Information and Communication Technology Strategy for Education in Pakistan" (cf. p.36)
Policy Action 3	ICTs shall be utilized creatively to assist teachers and students with a wide range of abilities and from varied socio-economic backgrounds (cf. p.36)
Policy Action 4	ICTs shall be used to strengthen the quality of teaching and educational management (cf. p.36)

No doubt, ICT is a very important area of investment for the public education sector. As discussed above, one important purposes of education is to create social cohesion through addressing issues of inequalities and promoting equitable provision of opportunities; ICT can certainly serve as a very important resource in reaching out to the most disadvantaged and in ensuring access to a wide variety of resources. Likewise, ICT can not only create an enriching learning environment for the mainstream classes, but can also serve as an important tool to promote adult literacy and non-formal education. Moreover, the use of technology for quality assurance, effective management and evidence-based planning is also a potential use.

The current scenario of ICT use in the public sector education system is though not very bright at the moment, it still holds potential for a promising future, provided that a comprehensive and feasible plan is in place and implemented, and department's necessary commitment and sustained interest is there. For instance, since Computer Science is an alternate career pathway (subject choice) for students at the secondary and higher secondary level, computer laboratories have been established, often under various projects (e.g. USAID based Ed-links Project), so as to enable students to pursue studies in the field of Computer Science. However, no systematic assessment has been carried out nor studies conducted so far to understand the current capacity of the system for provision of functional ICT facilities or insights in relation to its impact on teaching, learning and educational management. Nearly, all apex educational institutions – teacher education colleges, district education offices and PITE, are equipped with computers and printers. However, the effective use of these resources still remains an issue. Numerous studies and reports (e.g. Sindh Study Report, 2007; Bengali, 1997) provide evidence that the ICT/ technology related resources provided in past have largely remained under-utilized or misused;

for instance, computers have often remained under lock and key either due to security reasons or lack of competence, skills or aptitude or lack of necessary supporting infrastructure (e.g. availability of electricity; the situation has only further deteriorated in this regard), or they have been kept for personal use in some cases.

An important reference in this regard is the District Educational Technology Resource Centres (DETRCs) (established in Dadu, Mirpurkhas, Sanghar, Badin and Thatta) established in past, however, remain dysfunctional. Some educational projects in past made such investments, however, these resources turned into system wastage.

Recently, some shifts are visible in current interventions, e.g. in relation to current pre-service teacher education programmatic interventions. For instance, as reported in the Teacher Education Strategy 2018, some shifts were visible: Use of technology-based learning came across as a major component in student-teachers' (pre-service ADE) images of future of education and their aspirations; their assignments reflected use of computers. Likewise, there were evidences also of faculty's use of computers and laptops for information sharing and other professional work in some of the urban areas. Students' desire and aspiration to utilize technology was much more evident as compared to their teachers. Despite some technological obstacles noted by the student-teachers (difficulties mentioned included 'power breakdown,' 'non-availability of sufficient time', or lack of 'personal computers'), there seemed to be some increase in the use of technology. Capacity building sessions have been organized for teacher educators in ICT under USAID-based Pre-STEP Project; laptops were also provided to the faculty. Similarly, CIDA has been helping to provide computers to enhance resources of computer labs.

However, the TEIs faculty (teacher educators) use of technology was mostly evident in major cities only, but their comfort level and skills still need to be enhanced in order for them to facilitate the student-teachers in using ICT. Other teachers, in general, still seemed to be afraid of letting go of their traditional ways of teaching.

At the management level also, government managers[9] have attended capacity building programmes at, for instance, the AKU-IED, which included ICT as a necessary component. Likewise, some capacity building sessions for efficient system management have been conducted at RSU, for instance. MoE, RSU and STEDA have web presence and there are some other projects in the pipeline to enhance the use of ICT in educational management (e.g. TEDDS). These include, for instance, the use of IT for monitoring and evaluation for improved system performance. Another example is UNESCO's forthcoming project in collaboration with RSU of using mobile technology for promoting literacy in the province. These are all good examples to indicate an opening for ICT integration; however, these initiatives need to be carefully nurtured

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[9]Teachers/ teacher educators also

and studied to understand the process of implementation, the nature and issues and challenges faced and, most importantly, the impact of such initiatives.

Private Service providers offer great opportunity to build system's capacity for use of ICT and public-private partnership could be used to tap on existing resources in the province. The outreach programmes by INGOs such as iEARN are good examples.

11.6.2
Key Issues and Challenges

The following are some of the key issues and challenges relating to ICT in public education system in Sindh.

Table 11.6.1: Key Issues related to ICT in Education in Sindh

Issue	Details
Lack of comprehensive policy framework and implementation plan for provision and use of ICT in the province	• The department, currently, does not have available a comprehensive policy framework and implementation plan to promote the use of ICT in Sindh • Though, at national level, such document is available in form of 'The National ICT Strategy for Education in Pakistan'; however, the strategy needs to updated in terms of its relevance for the province • Donor support has been there in past to build capacity in this area to some extent, however, it has remained sporadic and fragmented, not as a mega project to provide a comprehensive strategy

Availability of/ access to ICT related physical resources and infrastructure	• Availability of ICT related resources (e.g. computers) is limited, especially in rural or disadvantaged areas, and far-flung areas
	• The available resources are not optimally utilized, rather they are under-utilized or misused
	• Even where the computers are available, the necessary support and infrastructure is not available; some related issues, for instance, include:
	   - Limited availability of electricity (especially, the extensive load-shedding)
	   - Limited or no internet connectivity
	   - Limited/ lack of technical support available in case the equipment has a problem

Lack of data on existing situation and system's capacity to offer ICT	• Lack of systematic data collection and comprehensive analysis of system's existing capacity for ICT provision • Lack of rigorous and systematic studies to generate insights into the existing attitude, competence and use of ICT • Rationalization of resources cannot be done in the absence of such data base
Existing mindsets, and limitations of competence and skills	• Though ICT is offered at secondary level, the secondary school programmes turn out is few students in the areas of science and technology and, even then the programme standards are not internationally competitive (White Paper 2007) • In many cases, the anecdotal evidence and other observations suggest that the existing orthodox mindset hinders use of ICT • Though students (or student-teachers in case of TEIs) seem to have interest in using ICT and developing relevant skills, teachers/ teacher educators, at large, seemed to have a fear of parting with their old ways of teaching • With this mindset, capacity building and subsequent implementation remains a challenge • Teachers' capacity building needs have not been assessed, without which it is difficult to put in place any effective and comprehensive capacity building plan

11.6.3.
Objectives, Targets and Strategies

Based on an analysis of the situation as well as suggestions and recommendations from key stakeholders consulted in this regard, the following objectives have been formulated.

Objectives
1. Developing policy framework for promoting ICTinEducation
2. Capacity building of system for ICT provision
3. Effective use of ICT for teaching and learning at schools, colleges and TEIs
4. Effective use of ICT in/ for educational management

Next, Table 11.6.2 presents the department's priorities for the next 3 years in terms of objectives, key strategies and targets.

Table 11.6.2: ICT in Education: Objectives, Strategies, Targets and Activities

GOAL: **Enhancing teaching, learning and management of education by using ICT**			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
Strategic Objective 1 *Developing policy framework for promoting ICTinEducation*	• Put in place 'ICT in Education' policy framework based on existing national strategy document and findings of policy research	• Policy related research findings regarding use of ICT in education and management are available for informing policy by 2015-16 • Policy framework for use of ICT in education is developed, approved and implemented by 2016 • Implementation framework for use of ICT in education is developed and approved by 2016	• Commission policy research to gain relevant insights • Adapt and update 'The National ICT Strategy for Education in Pakistan' to make it relevant for the provincial needs • Develop policy framework • Develop implementation framework
Strategic Objective 2 *Capacity building of system for ICT provision*	• System's capacity audit for provision of ICT • System's capacity building for creating ICT provision based on audit • Public-private partnership • Inviting donor support	• System's capacity audit for ICT provision is undertaken by 2015 • Comprehensive plan for need-based and rationalized provision of resources and phase-wise capacity building is in place by 2015-16	• Develop and approve plan for capacity audit of the system in relation to ICT provision (physical resources and teachers' capacity) • Carry out capacity audit • Based on findings, put in place resource rationalization plan • Enhance provision of ICT resources based on system's available/ sanctioned resources and/or donor support • Invite private sector to help in system-wide and phase-wise capacity of the system (teachers, teacher educators and technical staff) • Hire relevant teachers/ staff wherever needed (based on rationalization)
Strategic Objective 3 *Effective use of ICT*	• Teacher development through CPD for enhancing their use of ICT for/in teaching	• Phase wise plan for teaches/ faculty's phase wise capacity building is in place by 2015 • Enhance use of ICT at schools,	• Use findings of system's capacity audit to develop phase wise plan for teachers' capacity building • Use ICT policy framework for

GOAL:			
Enhancing teaching, learning and management of education by using ICT			
Strategic Objective	**Strategies**	**Targets (2013 – 2016)**	**Activities**
for teaching and learning at schools, colleges and TEIs	• Enhanced use of technology at schools, colleges, TEIs	colleges, TEIs by 2016	provincial needs to develop ICT in Education programmes and courses • Provide context-based mentoring/ support to teachers to help them in implementing their learning from programmes
Strategic Objective 4 *Effective use of ICT in/ for educational management*	• System's capacity audit for provision of ICT • Provision and maintenance of necessary ICT infrastructure • System's capacity enhancement to use ICT for management • Public-private partnership • Inviting donor support	• Necessary ICT infrastructure is in place by 2016 • Promote technology literacy among the sector personnel by 2016	• Identify ICT needs of educational managers • Equip all education administrations with IT facilities and supporting infrastructure • Develop a maintenance system for ICT equipment • Enhance functionality, updating and effective use of websites of apex institutions • Enhance provision of ICT resources based on system's available/ sanctioned resources and/or donor support • Invite private sector to help in system-wide and phase-wise capacity of the system (education managers, officials, technical staff) • Hire relevant staff wherever needed (based on rationalization)

APPENDIX

Roles and Responsibilities of the Education Department EiE Cell

The Education Department EiE Cell will be part of … Unit and will be in charge of preparedness, sharing of early warnings and coordination of education response during and after disasters. PDMA, UNICEF and OCHA will nominate focal points to liaise with the EiE cell and advise on its functioning. The EiE Cell will also liaise with the Education Department Reform Support Unit … for inclusion of education indicators following disasters in the Sindh Education Management Information System (SEMIS).

The EiE cell will call and lead the Sindh EiE working group comprising all current members of the Education Cluster and NGOs/donors active in the field of education in emergencies. Monthly meetings of the EiE working group will be initiated and led by the EiE Cell and include the focal points from UNICEF, OCHA and PDMA. Minutes of meetings and the most important information will be shared with the Education Cluster at the national level. Staff from the EiE Cell will also attend OCHA Inter-Cluster Coordination Meetings and donor coordination forums.

At the district level the same responsibilities will rest with the District Education Officer and a counterpart from an NGO active locally (resources of district education authorities and NGOs will be complementary as NGOs often dispose of more resources and have the benefit of being closer to local populations). The Education Department EiE Cell will work closely with the DEOs and NGO counterparts to monitor implementation on the objectives and planned

interventions on the agreed timeline. At the district level, meetings will also be held monthly, as part or following the DEO meetings and comprise all current members of the Education Cluster and UN agencies/NGOs active in the field of Education in Emergencies, plus OCHA. The DEO and/or NGO counterpart will also attend OCHA Inter-Cluster Coordination Meetings at the district level.

The Education Department EiE Cell will concentrate its capacity building efforts at the district level, so as to ensure the quickest and best response possible following an emergency. This will include training of staff, visits to the districts, providing transport and communication means.

Reactivation of the Education Cluster

In the event national or provincial authorities call for reactivation of the Education Cluster in Sindh, or one of the following happens: 1) new large-scale emergency or sharp deterioration in the existing humanitarian situation, 2) humanitarian needs justify a multi-sectoral approach that the EiE cell can no longer address, 3) the size of the operational presence (number of actors and complexity of response) requires more resources, 4) the EiE cell is not able to appropriately meet coordination needs, the Education Cluster will be reactivated and co-led by the EiE cell.

Annexes

ToR District-level Education Coordination Mechanism

Education Department Needs Assessment format