NEPAL EDUCATION SECTOR ANALYSIS

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This education sector analysis has been an unforeseen lengthy process as the overall analysis and planning process was disrupted by the devastating 2015 earthquakes in Nepal that undid a significant amount of the progress made within the education sector in the affected areas and demanded the Local Education Development Partner Group and the Government in terms of devoting available capacity towards response and recovery. As such, the leadership displayed by the honorable minister of education and the respected secretary of the Ministry of Education and the Joint secretary of the planning division that balanced the Ministry's capacity between the need for the development of a new education sector plan and the needs emerging from the post disaster context and the agitations related to the promulgation of the country's constitution should be acknowledged.

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EXECUTIVE SUMMARY

A. THE THREE IMPERATIVES OF EDUCATION REFORM

The context of education reform in Nepal is marked by three imperatives: (1) post-conflict and post-disaster reconstruction, (2) the demographic dividend window of opportunity, and (3) Nepal's ambition to graduate from being a least developed country by 2022. Almost ten years after the end of the decade long armed conflict, Nepal is seeking to strengthen its model of multi-party democracy through a federal system. The preamble of the new 2015 constitution commits to continue the country's efforts in ending discrimination and disparities based on class, caste, religion, language, region, gender, and location.

On 25 April 2015, Nepal was hit by its strongest earthquake in 80 years. The death toll reached 9,000. Over 35,000 classrooms were mostly or entirely damaged, leaving more than one million children lacking access to safe permanent places to learn. As the county was mobilizing response to the immediate needs after the earthquakes, it was hit again by a severe fuel and commodity crisis that has significantly undermined post-earthquake reconstruction and is likely to lead to a decline in the country's economic growth rate for the first time since the 1980s. In the wake of these disasters, building schools back better is a humanitarian imperative because the failure to respond is likely to exacerbate the number of children who are out-of-school and as the disaster exposed the vulnerability of the infrastructure where the country trusts its children to be in for most of their youth. From a post-conflict perspective, the urgency of overarching school reform is rooted in the urgent need to socialize a new generation of engaged Nepali citizenry who fully embrace the new constitution ideals of a multi-caste, multi-ethnic, multi-lingual, and multi-cultural society.

The second imperative of education reform in Nepal is the ticking clock of the demographic dividend. 2001–2011 data show a declining trend in the average population growth rate. If the current trends continue, projection models indicate that Nepal, like other South Asian countries, will continue to enjoy increasing demographic surplus characterized by a shrinking dependency rate (higher proportion of working age population, fewer children to feed, and fewer elderly to look after), that is projected to reach its peak in 2025. The implications of this projected demographic dividend are crucial for the country's continuing and sustainable growth, especially considering the importance of foreign remittances to the country's GDP. The urgency of education reform lies in making drastic improvement in the quality of education that ensures that the country's labor force can access gainful jobs that allow them career advancement opportunities and concomitant significant savings for their retirements. As of 2011, and unless major changes are effected in formal, informal, and non-formal education, the state of educational preparedness for Nepali youth does not indicate that they will be positioned to seize the demographic dividend opportunity in 2025. For youth aged 15–24 years, 12 percent have no education, 10 percent did not complete primary education, and 41 percent did not complete secondary education. This represents 63 percent of youth who are highly likely to not have the requisite skills to be engaged in gainful jobs.

Last, but not least, the third imperative for education reform lies in Nepal's aspiration to graduate from the status of an LDC. Nepal's 14th National Development Plan (2016/17 to 2020/21) has graduating from the LDC category by 2022 as its vision. In this regard, the reform imperative is two-fold:

1. The literacy and secondary school Human Assets Index (HAI) must be, at least, 10 percent above the LDC inclusion threshold.
2. The education sector needs to prepare the skilled human resources necessary to achieve its vision of "rebuilding a resilient nation, promoting entrepreneurial farmers and productive farms, gender equality with empowered women, building infrastructure and creating jobs, policy reform for growth take-off, connecting communities with markets, and nurturing nature to harness its riches."

B. NEPAL SITUATIONAL ANALYSIS: DEMOGRAPHIC, ECONOMIC, AND SOCIAL CONTEXT

Nepal's topography, climate, religion, and population are very diverse. The country consists of three topographic regions: the Terai plains in the south, the middle hills (Mid-hills), and the Himalayan mountains in the north. The country has tropical, sub-tropical, temperate, sub-arctic, and arctic climatic zones. In the early 1990s, Nepal was the only constitutionally declared Hindu state in the world. The 2007 Interim Constitution declared Nepal as a secular state. That said, the country has a majority of people who are Hindus (80.6 percent) followed by Buddhists (10.7 percent). Other religious minorities include Muslims, Kirats, Christians and Jains. The most densely populated parts of the country are the southern Terai districts, the Kathmandu Valley and Kaski district

With regards to the Millennium Development Goals (MDGs), the country has made significant albeit uneven progress. The country has halved the proportion of people whose income is less than a dollar a day. The decline of poverty has been steady — between 2004 and 2011 it decreased annually by an average of 2.5 percent. However, it is necessary to assess the impact of the severe fuel and commodity shortages since September 2015 on poverty and hunger for a more accurate appraisal. Furthermore, the country's progress in achieving universal primary education is commendable. The net enrolment rate rose from 64 percent in 1990 to 95.3 percent by 2013. The survival rate increased due to the government's support for early childhood education and development (ECED) and pre-primary education (PPE), among other factors.

In terms of gender equality and the empowerment of women, the ratio of girls to boys in primary education (Grades 1 to 5) has improved significantly since the 1990s, so much that the MDG target set for 2015 has already been achieved. There are, however, some lingering disparities by social groups and geographical location. With respect to the empowerment of women, the share of women's wage employment in the non-agricultural sector has more than doubled. Women's participation in non-traditional sectors such as the armed forces and overseas employment has increased rapidly in recent years.

With regards to reducing child mortality, childhood mortality has steadily declined over the past 20 years. In 2001, the infant mortality rate (IMR) declined to 46 and under-five mortality

rate (U5MR) to 54 per 1,000 live, compared to 162 in 1990. The neo-natal mortality rate is still a challenge as between 2006 and 2011 it remained the same. Although Nepal has achieved both its maternal mortality ratio (MMR) and attended birth goals by 2015, disparities exist between urban and rural settings, across ecological and development regions, and among social and age groups.

Nepal has shown improvement in other social development indicators. However, progress remains constrained by the persistent challenge of ensuring that gains benefit the country's disadvantaged groups and geographical areas. In terms of literacy, Muslims, other Terai castes, hill Dalits, Terai Janajatis, and Terai Dalits have literacy index scores well below the national average. The Multi-Dimensional Social Inclusion Index (CDSA 2014). shows hill Brahmans, Madhesi Brahmans/Chhetris, Newars and hill Chhetris scoring high on social, economic and cultural dimensions (OPHI 2015). However, the gender inclusion index is lower than the other social inclusion indices, showing that gender is still a dominant driver of disparities in Nepal.

The large remittance incomes represent a critical lifeline that mitigates poverty, promotes investment, and increases demand for education. That said, the high number of working age population outside the country also has social costs affecting families and communities.

C. MACROECONOMIC INDICATORS AND FIDUCIARY ASSESSMENT

Nepal is one of the least developed countries. Its per capita income is US$ 762. Agriculture employs 70 percent of the population but only accounts for 34 percent of GDP. The damage caused by the 2015 May/April earthquakes is reckoned to have reduced the growth of the economy from the expected 6 percent to only 3 percent growth in 2014/15, which was further reduced to 0.77 percent in 2015/16, with the 5-month severe fuel and commodity shortages caused by constraints on import of goods at Nepal's Southern border (Paudel 2015). The share of recurrent government expenditure has increased by more than 10 percent on average for the last five years (MoF 2015).

In the last seven years (FY 2009/10-2015/16), the government's educational expenditure has consistently stayed at around 15 percent of the national budget, despite a decline to around 12 percent in the last two years of this period. The educational budget has been increasing in absolute terms, despite that its share of government expenditure has decreased from 21.4 percent in 2010/11 to an estimated 12 percent in 2015/16 because of a significant overall increase of the national budget, partly due to the need to respond the post disaster emerged needs for reconstruction and recovery. The Government of Nepal bears the largest burden of education expenditure although development partners significantly contribute to supporting education. Also, the contributions of households to education amounted to 3.6 percent of GDP in fiscal year 2010/11, making private spending an important contributor to education. For SSRP, the share of funding from development partners that supported the SSRP implementation through pooled funding remained between 20 and 24 percent. This contribution fell to 15 percent in 2015/16 partly because of development partners' higher contributions in the first three years of SSRP, and partly because of the government's discouragement of foreign loans for financing education.

Basic education has consistently had the lion's share of government expenditure. But its share has been slowly decreasing in favor of more spending on secondary education. In 2010/11, basic education expenditure represented 64.0 percent of the overall spending on education, this increased to 68.9 percent in 2011/12 before beginning to taper off in 2012/13 to attain 54.1 percent in 2015/2016. Conversely, secondary education (Grades 9–12) steadily rose from 16.9 percent in 2010/2011 to attain 21.0 percent in 2015/16. The rest of sub-sector spending in 2015/16 includes 1.5 percent for early childhood education and development (ECED), 4 percent for technical and vocational education and training (TVET), 8.2 percent for tertiary education, 2.3 percent for education management and administration, 0.4 percent for literacy and lifelong learning and 8.5 percent for teacher pensions and retirement.

To enhance access and improve equity, the government offers 16 types of scholarships including conflict affected students, individuals with disabilities, girls, Dalits, the poor, and the talented. However, more effort is needed to better target scholarship to students with financial needs, and marginalized ethnic groups. From a sustainability perspective, 98 percent of the SSRP budget was used for recurrent activities such as teacher training and building educational facilities. In order to further strengthen the targeted and evidence base approach to reduce disparities in education outcomes, the Government developed the Consolidated Equity Strategy for the School Education Sector in Nepal {Equity Strategy}, which includes identifying districts to receive resources based on a disparity based formula. In addition to this, there is a need for a clear strategy that spells out how such recurrent expenditure will be included and sustained in the SSDP period.

D. NEPAL EDUCATION SECTOR: PROGRESS ACHIEVED AND LINGERING CHALLENGES

The major achievements of Nepal's education sector pertain to Education for All (EFA) Goals 1 and 2. Regarding EFA 1, Nepal expanded and improved comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children. According to DoE's Flash Reports (2010-2014), the country had reached 77.7 percent ECED coverage in 2014. The target for 2015 is 82 percent. However, the provision of pre-primary education to children aged above three years is uneven between and within districts. EFA Goal 2 is aimed at ensuring that all children, particularly girls and children in difficult circumstances and those belonging to disadvantaged ethnic groups, have access to and complete free and compulsory primary education of good quality. In this regard, the net intake rate in primary schools has risen to 92.7 percent for girls and 93.3 percent for boys. Net enrolment rates have also steadily improved, even if they fell short of the SSRP target of 98 percent. The net enrolment rate in basic education reached 88.7 percent in 2015. Other accomplishments include the gradual increase in secondary education enrolment, a steady fall in repetition rates in Grades 1 and 8, and improved survival rates to Grades 5 and 8 to 89.4 percent and 77.2 percent respectively.

Education in Nepal faces lingering challenges in quality and equity. The student teacher ratio (STR) remains very high in lower secondary schools. In the Terai the STR is a problem in all grades. Student achievement is also a major problem at all levels of education. In 2013/14, on average, 48 percent of Grade 3 students, 51 percent of Grade 5 students, and 52 percent of Grade 8 students did not achieve their grade level in science, math, or English. Trend data shows

that achievement challenges do not seem to have changed significantly in 2011, 2012, or 2013. Achievement data is worse for disadvantaged ethnic and caste groups.

Children with disabilities, and those from poor, remote, low caste families, and from disadvantaged ethnicities are mostly affected by the access gap. There are 770,000 out-of-school children between ages 5 and 18 in Nepal. More than 105,000 of the estimated 179,000 children with disabilities are out-of-school. Girls from the lowest quintile and from Madhesi and Muslim communities are under-represented in secondary education. Students from 'disadvantaged groups are also disproportionately affected by high repetition rates. While the difference between boys and girls in quality and efficiency indicators may seem insignificant, girls consistently perform less well than boys and are more likely to dropout and repeat across all grades. This indicates systematic barriers that are excluding girls from enabling learning conditions, compared to boys. Regarding learning outcomes, only 23.1 percent of Terai Dalits, compared to 80 percent of Terai Brahmans/Chhetris are literate. In addition to efficiency problems evident in high repetition and low survival rates, student career and college readiness indicators reflect wide problems in the education sector's external efficiency.

Unemployment and underemployment are highest among tertiary education graduates, less high among secondary education graduates, lower among primary education graduates, and the least low among workers with less than primary education (World Bank 2013). These findings highlight problems with student preparedness and the limited ability of the Nepal labor market to employ education graduates at salaries worth their investment in the longer years of education in secondary and tertiary education. These findings are consistent with a study (MMC 2014) that found that the marginal return to primary education had increased to 14 percent and 10 percent in primary and secondary education respectively. The marginal return for tertiary education stagnated around 13 percent from 1995 to 2011. Overcoming the stagnant marginal benefits to tertiary education is contingent on improving the quality and relevance of university education and creating links between work and school that promote college and career readiness (EIU 2014).

Analysts of the Nepal education sector see myriad factors that contribute to the systems' lingering problems. Demand factors include the low awareness of parents and communities, which is tied to lack of capacity in school management committees (SMC) and parent associations (PAs) to ensure that children receive quality education. On the demand side MoE (2015a) identifies system factors and teaching and learning factors that undermine the quality of education. Examples of these include low instructional time allocated to the teaching and learning of Nepali languages; inadequate supervision, monitoring, and academic support; problems with teachers' professional development; problems with educational accountability; assessment that is not focused on learning and outcomes, teacher-centered instruction, lack of a comprehensive approach to teaching reading; and multi-level classrooms with high disparities in reading levels.

E. READINESS FOR EDUCATION REFORM

The readiness for reform can be assessed according to: (1) the extent to which the policy framework provides needed feedback for education reform, and (2) the extent to which the current educational system demonstrates the capacity to implement proposed reform. Four policy documents represent the policy framework for education reform in Nepal; the country's Constitution (2015), the National Development 3 Year Plan (2014/15 to 2016/17), the Education Act (1971), and SSRP (2009–2016). The new Constitution, commits to the equitable provision of quality and free education for all until secondary education.

SSRP (2009–2014) is a continuation of a series of national education reform programs going back to the 1990s. SSRP called for:

- organizing school education into basic (1-8) and secondary levels (9-12);
- resetting the minimum qualifications of teachers;
- revising the curriculum for the integrated secondary education;
- revising the examination system to reflect the proposed new basic secondary education structure.

Six years after the initiation of SSRP, none of the reforms have materialized because the necessary amendments in the Education Act have not occurred yet. The Asian Development Bank's Institutional Analysis and Capacity Development Plan (Moriani et al. 2013) cautions that 'without concomitant structural changes and capacity development, past and current reform aspirations will continue to be mired in what it characterized as a 'state capability trap' marked by incorrect implementation assumptions, form over function, unrealistic expectations, and aspiring to accomplish too much too soon.'

Considering the above cautionary notes about the state capability trap, the sector analysis examined the following dimensions of system capacity to assess the education sector's capacity to implement the SSDP: (i) performance capacity, (ii) personal capacity, (iii) workload capacity, (iv) supervisory capacity, (v) facility capacity, (vi) support service capacity, (vii) structural capacity, (viii) systems capacity and (ix) role capacity.

Performance capacity refers to the availability of inputs to support the implementation of SSDP. The SSRP mid-term review (Cumming et al. 2012) estimated that the financing gap between SSRP resources and costs would reach $233 million in 2015/2016. In 2015, the country was hit by two major shocks: — the earthquake and an economic blockade that drastically restricted Nepal's access to fuel and commodities. In this regard, the Nepal Rastra Bank (NRB 2015) December 2015 report predicted that the economic growth could contract to minus 0.9 percent if the blockade continued until January 2016 (which it has). The macro-economic implications of the loss of revenue will affect the resources available for government funding of SSDP in the short and medium-term. Therefore, unless new sources of funding are found, the SSRP financing gap and the recent shocks that hit Nepal will weaken MoE's performance capacity to implement SSDP.

Personal capacity assesses the extent to which staff are sufficiently knowledgeable, skilled, and confident to perform properly. By 2014, 94.4 percent of primary school teachers, 80.6 percent

of lower secondary teachers, 90.4 percent of secondary school teachers and 67.6 percent of high secondary school teachers had been trained. However, on average more than 50 percent of students fail to perform at grade level in Nepali, English, reading, mathematics and science. Head teachers and administrative support lack training in effective school leadership and management. Administrative staff need support in phasing in (1) the federal structure of education governance, (2) strengthening the leadership skills of provincial and local officials in educational planning, management and budgeting, and (3) developing clear professional profiles and recruitment criteria to ensure that staff have the requisite competencies to undertake their duties successfully.

Workload capacity refers to the availability of staff and the breadth of their skills to cope with high workloads. The overall teacher-student ratio in Nepal is, on average, 24.8 in primary and 27.4 in secondary schools. This is within South Asian norms. However, low student teacher ratios are not correlated with higher achievement in Nepal, which, in turn, is a negative indicator of teachers' productivity. The Institutional Assessment and Capacity Development Plan (IACDP) Report (Moriani et al. 2013) findings of a rapid assessment survey of administrative staff suggested that MoE, DoE, and district education office (DEO) staff did not agree that their respective organizations had a plan for continuing staff development, or dedicated grants to support learning opportunities in an equitable manner, or tied human resource development initiatives to the systematic monitoring of employees' outcomes. This indicates that incentives are not perceived to be in place to equip staff with adequate skills that meet their professional needs. Staff concerns are also symptomatic of broader supervisory capacity challenges that the IACDP report described as operational rigidities, weak public disclosure, weak governance, and weak public finance management.

The other dimension of system capacity is facility capacity. This refers to the availability and quality of existing facilities to function as safe child friendly spaces for quality instruction. The April 2015 earthquake deprived more than one million children of safe learning spaces. As the country builds back better, the rebuilding of facility capacity necessitates using materials that can withstand natural disasters incorporating inclusive principles of universal design that allow buildings to be safe, usable, and accessible for all individuals. This is a process that depends, among other things, on support services capacity. This refers to the training and research capabilities often spearheaded by the country's universities. In Nepal, there is a need for home-grown research that informs existing efforts to improve access, equity, quality and efficiency. While universities offer courses in education, their contribution to strengthening the support capacity of Nepal education sector seems very limited.

Finally, the multiple dimensions of capacity depend on functional systems, structures, and clearly defined roles. Minimizing the risk of SSDP being entangled in the same state capability trap that prevented the full implementation of SSRP requires tackling the political gridlock, operational rigidities, weak public accountability, weak coordination, duplicative structures, cross-purpose agendas, insufficient funding, issues with teacher management, and asymmetric structures and roles (Moriani et al. 2013). These are some of the system issues that obstruct the flow of information, money, and decision making in a timely and effective way (system

capacity). They are also symptomatic of weak or unenforced structures for communication, cooperation, cooperation, and collaboration.

Last, but not least, the state capability trap is manifested in low role capacity. This is the lack of clarity about who is responsible for what. Nepal's transition to a federal system of governance presents an opportunity to overhaul the system, structure, and role capacity of the school sector to maximize its effectiveness, efficiency, and ability to improve equitable access to quality education for all.

F. EDUCATIONAL SUBSECTORS AND THEMES

Early childhood education and development (ECED)

The government of Nepal launched the National Policy on Early Childhood Development in 2004. The goal is to promote a comprehensive approach to early childhood development (ECD) programs for children aged 0–5 to safeguard their rights and fully develop their physical, socio-emotional, cognitive, spiritual and moral potential. Access to ECED centers has improved. However, it is still not equally available to vulnerable and disadvantaged groups. Of the 39.5 percent of children aged 3–5 who are attending ECED centers, girls, children with special needs, orphans, children on the streets, and other vulnerable children are the least likely to benefit from these services. Many ECED facilities lack proper ventilation, adequate lighting, permanent structures, and toilets and clean water. The Early Learning and Development Standards (ELDS) are not enforced. This makes it difficult to ensure minimum enabling conditions across centers. For examples, many centers lack a minimum number of learning corners with sufficient materials. Other challenges include the management capacity of the management committees, the limited or lack of training of ECED teachers, poor implementation of the curriculum due to inadequate teacher preparation and poor infrastructure, DEO ECED units without sufficient staff or resources to coordinate ECED activities or lead advocacy efforts to engage stakeholders in prioritizing ECED, and lack of support for holistic approaches to holistic child development. One major way of addressing these challenges is to define programs by age groups and institute clear plans for monitoring and evaluation.

Basic education

Within basic education, a decreasing trend in budget allocation was identified as a salient issue. Furthermore, increased access is observed as significant but should be seen against persisting disparities in terms of gender, caste ethnicity, ethnic minorities and students speaking ocal languages and disability, as these disparities are often multidimensional drivers of disparities and are currently met by strategies that need strengthening in terms of addressing the drivers of disparity and being targeted and evidence based. Furthermore, targeted interventions have been observed in establishment of minimum enabling conditions and child friendly environment. Disaggregating Education Management Information System (EMIS) data to better understand the demographics and disability status of in school and out-of-school children. The institution of a support system targeted at children with disabilities (CwDs) that includes early screening and interventions through closer coordination between health and education ministries, the provision of age appropriate support (birth to 3, 3 to 5, and 6 to 21), improving

accessibility of educational services to CwDs, mainstreaming children with disability in general education classrooms, updating data about types of disability, their levels of severity, and their prevalence, updating teacher training program to include special education, and addressing social stigma associated with disability.

Secondary education

Within secondary education the location of secondary schools does not make them equally accessible to all students, a low enrolment of students in some secondary schools is observed and students in Grades 11 and 12 do not always get to study their selected subjects. Furthermore, there is a lack of necessary infrastructure to study the subjects of interest, not enough prioritization of mathematics and science in the curriculum, which makes them inaccessible to a majority of students, and a lack of sufficient pathways and bridges that enable students to shift from purely academic to practical and vocational streams and vice-versa. Finally, there is a need to better target resources to those most in need of them to be able to afford achieving the goal of free secondary education, private education expansion needs to provide choices to those who cannot afford private education fees. Otherwise the expansion of private education should not be at the expense of community secondary schools, and inadequate supply of subject specialist teachers and head teachers with management skills. Inadequate facilities, equipment, and teacher training for vocational stream schools. Low student achievement and high dropout rates indicating secondary schools' low capacity to graduate students ready for a career or higher education. The threat of shrinking funding because of reduced local funding sources after the declaration of free secondary education, which is not balanced with sufficient government funds. The need to reform the curriculum and textbooks to better align lower and higher levels, create multiple pathways for students learning, provide sufficient and relevant textbooks to support the vocational stream, and identify solutions to the low efficiency (external and internal) and effectiveness of instruction as evidenced in the high number of students who fail secondary school exams.

Non-formal education and lifelong learning

The distinction between formal and non-formal education is often based on where learning takes place. Formal education primarily occurs in establishments designed for instruction and training and often leads to recognized outcomes and qualifications. Non-formal education has intended learning outcomes, but the learning often happens in places where teaching is not the primary business. In the face of a situation of high dropout rates, high numbers of out-of-school children, and high percentage of low skilled workers in Nepal, and the low fit between tertiary education and labor market needs, non-formal education and lifelong learning are increasingly occupying center stage in education reform in Nepal. The ability of Nepalese to adapt their knowledge and skills to the needs of the labor market at home and abroad will significantly determine the extent to which they can secure gainful jobs and break the cycle of economic vulnerability.

In Nepal, it seems that technical education and vocational training (TVET) is conflated with non-formal education and lifelong learning. While the overlap may be justified in the cases of non-

formal settings, it is important to underscore that when TVET is delivered as part of the vocational streams in formal learning institutions, it should be subsumed under formal education. In this regard, the need for more funding, more up-to-date curriculum, better teacher training, more vocational stream choices that are relevant to the job market are the main challenges facing TVET in Nepal. There is, however, little information on the potential of leveraging existing non-formal and informal channels to supplement formal education efforts to provide courses in literacy, numeracy, and social skills that equip Nepalese of all ages with the life skills needed to function independently at the personal and professional levels.

Linkages with higher education

It was earlier explained that the ageing trend of the Nepalese population represents a demographic dividend opportunity that must be fully seized if the country is to be able to graduate from being an LDC. It was also noted that key to cashing in on the demographic dividend is maximizing the productivity of available human resources. One of the means to this end is educating students to make them ready for college and a career. The Department of Education's (DoE) reform vision for SSDP is to prepare citizens who are committed to democracy, human rights, lifelong learning, a positive disposition toward labor and self-employment, community participation, and active participation in solving local and national challenges in the twenty-first century.

Higher education is often the place where these skills and dispositions are tested and honed. However, there is no reference to links with higher education in the vision or goals of the SSRP. Thus, of the 14.5 percent of secondary graduates who enrolled in higher education, very little is known about the extent to which they have the dispositions necessary to succeed in higher education. According to Conley (2003), these skills include critical and analytical thinking, problem solving, inquisitiveness, the initiative to take advantage of university resources, openness to trying new things, being willing to fail at tasks the first time, and the ability to accept critical feedback and adjust accordingly. These skills are critical to achieving DoE's vision. However, without deliberate policies and programs that link education reform to the broader goal of preparing children who are ready for college and employment, it will be difficult to translate the vision into an implementable and realistic strategy.

Issues of technical and vocational education and training

Another area where the connection between DoE's vision and existing programs will need to be strengthened is technical and vocational education and training (TVET). We noted that the DoE envisions citizens who have a positive perception of labor, are oriented towards employment, and have the agency to be active citizens. To achieve this vision, the common view that TVET is a path of second choice needs to change. Parajuli (2013) notes that only two percent of secondary and higher secondary students choose TVET, and that this sub-sector receives only a little bit more than two percent of the national budget. From a management perspective, TVET programs need to be integrated under one structure instead of being fragmented into multiple programs under various ministries and offices. The country has yet to have a vocational qualifications framework even if recognition of the importance of such a

framework began as early as the 1980s. Last, but not least, there is an urgent need to strengthen the TVET information management system.

Strengthening TVET require connecting the various actors in TVET to create pathways for further development of TVET participants and alignment of the TVET curriculum with the demands and needs of the labor market. TVET curricula in Nepal are about 15 years old. In an increasingly knowledge intensive service driven labor market, the curricula need to be modernized and connected with modern technology, and there needs to be a robust monitoring and evaluation system that ensures the enforcement of uniform quality standards and stronger linkages with the industry to ensure that the curricula and the training fit the labor markets' needs. Finally, there is a need to institute a national vocational qualification framework that meets clear and urgent needs, demonstrates compelling benefits, and reflects the financial constraints and capacities of Nepal.

These actions require political and bureaucratic support, a clear line of command with an ultimate agency responsible for its implementation, an appreciation of the multiplicity of the interventions and disposition to build better coordination and flexible pathways connecting formal and non-formal systems of TVET, reducing barriers to access to TVET. They also need an integrated system of credit, planning, management, marketing, logistical, support, technical support, and networking with TVET private and public stakeholders that will make TVET relevant and responsive to market demands. And all these changes are contingent on a functional TVET information management system that helps identify needs, disaggregates services and beneficiaries, better tracks the use of resources, and hence strengthen the governance of TVET and its attractiveness to private investors.

ICT in education

The vision of the Information and Communication Technology (ICT) in Education Master Plan (2013–2017) (MoE 2013) is the extensive use of ICT in the education sector for expanding access to and enhancing the quality of education. The mission is to narrow down the digital divide through the development of ICT infrastructures, human resources, digital content, and system enhancement in education. According to UNESCO Institute of Statistics (2012), 6 percent of Nepal's primary schools and 24 percent of its secondary schools have electricity connections. One percent of primary schools and 6 percent of secondary schools are connected to the internet. And only 0.5 percent of primary schools and four percent of secondary schools use computer-assisted instruction. These data indicate that it may take some time to narrow the digital divide.

To help speed up ICT penetration in education, ICT needs to be integrated within the National Information Communication Technology policy. Given the considerable funding necessary to support ICT penetration, efforts are needed to mobilize the private sector, telecommunication operators and civil society to help close the digital divide in schools. This could include the dissemination of local solutions to the generation of electricity and partnerships with local entrepreneurs (cyber café owners) to improve access to the internet. MoE led solutions should also include specific strategies aimed at funding ICT infrastructure s (electricity, internet

connection, computers, trained staff, digital media) in pilot schools, modelling the use of technology in instruction, training teachers in the use of technology and demonstrating how ICT can be used to reduce teachers' workloads and improve students' focus, retention and learning. Last, but not least, efforts to support ICT in education should benefit from efforts to expand the TVET infrastructure. This way, resulting technologically rich platforms in schools would serve to fulfil the goal of improving access to quality education while planting the seeds for interest in TVET early in children's lives.

Teacher management and capacity development

The quality of an education system cannot exceed the quality of its teachers. Improving the quality of education is an urgent reform priority in Nepal. One main front of effecting change is by changing the practices of teacher management and capacity development. From a management perspective, teacher management and capacity development is undertaken by multiple actors, but the extent to which all the actors are accountable to a single entity is unclear. This makes the task of enforcing common standards for effective instruction and effective teacher training at the basic and secondary levels very challenging.

The Teacher Service Commission (TSC) is ultimately responsible for licensing and selecting permanent teachers. District education offices (DEOs) play a crucial role in recruiting, deploying, and redeploying teachers. School management committees are responsible for recruiting temporary teachers. The National Centre for Educational Development (NCED) manages in-service training for lower secondary and secondary teachers. However, lacking adequate staff to fulfil its mission, NCED is overwhelmed with in-service training tasks that are too big to implement successfully.

The backlog of untrained teachers has been largely cleared. The lingering challenge, however, is that teacher training/qualification has not demonstrated significant effects on student achievement. The underlying causes of this disconnect should be carefully examined and analyzed, and factors related to teachers' preparedness should inform SSDP-related adjustments to teacher management and capacity development.

Capacity development

Human resource development occurs at individual, organizational and systems levels. Key provisions of SSRP were not fully implemented because of capacity development weaknesses at these three levels The SSDP working group has proposed a visionary 50-point capacity building scenario.

The main thrust of the individual level capacity development scenario is the improvement of technical skills for executing tasks, use of the curriculum, planning, monitoring supervision, and documentation using ICT. At the organizational level, the focus of capacity development should be placed on creating appropriate environments for executing tasks through better work conditions, high cooperation and team work, action learning, and the promotion of higher exchange and coordination between branches and authorities with the school sector. At the systems levels, the need for capacity development is expressed about improving practices in

staff selection, assigning tasks, preparing rules and regulations, developing work details, conducting evaluation, and transparent systems of promotion.

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ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
ASIP	Annual Strategic Implementation Plan
AWPB	annual work plan and budget
bn	billion
CBS	Central Bureau of Statistics
CDC	Curriculum Development Centre
CFS	child friendly school
CLC	community learning center
CTEVT	Council for Technical Education and Vocational Training
CwD	children with disabilities
CwSN	children with special needs
DDC	district development committee
DLI	deliverable linked incentives
DoE	Department of Education
DEO	district education office
ECD	early childhood development
ECED	early childhood education and development
EFA	Education For All
EGRA	early grade reading assessment
EMIS	Education Management Information System
ERO	Education Review Office
ETC	education training center
FMR	financial monitoring report
FY	fiscal year
GDP	gross domestic product
GER	gross enrolment rate
GoN	Government of Nepal
HIV	human immunodeficiency virus
IACDP	Institutional Assessment and Capacity Development Plan
ICT	information and communication technology
ILO	International Labour Organization
INGO	international non-governmental organization
JFA	Joint Financing Arrangement
LDC	least developed country
LLL	life-long learning
M&E	monitoring and evaluation
MCC	Millennium Challenge Corporation
MDG	Millennium Development Goal
MMR	maternal mortality rate
MoE	Ministry of Education
MoF	Ministry of Finance
MoFALD	Ministry of Local Development
MoH	Ministry of Health
MoHP	Ministry of Health and Population
MoI	medium of instruction
MTEF	medium term expenditure framework
NASA	National Assessment of Student Achievement

NCASC	National Centre for AIDS and STD Control
NCE	National Campaign for Education
NCED	National Centre for Educational Development
NFE	non-formal education
NFEC	Non-Formal Education Committee
NGO	non-governmental organization
NLSS	Nepal Living Standard Survey
NPA	National Plan of Action
NPC	National Planning Commission
NPR	Nepalese rupees
NSII	Nepal Multi-Dimensional Social Inclusion Index
NVQF	National Vocational Qualification Framework
OECD	Organization for Economic Cooperation and Development
OOSC	out of school children
PABSON	Private and Boarding Schools Organization of Nepal
PCF	per capita funding
PDNA	Post-disaster Need Assessment
PIAAC	Program for the International Assessment of Adult Competencies
PMECs	priority minimum enabling conditions
PPC	pre-primary class
PPE	pre-primary education
PTA	parent teacher association
SAARC	South Asian Association for Regional Cooperation
SDGs	Sustainable Development Goals
SESP	Secondary Education Support Program
SHN	school health and nutrition
SIP	school improvement plan
SLC	School Level Certificate
SMC	school management committee
SSDP	School Sector Development Plan
SSRP	School Sector Reform Plan
STEM	Science Technology Engineering and Mathematics
SWAp	sector wide approach
TPD	teacher professional development
TSC	Teacher Service Commission
TSLC	Technical School Leaving Certificate
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNGEI	United Nations Girls' Education Initiative
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
VDC	Village Development Committee
WFP	World Food Program
WHO	World Health Organization

Exchange rate as of February 2016, = NPR 108: $1

1. INTRODUCTION AND CONTEXT

Nepal and the rest of the world are embarking on the Sustainable Development Goals (SDGs). The country is also entering a new federal education governance era as per the newly promulgated constitution (2015). In education, the SDGs agenda and the new constitution advocate for inclusive, equitable, and quality access to education that encompasses early childhood, primary, secondary and tertiary education, and technical and vocational training. In this regard, the government's School Sector Development Program (SSDP), scheduled for implementation from July 2016 to July 2022, is intended to embody the SDGs and the new constitution aspirations and put education improvement reforms front and center of Nepal's national development. This is all in line with the government's vision for the country to graduate from the status of a least developed country (LDC).

The School Sector Reform Plan (SSRP) is the current Education Sector Plan. It was initiated in 2009 and is due to end in July 2016. The SSDP will be a continuation of the government's efforts to ensure access to quality education for all through programs such as Education for All (EFA), the Secondary Education Support Program (SESP), the Community School Support Program (CSSP), the Teacher Education Project (TEP) and the SSRP. Building upon the lessons learned and the gains made under these programs, the SSDP is envisioned to achieve the unfinished agendas and accomplish the goals defined under the recently agreed SDGs.

To produce a needs-based plan, the Ministry of Education (MoE) is taking an inclusive and participatory approach and is carrying out a sectoral analysis. This analysis has an important role in making an evidence-based case for the direction of education reform for Nepal between July 2016 and 2022. Fullan (2001) argues that planning often fails because it does not consider local context and culture. National education reform presents a challenge with a much more complex order of magnitude. As a plan, it is highly complex because it entails identifying problems by order of urgency, selecting among competing solutions, and getting the necessary buy-in to allow the SSDP to be implemented with minimum disruptions. All this requires careful preparation of the case for reform, which in turn is largely dependent on fully understanding the national context for reform. This sector analysis attempts to do this.

The report has seven chapters. Chapter 1 describes the rationale for investing in deep and sweeping education reform. Chapter 2 presents a situational analysis of the demographic, economic, social, and political context in Nepal. Chapter 3 discusses the macro-economic picture of the country and state of public finance in its relation to the education sector. Chapter 4 describes the progress achieved and lingering challenges on access, quality, equity, and efficiency. Chapter 5 examines dimensions of sector system capacity to gauge institutional, organizational, and human resource readiness for SSDP. Chapter 6 presents the

state of the school sector by the sub-sectors of are early childhood education, basic education, secondary education, tertiary education, and technical vocational education and training (TVET). Chapter 7 reviews cross-cutting issues including education sector governance, capacity development, teacher management and ICT. Chapter 8 presents lessons learned from the sector analysis and recommendations for the way forward.

1. Background

The Government of Nepal has implemented the School Sector Reform Plan (SSRP) since 2009. The SSRP—jointly supported by several development partners using a sector-wide approach—builds upon the earlier reforms in the school education sector and seeks to improve access and equity and quality of the entire school education system (grades 1–12). It also seeks to consolidate the existing four-tier structure of school education (comprising of 5 years of primary, three years of lower secondary, two years of secondary, and two years of higher secondary education) into eight years of basic (grades 1–8) and four years of secondary (grades 9–12) education. The SSRP is scheduled to complete at the end of FY 2015-16 (July 2016). Thus, there is a need for a new sector development plan to build upon the gains made thus far and to continue the sector wide approach to reforms in the school education sector for greater impact. To ensure need based and relevant design of the new plan, translating in further strengthening of access, participation and learning outcomes across the education sector, the Government of Nepal and the Development Partners (including (I)NGOs and CSOs) have agreed to jointly undertake the necessary evaluation, analysis and consultations prior to the development of the new sector development plan.

In addition to this, the new Education Sector Plan must take the post immediate and medium term needs that have emerged because of the earthquakes that struck a large part of Nepal on the 25th of April and 12th of May, which affected the education of around 1.5 million children in several grades of severities. The plan must build on the immediate response that has been undertaken by the Government through the ASIP and the Nepal Education Cluster to mitigate the interruption of education and the impact of the disaster, both in terms of primary and secondary damage and in terms of physical damage and social impact. Furthermore, the new plan should have a strong cross cutting focus on strengthening Disaster Risk Reduction (DRR) and Resilience.

2. Purpose and Objectives:

Goal: To ensure a clear roadmap for the development of the SSDP that caters to the needs of children, youth and adults and contributes to Nepal's socio-economic and sustainable development through a continuous process of enhancing institutional and organizational capacity, as well as the development of human capital and resilience at all levels.

Objective: The Technical expertise mobilized through this Terms of reference will enable the Government for the development of the School Sector Development Plan (SSDP), which is envisioned to:

i. foster children's all-round development, laying a firm foundation for basic education,
ii. ensure equitable access to quality education through a right based and child friendly approach,
iii. ensure all teachers have the knowledge and skills required to effectively facilitate students learning processes and are managed accordingly,
iv. Meet national development needs by producing competent and skilled human resources and providing a sound foundation for tertiary education.
v. Strengthening resilience of the school education sector and through that of the Nepalese society.

1.1 Alignment of development Cooperation

The DPs are committed to engage in the SSDP development process with the aim to further strengthening effective development cooperation, further strengthen national ownership of the program, further engage I/NGO and CSO networks through participatory approaches to ensure the achievement of national priorities and enable effective decision making. Building on the strong practices under the SSRP Sector Wide Approach (SWAp), the Development Partners and Government aim to align Development Cooperation with national priorities, build capacity and strengthen institutions where needed and ensure joint monitoring and assessment of performance through aligned indicators. Strengthening a 'One Door Only' policy for TA during the SSDP development period is considered a priority to further strengthen coordination and avoid duplication and redundancy, both in terms of available resources and in terms of involvement of the (limited) human resources within the Government allocated for this. Furthermore, it ensures that all SSDP related activities undertaken will feed into the SSDP development process. In line with the good practices under the SSRP Joint Financial Arrangement (JFA), this ToR has been jointly developed by the Development Partners and endorsed by the Ministry of Education. As such, the roadmap described in this ToR is envisioned to guide the partnership in line with the international agreements on Aide effectiveness. The ToR supports the development of common procedures and operational guidelines for management to ensure transparency,

accountability, results-based monitoring and reporting and increase effectiveness and foster improved government ownership and prospects of sustainability as activities originate from implementing agencies, based on their needs.

1.2 Coordination and Supervision of the Technical Assistance

For the overall supervision, a core team will be established, consisting of the SSDP Technical Committee Member Secretary, DP focal and DPs that have provided resources for the deployment of the required TA. The individual TA that will be procured through the institutional consultancy will be supervised by the institution and daily by the Team Leader, guided by the core team. The core team will meet frequently and on a needs basis and will communicate with the institution through UNICEF as both the DP focal point and the Managing entity of the GPE grant through which the institutional consultancy will be procured. For the individually-procured TA for the background studies, a detailed study protocol will be presented by them to the core team within the first 10 days of the deployment that is aligned with the timelines, roles, responsibilities and expected deliverables and outputs stated in this ToR. Regarding the individually recruited TA of the SSDP core team, the TA will develop a detailed work plan in line with the timelines, deliverables, outputs and tasks, as specified in this consultancy which will be submitted to the core team for approval.

1.3 Supervision of Technical Assistance recruited under the Institutional Consultancy

Nepal has applied for an Education Sector Program Development Grant (ESPDG) from the GPE for the resourcing of the Technical Assistance that will be deployed through an institutional consultancy. UNICEF has been endorsed by the Nepal Local Education Group (LEG) as Managing Entity for this grant and as such will manage the recruitment and contracting of the institution. The Terms of Reference for this will be developed in line with UNICEF's internal requirements and reflect the feedback and input provided by Government and the LEG members. After the deployment of the team, the Team Leader will initiate the work by developing an inception report that specifies the planned activities and methodologies, which will be reviewed and approved by the SSDP Technical Committee and fulfil the requirements of meeting the expected deliverables stated in the contract. The institution will be responsible for the recruitment and deployment of the thematic specialists for the undertaking of additional studies to address the identified knowledge gaps of the background documentation review and analysis, in line with the requirements and expertise stated in the ToR. The SSDP support team that will be deployed under the institutional consultancy will be managed by the SSDP Team Leader and the SSRP Team Leader will be guided by the member secretary of the SSDP Technical Committee, in line with the approved inception report and the institutional contract signed with the Managing Entity. When requesting for payment or resources, the Team Leader will request approval from the

Managing Entity through mail. The SSDP Technical Committee will review the timeline and deliverables stated in the ToR during each meeting.

1.3.1 Supervision of individually recruited Technical Assistance

The day to day coordination of the mobilized TA will be done by the SSDP Secretariat and Team Leader will coordinate with the TA recruited as specified within this ToR under Phase I to Phase V (excluding the external appraisal of the SSDP program Document), guided by the research protocols and work plans that have been approved by the core plan and the TA and consultation flow chart that has been attached to this ToR as Annex 3. The Team Leader will do so in close collaboration with the SSDP Technical Committee, of which S/He will be a member. The required additional Technical Assistance is described in detail in chapter 8; 'Technical Assistance Requirements' below.

1.3.2 Resource Requirements and Sources for Mobilization of Consultants

The consultants will be mobilized through resources from the government and Development Partners (DPs) interested in supporting the proposed SSDP. In addition, the DP focal point and the Government will apply for an Education Program Development Grant (EPDG) from the Global Partnership for Education (GPE) to ensure all identified needs are sufficiently funded. The provision of resources for TA from the DPs will be aligned through this TA and a budget, specifying the detailed budget and funding sources and modalities, is presented in chapter 7.

1.4 Methodology and production modality / process:

The proposed 5 year SSDP for FY2017-FY2021 will continue to consolidate the gains made from earlier programs and strive to develop an inclusive and high quality school education system for all children. The SSDP is envisioned to be embedded in the 14th Periodic Plan of the Nepal Education Sector developed by the National Planning Commission (NPC), as well as be aligned with the longer-term Education Sector Plan that will succeed the Education For All National Plan of Action (EFA/NPA; 2000-2015) and will be guiding Nepal in achieving the Sustainable Development Goals (SDGs) by 2030. Development of the SSDP will be led by the Ministry of Education (MOE) through a highly consultative process and will both aim to secure the gains made within the education sector and reflect the emerging priorities and areas for future investment. Additionally, the Damage and Loss Assessment (DaLA) and identified needs in the Post Disaster Needs Assessment (PDNA) that has been conducted in May/June 2015 for the post immediate (1-3 years) and medium (3-6 years) time period will guide the incorporation of the post disaster recovery plan in the SSDP. The development of the SSDP will be implemented through a number of phases that are described below:

Phase 1; Initial Assessment and Preparation (Feb-July 2015); During this phase the SSDP development infrastructure will be established and the technical assistance to support this process will be mobilized. After the establishment of the Steering Committee, Technical Committee and Secretariat, as well as the physical and logistical arrangements to support this, the secretariat will compile the relevant documentation and data to inform the background papers developed by the SSDP Thematic Working Groups (TWGs***).***

The existing SSRP joint Thematic Working Groups (TWGs) will serve as a base for the establishment of SSDP Thematic Working Groups (TWGs) to undertake thematic review and stakeholder consultation (4.3.6) that will result in the development of SSDP Thematic Option Papers (4.3.7). For this, the existing Terms of Reference of the joint SSRP TWGs will be revised. The TWGs are envisioned to broaden their participation for the thematic review and consultation with experts and stakeholder representatives. The TWGs will undertake documentation review and provide input and guidance to the thematic specialists (8.2 & 8.3) that are deployed for undertaking background studies (4.3.2) as part of the sector analysis (4.3).

1.4.1 Education Sector Analysis and Planning Protocol;

Guided by the SSDP Technical Committee (5.1), the SSDP Development support team will develop an inception report that will specify the methodology deployed during the Education Sector Analysis (4.3) and the SSDP development and planning. The inception report will specify the roles and responsibilities of the TA that will be mobilized for the development of the SSDP, as well as which methodologies will be specified during the review and analysis and the undertaking of additional background studies to address identified knowledge gaps. The inception report should provide a roadmap to ensure an aligned process that incorporates the findings of all activities undertaken as part of the process and assures a sector analysis and planning process of international quality standards. The Inception report and sector analysis will have to take the changed context post disaster and the PDNA report into account. The Sector Analysis and SSDP Planning Inception draft Report will be presented to the SSDP Technical Committee (4.1.1 & 5.1) for input and the revised report will be submitted to the SSDP Technical Committee for approval.

SSDP background documentation review and Gap analysis The SSDP Concept Note will identify the 'unfinished agenda' of the SSRP based on the guidance of the NPC and the SSDP Steering Committee, as well as through reviewing the outcomes of the SSRP joint reviews and consultations. The SSDP Concept Note will identify key issues and opportunities within thematic components that will be used as a departure point for the review and consultation that will be undertaken by the joint Thematic Working Groups. Furthermore, the SSDP Concept Note will highlight the areas in which further consultation and focus is needed to address knowledge gaps and to inform

the Thematic Working Groups for the Development of Option Papers, stakeholder consultations and through background studies that will be undertaken as part of the sector analysis to inform the SSDP development.

Phase 2; Joint External Evaluation of the SSRP (April-August 2015)

1.4.2 Development of the joint ToR

The Joint Financing Arrangement (JFA) of the SSRP, signed between the GON and the Pooling DPs has a requirement to conduct a joint independent final evaluation of the SSRP. Key stakeholders such as MoE and the DPs have been actively involved in the planning process of this evaluation, including in the drafting of the TOR. At the overall level the GoN and the pooling DPs have jointly developed the TOR, agreeing that the evaluation process will be funded and managed by the Delegation of the European Union to Nepal (EU) on behalf of the Ministry of Education and the Pooling Development Partners.

1.4.3 SSRP Evaluation

a concise report in English is to be submitted to the EU Delegation within 5 days of the start of the assignment, which will include: a detailed methodology including an evaluation matrix with evaluation questions and select indicators, based on the priorities detailed above; a plan for data collection and a program of work; and a suggested structure for the final report. The evaluation questions can be expanded on as and when necessary during the evaluation. The Inception Report will be discussed with the GON and the DPs before approval by the EU. An Aide Memoire on initial key findings with an analysis was presented to the Stakeholders and a discussion facilitated by the Evaluation team at an ad hoc meeting for this purpose around the middle of the assignment. The draft final report should be submitted to the EU Delegation, who will gather and consolidate the comments / feedback from GON and the DP group. The EU Delegation will provide the consolidated comments not later than 10 calendar days after the submission of the draft report. After receipt of the comments the consultant will finalise and submit the Final Report. The Final Report should include in annex a PowerPoint Presentation, summarizing the methodology, key findings, conclusions and recommendations, to be presented to MoE, DPs and other stakeholders around the time of the Joint Quarterly Meeting (JQM).

1.4.4 Sector Analysis

Sector Analysis Methodology; The SSDP Team Leader and the Sector Analysis and Program planning Expert will support the SSDP Technical Committee and Secretariat in the development of a detailed Sector analysis methodology that encompasses a quantitative analysis to identify statistical trends, a socio-economic and political context analysis, a macro-economic and public finance analysis and projection and a social and economic impact analysis of education. In addition, the Sector Analysis needs to be building on and aligned with the DaLA and PDNA report that will be finalized in June 2015. The design of the overall sector analysis will also *specify* in what way the thematic background studies,

stakeholder consultations, Thematic Option Papers, Findings and Outcomes of the SSRP Evaluation will feed into the analysis process.

The thematic specialist that will be deployed to undertake the thematic background studies will in close collaboration with the Sector Analysis and Program planning Expert for the design of research protocol and methodology to ensure compatibility in approach and outputs to feed back into the sector analysis. The background studies will be conducted in education sub sectors and thematic areas. Technical Assistance will be mobilized through the deployment of thematic specialist to supplement the review of background documentation and address identified knowledge gaps. The Thematic specialists will work closely with the relevant Thematic Working Group Coordinators and Facilitators to ensure that the stakeholder consultations are providing relevant input to the background studies and support the TWG facilitators and facilitators with the development of the Thematic Option Papers. Where background studies cover an area that has not been embedded within the SSRP, the specialists will also be expected to support the Sector Analysis and Program planning Expert and the sub sector/thematic expert writers with the drafting of the SSDP document.

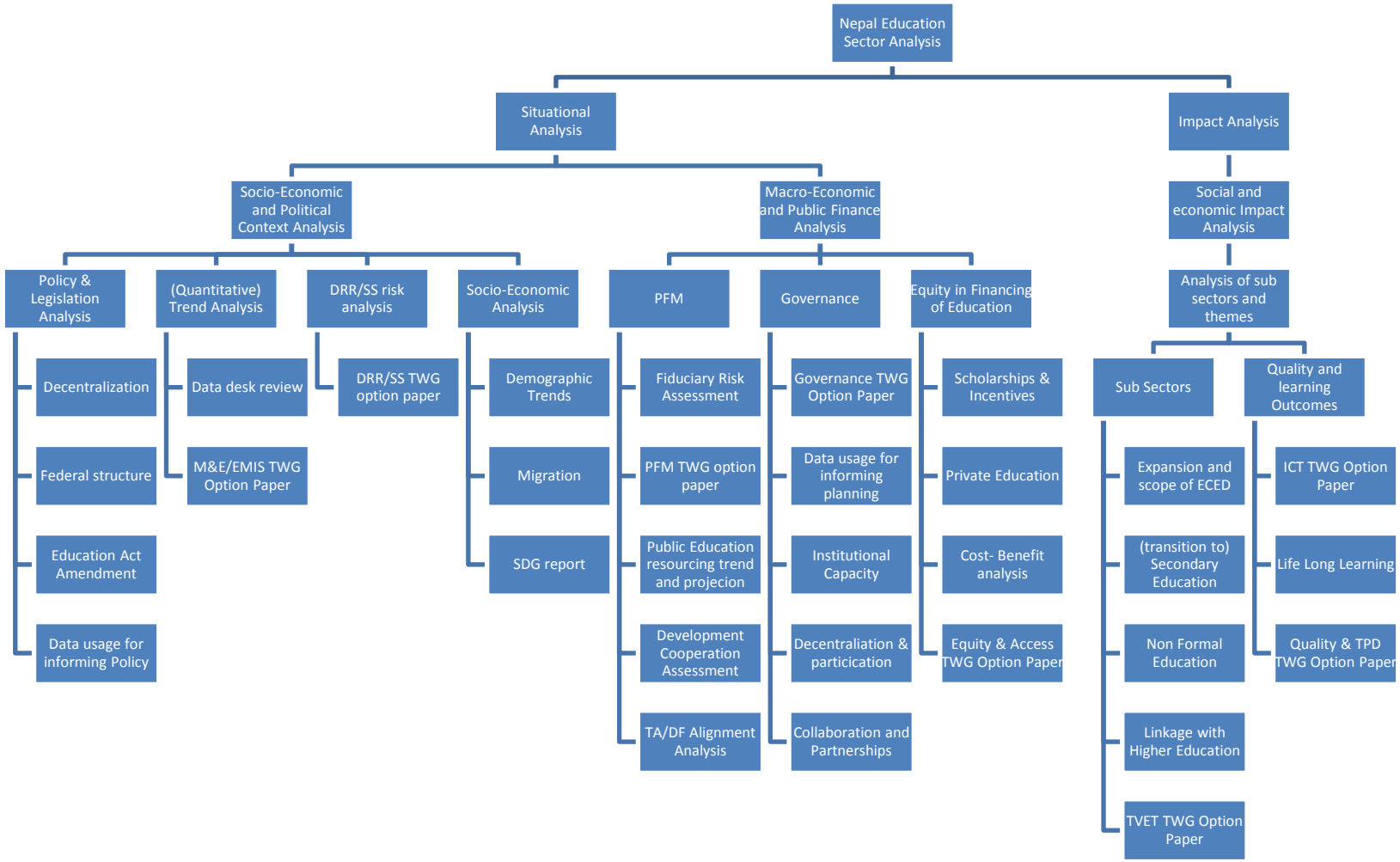
Quantitative Trend Analysis Based on the compiled quantitative data from education statistics (EMIS), household statistics, DaLA & PDNA, and other reviews and assessments, such as NASA and EGRA, a (quantitative) trend analysis of education outcomes will be undertaken by the Sector Analysis and Program Planning Expert to project trend in (quantitative) education outcomes. The quantitative trend analysis will feed into the broader Socio-economic and political context analysis.

Socio economic and political context and policy analysis; The context analysis is aimed to flash out future projections of the total population and the school aged population based on past trends, to identify constraints placed by demographics on the education system. For this, the Sector Analysis and Program planning Expert will analyze key social indicators (such as share of population living below poverty line, urban/non-urban/rural/remote trends and projections, demographic density, adult literacy rate, prevalence of disabilities, HDI, etc.) that define the national social development context. The detailed methodology will be shared with the M&E TWG for input and the SSDP TC, Secretariat, and Team Leader for approval and will include analysis of past trends and future *projections* of the distribution of the total population and the school aged population by age, gender, geographical location, and events that influence this, such as migration, climate related living patterns and geographical and cultural features. Furthermore, the context analysis will include an analysis of the country's context in political and geographical perspectives and provide an overview of the country's cultural, ethnical and linguistic composition. A risk assessment in terms of natural disasters and socio economic, cultural and political hazards will also be included in the design of the analysis, informed by the Disaster Risk Reduction and School Safety TWG Option Paper. The analysis will take stock of the EU Development Cooperation assessment, which is expected to be completed in April 2015 and the Joint External SSRP evaluation, of which the initial key findings will be shared in June 2015.

Macro-economic and public finance analysis and projection; This part of the sector analysis will be performed by the Education Economist and be informed by the School Education

Financing Study, the Private education Sector Study, the Governance and Management Study and the Student Financial Assistance/Scholarship Study and will evaluate the current and projected levels of resources available for public education through analysis of past trends in GDP, domestic and external resources and projection of future scenarios for GDP, tax income and public resources. The analysis will include a cost-benefit analysis, including an assessment of resource allocations from an equity perspective, analysis of the overarching finance legislation, policy and management in education and which rationale is used in policy choices regarding public resources (re)distribution are undertaken, education cost sharing between the Government and households, breakdown and assessment of public recurrent unit costs. The analysis will take stock of the work and findings that are expected from the GPE-GRA supported Nepal Education Accounts initiative undertaken by the Ministry of education and UNESCO UIS on determining the total cost and resourcing of Education in Nepal.

Figure 1: Overview of the Education Sector Analysis



Stakeholder Consultations; In order to maximize analytical findings into reforms, strong ownership across the system needs to be ensured. For this broad stakeholder consultations, as well as validations are planned to be undertaken through a participatory approach by Government, Development Partners, (I)NGO and CSO networks and at all levels. The stakeholder consultations need to ensure that limited resources are realistically projected and planned in most effective and equitable way through identification of need. By also including high level and key stakeholder consultations, ownership and advocacy at a political level and among groups that have a high level of influence within the education sector is aimed to be ensured. In order to engage with stakeholders in effective and appropriate ways, an SSDP stakeholder consultation guideline will be developed by the SSDP Secretariat, supported by the SSDP Team Leader and with active contribution from the Association of INGOs in Nepal (AIN) and the National Campaign for Education in Nepal (NCE-N), based on the lessons learnt and best practices within these networks. Stakeholder consultations will be undertaken at local, district and regional level by the TWGs with the support of the TWG facilitators and the SSDP Team Leader and the SSDP Secretariat support staff. In addition to these consultations, the SSDP TC will organize round table discussions and key stakeholder representative interviews, as well as high level consultations by the MOE management. As such, the TWGs will support the SSDP development process through providing technical input within the parameters and in response to the guiding questions set out in the SSDP concept note and will submit a proposal to the SSDP Secretariat in which the scope, location and rationale of the stakeholder consultations is specified, for which they will be supported by the TWG facilitators and the appropriate thematic specialists.

Development of Thematic Option Papers; In line with the guiding questions stated in the SSDP Concept note, the TWGs will develop Thematic Option Papers, which are based on internal and external discussion that is facilitated and documented by the TWG facilitators. The TWG Coordinators will ensure that there is close collaboration with the thematic specialists in order to ensure there is no discrepancy between the Thematic Option Papers and the Thematic Background Studies that are both expected to inform the Sector Analysis and the development of the SSDP Approach Paper. The SSDP Sub Sector Expert Writer and the SSDP Thematic Expert writer will ensure the consistency within the SSDP Approach Paper during the incorporation of the Thematic Option Papers, under the guidance of the Team Leader.

Stock taking of SSRP evaluation main findings; A joint external SSRP Evaluation has been initiated, as is provisioned in the SSRP Joint Financial Arrangement. For this, an external SSRP Evaluation Team has been deployed to evaluate the SSRP on Effectiveness, Efficiency, Relevance, Impact and Sustainability. The SSRP Evaluation and main findings will be presented during the 2015 SSRP Joint Quarterly Meeting and will be reflected in the sector analysis.

Social and economic impact analysis of education; The impact analysis will, have a strong equity focus and will be undertaken by Sector Analysis and Program planning Expert, supported by a team of experts from UNICEF Head Quarters that is supporting the Government on the undertaking of the sector analysis as part of the Global Partnership for Education Global and Regional Activities (GPE-GRA) scheme. The analysis will present the social disparities in the appropriation of education resources and provide a benefit incidence analysis, as well as analysis on the conversion of resources into quality/learning outcome results by schools.

Development of SSDP Approach Paper; The SSDP Approach Paper is aimed to lay out the strategic framework which guides the preparation of the SSDP Framework, building on the Sector Analysis, Thematic Background Studies and Option Papers that reflect the TWG discussions and Stakeholder Consultations. As such, the SSDP Approach paper will have identified the key issues and priorities as well as presenting a range of possibilities and scenarios to mitigate key challenges and capitalize on identified opportunities. The SSDP Approach Paper will be developed by the SSDP Team Leader and the Sector Analysis and Program planning Expert and reviewed by the SSDP Steering Committee and Technical Committee.

Communication strategy of the Education Sector Analysis outcomes and implications; the main outcomes and implications of the comprehensive education sector analysis will need to be translated into briefs and presentations appropriate for stakeholders at policy, planning and implementation level within the education sector, as well as decision makers within the Government such as NPC and the Ministry of Finance.

SSDP Theory of Change; the Sector Analysis and Program planning Expert will support the SSDP Core Writer Team in the development of an SSDP Theory of Change that is based on the sector analysis and reflected in the SSDP strategies and policy directions, as well as in the SSDP Logical Framework and Result Framework which are all included in the SSDP first draft.

2. THE THREE IMPERATIVES FOR EDUCATION REFORM

Nepal promulgated its new constitution on 20 September 2015. The constitution enshrines education as a universal right of all citizens. It commits the State to:

> *"[make] education scientific, technical, professional, skill-oriented, and employment and people oriented in order to prepare the human resources to be competent, competitive, moral, and committed to national interest." (Article 51 h1).*

The constitution's call for education to be an engine for national development and the advancement of national interests highlights at least the following three education reform imperatives: (1) post-disaster and post-conflict reconstruction, (2) exploiting the demographic dividend, and (3) graduating from LDC status.

2.1 Post Disaster and Conflict Reconstruction

> *"It is easier to build stronger children than to repair broken men." Frederick Douglass*[1]

Nepal straddles the fault line between the Indian and the Eurasian plates making it one of the world's most earthquake prone countries. On 25 April 2015, the country was hit by its strongest quake in 80 years. The death toll surpassed 8,500. Over 35,000 classrooms were mostly or totally damaged, leaving more than a million children lacking access to a safe, permanent place to learn (NEC 2015).

In May and June 2015, Save the Children, Plan International, Unicef and World Vision International interviewed more than 1,800 children about their experiences and needs after the earthquakes (Plan et al. 2015).[2] Education was the second highest priority after securing a safe shelter. Children wanted to return to school; but they also wanted safe schools that can withstand future disasters.

From a post-disaster perspective, education reform is a humanitarian imperative because the failure to build back better schools is likely to exacerbate the already swollen numbers of out-of-school children[3]. Better schools emphasize resilient humans in resilient buildings. This means improved structural design that ensures accessibility for and the safety of all children including those with disabilities. It also means resilient teachers, students, and communities who will take steps to ensure that disasters cause as little damage as possible, take responsibility for the risks associated with disasters, and are ready to rely on themselves to mitigate damage when disasters hit.

[1] Frederick Douglass is a prominent African-American social reformer who became the leader of the abolitionist movement after escaping slavery. His words are cited in Ward (2000).

[2]. All quotes are from the Children's Consultation of Plan et al. (2015)

[3] According to Unicef Nepal OOSC study (Unicef Nepal 2015), about 10% to 15% of children of primary and lower secondary age group currently do not attend school in the primary and lower secondary levels

Nepal experienced armed conflict from 1996 to 2006. More than 130,000 people were killed and at least 3,000 disappeared and remain unaccounted for (Vaux 2011). The warring ideologies that fuelled the conflict were rooted in grievances about poverty, exclusion, feudalism, and the caste system (ICG 2011). Almost ten years after the end of the conflict, the country is seeking political consensus around the form of inclusive and just federalism that ends years of civil strife and political gridlock, and puts the nation back on a stable track. Education reform should be part of the solution.

The preamble to Nepal's new constitution preamble commits to embracing multi-caste, multi-lingual, multi-cultural, and diverse geographical specificities by ending discrimination relating to class, caste, religion, language, region, and gender, including all forms of racial untouchability. Schools can often be the grounds where some children are socialized to feel inferior, undeserving and powerless. They can also be the places where children thrive as productive and peaceful citizens who are committed to excellence, equality, rule of law and pluralism. Nepal's commitment to building back better should include the far more complex, vital, and urgent task of ensuring that students and out-of-school children do not grow into broken men and women that are both victims and perpetuators of conflict. Nepal's education reform imperative is, therefore, to ensure that curricula, teacher training, teaching practices, teachers' supervision, educational governance, and community engagement are catalysts for building a cohesive, resilient, and prosperous nation.

2.2 The Ticking Clock of the Demographic Dividend: Use It Or Lose It!

> *South Asia's demographic surplus will be key in meeting the labor needs both within the region and beyond, but only if workers have the right education and training.* (Business Intelligence Unit, January 2014)

There was a sharp decline in the average growth rate of Nepal's total population in the 2001-2011 period compared to the 1991–2001 period (CBS 2014). In the previous decade, the average growth rate was 2.25 percent, compared to only 1.35 percent in 2001–2011. If the present population growth rate persists, it will take 51 years to double the population of 2011. The decline in growth rate was attributed to both a decline in fertility and the emigration of many young people. The CBS also noted that mortality has also been declining. Compared to the 2001 mortality rate of 10.3 per thousand, the 2011 rate is estimated at 7.3. Additionally, life expectancy at birth has increased from 49.6 years in 1981 to 66.6 years in 2011. Finally, the median age of the population and ageing index show that the population is getting older, and the dependency of older individuals (50 years and over) is increasing.

Current trends show that Nepal, like other South Asian countries, is enjoying a demographic surplus. Appendix C visualizes Nepal's shifting demographic make-up and future projections.

The remittances of the labor force were estimated to account for 21 percent of GDP in 2012. However, Nepalese working overseas are mainly engaged in low skill and low wage occupations (ADB 2013). At home, university graduates are the most affected by unemployment followed by secondary school, then primary school completers (World Bank 2013).

The projection pyramid for 2025 shows that in 10 years Nepal's window of opportunity to cash in on its demographic dividend will be at its widest before it begins to shrink in 2030. According to Lee and Mason (2006), a demographic dividend window of opportunity opens when fertility rates fall, leading to fewer mouths to feed. In this period, the labor force grows more rapidly than the population dependent on it. The demographic dividend, therefore, represents the rate increase of economic growth that results from an increase in the working age ratio and greater female labor supply (Bailey 2006), which tends to result in higher savings, more domestic resources.

The size of the demographic dividend opportunity hinges on the productivity of young adults (Lee and Mason 2006). Like other South Asian countries, the window for the demographic dividend in Nepal began in the mid-1980s. Herein lies the education reform imperative. As of 2011, school attainment of Nepal's youth (15-24-year-olds) does not indicate that the country has the prepared labor force to optimize its demographic dividend. Twelve percent have no education, 10 percent have not completed primary education, and 41 percent have not completed secondary education. This represents 63 percent of youth who do not have the requisite skills to be engaged in gainful jobs of high added value.

In the coming 10 years, the age of this population will be between 25 and 34 years. Providing them with the necessary literacy, numeracy and life skills to obtain higher paying jobs in their prime years should be a national priority. Commenting on the projected demographic dividend, Khare and Slany (2011) noted that 40 percent of the population is under the age of 15 years. Their entry into the labor market will result in the most favorable dependency ratio the country has ever seen. If little is done to integrate educational reform with change in employment and labor market policies, most of the new entrants will continue to engage in subsistence agriculture and low paying service and manufacturing jobs. This means that at least one-third of the workers will not earn enough to pull themselves above Nepal's poverty line, while half of those workers will fall under the international poverty level of US$ 1.25 a day.

Major investment in quality education and training recognizes that highly productive citizens are the key to enduring national prosperity. The number of young people emigrating out of the country jumped from 762,181 in 2001 to 1,921,494 in 2011. Considering the decreasing fertility rate, emigrants' numbers will gradually dwindle, and if little is done to improve their skills, their remittances will also dwindle. If the emigrant host countries are aggressively investing their resources for a future with lower oil windfalls, Nepal should invest more heavily in ensuring that its human resources are well-

trained and well compensated for a future where they will be in high demand and in shorter supply. Given the ticking clock of the demographic dividend window of opportunity, investing heavily in improving the quality of education and training for all should be a national security priority.

2.3 Nepal's Vision for Graduating from LDC Status

> *"A vision without a plan is a dream. A plan without a vision is just drudgery. But a vision with a plan can change the world"*

Nepal's vision for graduating from the LDC category should be another driver for expediting education reform. The Nepal National Planning Commission (NPC) has set the following seven national development goals:

- rebuilding a resilient nation
- entrepreneurial famers and productive farms
- gender equality with conscious empowered women
- building infrastructure and creating jobs
- policy reforms for growth take off
- connecting communities with markets
- nurturing nature to harness its riches.

Achieving these goals depends on entrepreneurial, productive, and resourceful individuals who believe in the national vision and have the requisite skills to achieve it.

The NPC identifies improving competency in education, science, and technology as one of at least nine target areas for graduating the country from LDC category to the status of developing or middle income country by 2022 (Sainju 2013).

For this vision to be achieved, the per capita gross national income (GNI) must be 20 percent above the threshold for inclusion in the LDC category, the Human Assets Index (HAI)[4] must be 10 percent above the LDC inclusion level and the economic vulnerability index must be 10 percent below the LDC inclusion level.

Nepal's Thirteenth Plan adopted graduation from the LDC category by 2022 as its sole vision and prepared sectoral strategies accordingly. In this regard, the education reform imperative is twofold:

- The literacy and secondary school Human Assets Index indicators must be at least 10 percent above the LDC inclusion threshold.

[4] The HAI comprises percentage of population undernourished, mortality rate for children five years or under, gross secondary school enrolment ratio, and adult literacy rate.

- The education sector should show improved student competencies in education, science, and technology to provide the supply for skilled human capital that is prepared and ready to help reach NPC's seven national development goals.

2.4 In Summary

In this chapter, we have established that education sector reform is urgent because it responds to the immediate need of rebuilding after the earthquakes that hit the country. We have also established that education reform should be a national priority because the country is in a state of political transition and the education sector is called to fulfil its responsibility to empower resilient citizens with a sense of belonging to a socially cohesive nation. We have demonstrated that reform of the education sector is an imperative because business as usual in delivering education and training is not helping graduates who can only demonstrate the minimum literacy, numeracy, and life skills, and therefore cannot get gainful employment. In the coming 20 years, Nepal's demographic dividend will present itself as a growth opportunity. Ensuring that programs are in place to stimulate children's intelligence, leadership, and entrepreneurial spirit from cradle to career will supply the country with the quality workforce it needs to meet and exceed its development goals. Last, but not least, education reform is an imperative because it is at the heart of the intervention areas and strategies identified to stimulate sustainable growth and graduate the country from LDC status by 2022.

In his 'Building the Bridge As You Walk On It: A Guide for Leading Change' Robert Quinn[5] (2004) talks about leading change as a process that is often difficult because it means giving up the control and predictability of what's known and venturing into the risks of the unknown. To graduate to a developing or middle income country status, Nepal leaders must make deep changes that meet the benchmarks for graduation in 2022. In this regard, the analogy of "building the bridge as you walk on it" is an apt description of the transition situation that the country is facing politically, socially, and economically. Nepal wants to move forward. Its leaders will make some wise moves, but at times there will be setbacks and cross-purpose interests. Education leaders' mission may be the most complex because it entails transforming current and future young men and women into a productive workforce while not knowing or controlling all the levers necessary for that transformation to occur.

As the sector's leaders and their partners build the knowledge base for the bridge towards 2022, they must have clear lines of command and accountability, they need time to reflect on their actions, they need to demonstrate full engagement in the change process that is rooted in fully understanding why it is important, and they must stay positive and focus on solutions and opportunities. They must also have a shared vision that all levels of the education sector know, understand, and support, they must be willing to try different

[5] Robert E. Quinn is chair of the Department of Organizational Behavior and Human Resource Management at the University of Michigan School of Business.

solutions when existing ones fail, they must be able to balance free initiative with accountability to shared goals and standards of quality performance, and they must model high expectations from themselves, their colleagues, and their followers to ensure that the education sector is fulfilling its role of equipping Nepali citizenry with the required skills to thrive in the 21st century. This sector analysis, therefore, takes the pulse of the education system to ensure that the proposed plan of action is based on a full understanding of what can and must be changed. This way when the train of reform is on track, it moves in the right direction.

3. NEPAL SITUATIONAL ANALYSIS: DEMOGRAPHIC, ECONOMIC AND SOCIAL CONTEXT

3.1 Introduction

Nepal is a landlocked country located between India and China. It has three topographic regions: the southern Terai plains, the middle hills and the Himalayan mountains in the north. Kathmandu is the capital city.

For most of its history the country had been ruled by monarchs or a ruling family. Reforms in 1990 established a multiparty democracy within a constitutional monarchy. A Maoist insurgency broke out in 1996 and the decade-long conflict between the insurgents and the culminated in a peace accord (2005) and the promulgation of an interim constitution in 2007. The regime led to the abolition of the monarchy. The Interim Constitution, 2007 declared Nepal as a Federal Democratic Republic. The constitution for a federal Nepal was effective on 28 May 2008.

The country has great diversity. Its climatic zones range from tropical and subtropical zones through the temperate zone to sub-arctic and arctic climatic zones. Nepal has a great variety of birds, animals, and plants. The country is inhabited by people of diverse social, cultural, and ethnic backgrounds. The 2011 census recorded 126 ethnic groups and 123 languages, of which more than a dozen are in active use by more than one hundred thousand people (CBS 2011a).

Religion has an integral position in Nepalese life and society. In the early 1990s, Nepal was the only constitutionally declared Hindu state in the world despite a great deal of intermingling of Hindu and Buddhist beliefs. The 2001 census recorded 80.6% and 10.7% Buddhists with the remainder being Muslims, Kirats, Christians and Jains. The Interim Constitution declared Nepal a secular state.

3.2 Socioeconomic Indicators - Population Density Across Regions and Districts

The 2011 census recorded a population of 26.5 million people. The districts along the southern border and Kaski, Lalitpur, Kavre Palanchok, and Kathmandu have the highest population densities (see Figure 2.1). Appendix A gives the population densities by region and district.

3.2.1 Education – school population

Age Education in Nepal has significant improved in the past few decades. The pre-primary school level consists of early childhood development (ECD) classes for 3-year-olds and pre-primary classes (PPCs) for 4-year-olds. ECDs and PPC classes are provided at school-based ECD centers, community-based ECD centers and privately managed pre-primary classes. About 22% of 4-year-olds are out-of-school (Table 2.1) with no significant difference between girls and boys.

Table 2.1: Schooling status of 4-year-old children in Nepal

Category	Girls	Boys	Total
Projected number of 4-year-olds	272,440	286,031	558,471
Total 4-year-old children enrolled in ECD/PPE	210,592	223,480	434,072
Total 4-year-old out-of-school children	61,848	62,551	124,399
% of 4-year-old children who are out-of-school	23%	22%	22%

Source: Projected population as per DoE (2014)

Figure 2.1: Population densities of Nepal's districts

According to the 2011 census, Nepal had 5.37 million children in primary and lower secondary age group (Table 2.2) with 51.1 percent boys and 48.9 percent girls. 3.2 million children are in the primary age group and 2.16 million in the lower secondary age group. There are more boys than girls in these age groups.

Table 2.2: Population of children in primary and lower secondary age groups

Age	Male		Female		Total	
	Number	%	Number	%	Number	%
Primary	1,635,176	51.0%	1,569,683	49.0%	3,204,859	100%
Lower secondary	1,111,791	51.2%	1,057,613	48.8%	2,169,404	100%
Total	2,746,967	51.1%	2,627,296	48.9%	5,374,263	100%

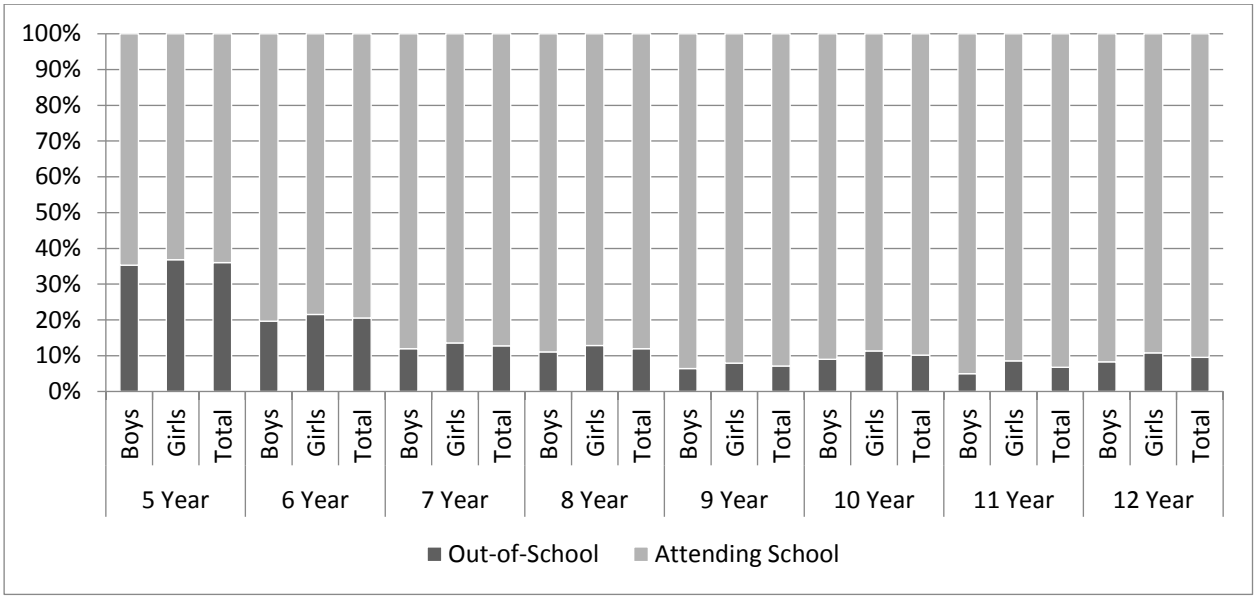
Source: CBS 2011a

Gender

Women are more at risk of receiving inadequate education than men. Dalit rural women are among the most disadvantaged women in Nepal. According to the 2011 national

census, only 12% of Dalit women are literate (CBS 2011a). Dalit girls are especially disadvantaged and suffer from the malnutrition, infant mortality and lack of education. Figure 2.2 shows the proportion of children attending school to those who do not.

Figure 2.2: Percentage of children not attending schools by gender and age group (2011)



Source: Unicef Nepal 2015

The 2011 Census states that girls and women constitute 51.5% of the total population. However, the proportion of the female population in primary and lower secondary age groups is only 48.8%. Children not attending schools in primary and lower secondary age groups are 47.6% boys and 52.4% girls. There are more out-of-school girls than boys regardless of students' age (Figure 2.2). And gender disparity is not just about equality in access or attendance, it is also about girls' and boys' experiences while in a school.

Geographical location

In Nepal, mountain areas have the highest proportion (24.3%) of 4-year-old out-of-school children (Table 2.3). The Terai belt has the highest number of out of school 4-year-olds. The lowest proportion and number of out-of-school 4-year-olds is in the Kathmandu Valley. About 22.3% of all 4-year-olds are out-of-school.

Table 2.3: Enrolment status of 4-year-olds by geographic region

Eco belts	4-year age group population			4-year-old children enrolled in ECD/PPCs			Number and % of 4-year-old children out-of-school			
	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total	%
Mountain	21,220	21,549	42,769	16,064	16,324	32,388	5,156	5,225	10,381	24.3 %
Hill	89,779	92,877	182,656	70,468	73,137	143,605	19,311	19,740	39,051	21.4 %

Kathmandu Valley	17,734	20,410	38,144	15,121	17,847	32,968	2,613	2,563	5,176	13.6 %
Terai	143,707	151,195	294,902	108,939	116,172	225,111	34,768	35,023	69,791	23.7 %
Total	272,440	286,031	558,471	210,592	223,480	434,072	61,848	62,551	124,399	22.3 %

Note: Projected population as per DoE (2014)

The Terai has the highest proportion of 5-12-year-olds not attending school (Table 2.4). These children account for 68.5% of all such children not attending school.

Table 2.4: Distribution of children not attending schools across eco belts

Eco Belt	5-9-year-olds	10-12-year-olds	Total (primary and lower secondary)
Hill	25.8%	15.1%	23.1%
Mountain	7.2%	3.9%	6.4%
Terai	65.1%	78.6%	68.5%
Kathmandu Valley	1.9%	2.4%	2.0%
Total	100.0%	100.0%	100%

Source: CBS 2011a

Disability

The 2011 census recorded children with special needs (CwSN) only account for 0.7% and 0.8% of the students in age group 3-4 (Tables 2.5 and 2.6) (CBS 2011a). However, there is reason to believe these statistics greatly underestimate the true population of children with disabilities in Nepal. Also, note that only 15% of the 2011 census data collected through the Nepal Living Standard Survey (NLSS) on pre-primary age groups was analyzed for disability occurrence.

It is estimated that 15% of the world's population live with disability (WHO and World Bank 2011). Nepal's latest census reported only 1.94% of people having disabilities (CBS 2011a). However, Handicap International 2015) characterized the government's classification of disability as very restrictive compared to internationally accepted definitions. The Handicap International report used the World Health Organization's estimate of 5.8% of disability prevalence among children from 0 to 14 of age (WHO 2011). This would translate to a figure of between 250,000 and 735,000 children with disabilities in Nepal. It notes that many mild disabilities are hardly identified in Nepal including dyslexia, dyspraxia[6], and attention deficit hyperactivity disorder. The report further notes that there are 650,000 children in primary school who need glasses, and at least 65,000 of those children cannot access them.

[6] A brain-based condition that makes it hard to plan and coordinate physical movement.

According to the classification used in the 2011 census (CBS 2011a), the most common disability is physical disability (37.0% and 39.4% of 3 and 4-year-olds respectively). Children who are blind or have low vision accounted for the second highest group (22.0% and 20.6% of 3 and 4-year-olds respectively) among children with disabilities.

Table 2.6 shows disability among students by age groups with disability incidence increasing with age.

Table 2.5: Proportion of children with special needs (CwSN) in pre-primary age groups

Category	3-year-olds	4-year-olds
Not CwSN	97.5%	97.5%
Not stated	1.8%	1.7%
CwSN	0.7%	0.8%
Total	100%	100%
Type of disability:		
Physically disabled	37.0%	39.4%
Blind/low vision	22.0%	20.6%
Deaf/hard of hearing	7.5%	6.8%
Deaf-blind	1.3%	1.3%
Speech problem	15.1%	14.5%
Mentally disabled	1.4%	2.9%
Intellectually disabled	3.0%	3.5%
Multiple disability	12.7%	10.9%
Total	100%	100%

Source: Census 2011. Note that only 15% of 2011 raw census data was analyzed)

Table 2.6: Proportion of CwSN in primary and lower secondary age groups

Age group (in years)	5	6	7	8	9	10	11	12	Total
Not CwSN	97.5%	97.5%	97.5%	97.4%	97.4%	97.3%	97.3%	97.3%	97.4%
Not Stated	1.7%	1.6%	1.5%	1.6%	1.4%	1.5%	1.5%	1.4%	1.5%
CwSN	0.8%	0.9%	1.0%	1.1%	1.2%	1.2%	1.2%	1.3%	1.1%
Total	100%	100%	100%	100%	100%	100.0%	100.0%	100.0%	100.0 %

Source: Census, 2011 (analysis of 15% of data)

Out of school children

The 2011 census reported 0.77 million children not attending school of whom 0.57 million should have been in primary school and 0.19 million in lower secondary school (Table 2.7). Slightly more primary school age girls were not attending school while the difference was larger for lower secondary age children.

Table 2.7: Children not attending schools (2011)

Dimension	Boys	%	Girls	%	Total
Dimension 2: Primary School Age	280,366	48.8%	294,081	51.2%	574,447
Dimension 3: Lower Secondary Age	85,906	43.9%	109,935	56.1%	195,841
Total	366,272	47.6%	404,016	52.4%	770,288

Source: Census 2011 data from Nepal's Study within the Global Initiative on out of School Children[7]

Caste

The caste system still plays a significant role in Nepalese education and life. Gender differences are very pronounced among children across social groups. Although the total population of boys is higher than girls across almost all caste groups, there are more out of school girls than boys across almost all caste groups (Table 2.8).

Table 2.8: Caste, gender and population-wise proportion of children not attending school (5-12 years)[8]

Caste	% boys to total population	% OOSC boys to total OOSC population	% girls to total population	% OOSC girls to total OOSC population
Dom	52.5%	47.7%	47.5%	52.3%
Musahar	51.2%	47.9%	48.8%	52.1%
Dolpo	49.6%	44.6%	50.4%	55.4%
Natuwa	51.5%	48.7%	48.5%	51.3%
Dhunia	51.0%	46.4%	49.0%	53.6%
Halkhor	53.5%	50.7%	46.5%	49.3%
Bin	50.8%	45.5%	49.2%	54.5%
Nuniya	52.3%	45.8%	47.7%	54.2%
Raute	49.0%	41.1%	51.0%	58.9%
Dhankar/Kharikar	52.1%	50.4%	47.9%	49.6%
Mallaha	51.1%	45.0%	48.9%	55.0%
Musalman	51.5%	47.4%	48.5%	52.6%
Kori	52.3%	47.3%	47.7%	52.7%
Dusadh/Pasawan/Pasi	51.0%	46.5%	49.0%	53.5%
Khatwe	50.4%	42.7%	49.6%	57.3%
Chamar/Harijan/Ram	51.3%	46.5%	48.7%	53.5%
Tatma/Tatwa	50.9%	44.9%	49.1%	55.1%
Pattharkatta/Kushwadiya	53.7%	54.4%	46.3%	45.6%

[7] Unicef Nepal Country Office Final Report 2015

[8] The final report of Nepal's Study within the Global Initiative on Out-of-School Children (Unicef Nepal 2015) did not include statistics on ethnicity.

Source: Census 2011 *OOSC = out-of-school children*

Achievement of Millennium Development Goals

Nepal has made significant progress in achieving the Millennium Development Goals (MDGs) (NPC 2013). Here is how the country performed in each of the eight goals.

1. Eradicate extreme poverty and hunger

The United Nations seeks to reduce by half the population living on less than one dollar a day. Nepal has made significant progress in meeting MDG 1. The rate dropped from 33.5% in 1990 to 19.7% in 2010, and then fell again to 16.4% in 2013. With a rate of change of about one percent per year, the 17% target was achieved ahead of schedule.

The annual rate of decline in Nepal's poverty level went from 1.5 percent in 1996–2004 to 2.5 percent in 2004–2011 (World Bank 2013). The declining trend continued even during the ten-year armed conflict (1996–2006). However, disparities persist with more poverty in rural areas, where over 80 percent of the population lives, being much higher than in urban areas.

On reducing hunger, Nepal has met the 2015 target of reducing the prevalence of underweight children aged 6–59 months to 29 percent as only 28.8 percent of this age group are underweight. For the target of reducing the population living on below minimum dietary consumption, Nepal has reduced the proportion to 15.7 percent, well below the MDG target of 25%.

2. Universal primary education

Nepal has made excellent progress in primary education. The net enrolment rate (NER) at the primary level has increased from just 64 percent of all age appropriate children in 1990 to 95.3 percent in 2013. This progress has been supported by the increased enrolment in the bottom consumption quintile — from 51% in 2004 to 76.2% in 2011, an increase of almost 50% in just seven years.

The schooling survival rate has also increased. An important contributing factor has been government investment in early childhood development (ECD) and pre-primary education (PPE). The number of students enrolled in Grade 1 with ECD/PPE experience increased from 36.2 percent in 2008 (DoE 2008) to 55.6 percent in 2013 (MoE 2012-13). The transition rate of students from primary to lower secondary increased from 3.9 percent in 2007 to 87.3 percent in 2011.

3. Gender equality and empowerment of women

The 2015 target ratio of girls to boys in primary education has been achieved. The ratio for gross enrolment is 1.04 and for net enrolment is 1.01. Of total enrolment, girls represent 50.5% at primary and 50.9% at lower secondary level. However, disparities persist at higher levels and by caste/ethnicity and geographical location. The gross

enrolment ratio for Dalits (1.03) is slightly lower than the national average. The ratio of girls to boys at higher secondary is 0.91 while at tertiary level it is 0.71.

In the workforce, the share of women's wage employment in the non-agricultural sector has more than doubled, from 19.9 percent in 2009 to 44.8 percent in 2011. Women's employment in the service sector (particularly education) increased significantly between 2005 and 2013. The proportion of female teachers at the primary and secondary levels is gradually increasing. Although women are still mostly employed in traditional sectors, their participation in non-traditional sectors such as the armed forces and overseas employment has increased rapidly in recent years. In 2006/07, women's share of the total official labor force working abroad was only 0.19 percent. By July 2012, this figure had increased to 5.96 percent.

One important indicator of women's empowerment is their participation in the political domain. The Interim Constitution, 2007 requires political parties to ensure that women constitute at least one-third of the total number of representatives in parliament. The Constituent Assembly (2008–2012) comprised 32.8 percent women. The share of women in government and semi-government employment has also increased with women now making up about 15 percent of this workforce.

However, many barriers remain to gender equality and women's empowerment. In education, there are large regional disparities in female teachers at the secondary (Grades 9 and 10) and tertiary levels. 74.8 percent of the unpaid family labor force is female. The numbers of unreported cases of women's labor migration and of cases of migration to restricted countries have increased. In consequence, the exploitation and abuse of Nepali women in host countries as well as in Nepal by employment agencies and brokers has reportedly grown. There is also a recognized link between foreign employment and the trafficking of women.

4. Reduce child mortality

Childhood mortality has declined as between 1990 and 2011, the infant mortality rate (under 1-year-olds) declined from 108 to 46 and the under-five child mortality rate (U5MR) from 162 to 54 per 1,000 live births. This represented a 57.4 percent and 66.6 percent decline respectively. However, one in twenty-two Nepali children still die before the age of one year and one in nineteen before they turn five. There has been a lesser decline in the neonatal mortality rate (28 days and under). While the neonatal mortality rate dropped from 43 to 33 per 1,000 between 2001 and 2006, it declined no further between 2006 and 2011. The decline of the infant mortality rate also slowed in the later period as its progress was stymied by the stagnant neonatal mortality rate.

Nepal carried out nationwide measles vaccination campaigns in 2005 and 2008, that resulted in a dramatic decrease in the number of measles-like outbreaks (from 127 to 39) and laboratory-confirmed measles cases (from 2,857 to 6). The proportion of one-year-old children immunized against measles through routine immunization more than

doubled in the last two decades from 42 percent in 1990 to 88 percent in 2011, and was therefore on track to meet the 2015 target of more than 90%.

5. Improve maternal health

The 2015 MDG maternal health target is to reduce the maternal mortality ratio by three-quarters. After a drastic decline in the MMR from 850 maternal deaths per 100,000 live births in 1990 to just 281 in 2006 (MoHP 2006), Nepal was well on track to meet the target. In fact, according to the maternal mortality and morbidity study found the MMR in eight districts to be 229 per 100,000 live births, just slightly above the 2015 target of 213 (Suvedi et al 2009). This progress prompted the government to lower its MMR target to 134.

The proportion of women who deliver with the help of a skilled birth attendant (SBA) increased from 7% in 1990 to 36% in 2011. In mid-2013, it reached 50%, making it likely Nepal that the target of 60% would be achieved by 2015. Although Nepal has likely achieved both its MMR and attended-birth goals, there are disparities between rural and urban settings, across ecological and development regions, and among social and age groups.

6. Combat HIV/AIDS, malaria, and other diseases

In 2011, there were approximately 55,626 adults and children living with the human immunodeficiency virus (HIV) in Nepal. The overall HIV prevalence among adults aged 15-49 years was 0.3%, a decrease from the 2007 estimate. The MDG for HIV prevalence among adults aged 15-49 years was achieved in 2011. For the first time, the National Centre for AIDS and STD Control (NCASC) rigorously calculated the current national HIV prevalence among men and women aged 15-24 years and then retrospectively calculated the rate in 2006 to serve as a baseline. The drop from 0.15 to 0.12 percent signaled achievement of the goal. To achieve the new target set by NCASC for 2016 (a 0.06 prevalence rate among 15-24-year-olds) the rate of decline will need to be accelerated.

Malaria is almost exclusively confined within 13 high-risk and 18 moderate risk districts. Ten districts have no risk at all. In 201a/12, the overall national clinical malaria incidence and annual parasite incidence (API) rates per 1,000 people were 3.28 and 0.08 respectively.

About 45 percent of the total population is infected with tuberculosis with 60 percent of these cases being adults. Every year, 40,000 people develop active TB. Half of these cases are infectious. The prevalence and death rates associated with TB per 100,000 people declined markedly between 1990 and 2011, from 460 to 238 and 43 to 21 respectively. The proportion of TB cases detected increased slightly, from 70 in 2001 to 73 in 2011. The proportion of TB cases cured under short course direct observation treatments (DOTS) was 90 percent in 2011. Even if the number of multi-drug resistant cases is constant, Nepal is on track to achieve the MDG of 91 percent.

7. Ensure environmental sustainability

Nepal has made significant progress in reducing the rate of loss of biodiversity. Forests covered 39.6 percent of Nepal's total land area when it was surveyed in 1994, 29% of which was forest land and 10.6% shrub land. Under Nepal's community forestry program, about 1.6 million hectares of the total 5.8 million ha of forest has been handed over to 17,808 forest users' groups, benefiting over 2.19 million people, or over 40% of Nepal's total households.

Regarding water consumption, the national average for the proportion of households using safe drinking water sources was 85% in 2012/13, surpassing the 2015 MDG target of 73%. However, access to piped water, considered the safest source, has not increased in the last seven years. Overall, nearly 44.5% of households have access to piped water, and almost half of these households have private connections. The remaining 55.5% depend on covered wells (38.5%), open wells (7%), and other unreliable sources like river and spring water (10%). But almost all households (99%) are located within 30 minutes of a water source and access is uniform during both the rainy and dry seasons. Disparities across geographical regions and consumption quintiles are minimal.

Sanitation is a key issue in Nepal. Between 2000 and 2011, the national sanitation coverage more than doubled, from 30% to 62%, and surpassed the 2015 MDG target of 53 percent. However, sanitation is not adequate in schools. Only 80% of community schools have toilets, and of them, only 65% have separate facilities for girls. The inadequate levels of sanitation and hygiene and supply of water in many schools cause children, especially adolescent girls, to leave school during the day and miss crucial classes. The uneven progress in sanitation has also had negative effects on the incidence of diarrheal diseases, child mortality, and the proportion of girls in secondary and tertiary education.

8. Global partnership for development

In Nepal, total foreign aid use increased from NPR 36 billion in 2008-2009 to NPR 58 billion in 2010-2011, and from 3.66% to 4.24% of GDP in the same period. The share of foreign aid in the total government expenditure rose from 16.5% to 19.6%, and its share in development expenditure (classified as capital expenditure in the economic surveys released by the Ministry of Finance [MoF]) increased from 49.73% to 53.80%.

The volatility of the changes in aid on budget over the three years renders any inter-temporal analysis difficult. However, since the last survey, both the share of aid in the total budget and the share of loans in aid have increased. These increases are both problematic in the long run since they increase the burden of interest and dependency on aid. The increases in the proportion of aid in project support and the sector-wise approach are positive developments because they mean that accountability for aid and the involvement of the state in deciding the fate of aid have both risen. This is likely to increase the

government's independence in formulating development policy and boost coordination with donors.

Over the last decade, the share of loans in capital expenditure has declined steadily from 61% to 51%. In the last year, however, there was a slight, anomalous increase in the share of loans in capital expenditure, from 45.5% in 2009-2010 to 50.7% in 2010-2011. Notwithstanding a marginal increase in the past few years, the spectacular fall in the debt-to-GDP ratio, from 60% in 2002-2003 to 30% in 2011/12, is an extremely welcome development. This decline is largely attributable to the steady decline in outstanding foreign debt-to GDP ratio, which fell from over 45% to less than 20% in the same period. This is a positive development for two key reasons: (1) the cost of servicing the loan has declined in absolute terms (the debt service as a percentage of recurrent expenditure has more than halved over the last decade), and (2) the confidence of the creditors has risen, leading to lower interest rates and greater bargaining power of the government.

Other social development indicators

Adult literacy rate

The adult literacy rate refers to the percentage of the population aged 15 years and above who can, with understanding, read and write a short, simple statement on their everyday life. The overall index of adult literacy for Nepal is 0.5957. The index is highest among Terai Brahmans/Chhetris (0.80050), followed by Hill Brahmans (0.7846) and Newars (0.7649). It is lowest among Terai Dalits (0.2312). There are five groups whose index scores are below the national average: Muslims, other Terai castes, hill Dalits, Terai Janajatis, and Terai Dalits (Cemjong 2014).

Urbanization rate

The urbanization rate is the projected average rate of change of the size of the urban population over time. The percentage of people living in an urban setting is an important context indicator because demand for education is higher in urban areas than rural ones. It is also considerably easier to deliver education services to people living in urban areas. Nepal however, has one of the lowest urbanization rates in the World with only 17 percent (3.86 million) of the population living in urban areas. Nonetheless, Nepal is urbanizing rapidly. With a population of 2.5 million people, the Kathmandu Valley is growing at 4 percent annually, making it one of the fastest growing metropolitan areas in South Asia. This rapid expansion has also been experienced by Pokhara an annual population growth rates of as high as 5 percent (World Bank 2013).

Fast urbanization can have adverse repercussions in terms of the quality of life. The annual growth rate in sanitation coverage was 1% in urban areas and 2.7 percent in rural areas. Rapid population growth and municipal governments' inattention to the sanitation needs of informal settlements such as slums and squatter areas partly accounts for slow

growth in sanitation coverage in urban areas. There is little national-level data on slums and squatter settlements, so the MDG Progress Report 2010 worked with data from Kathmandu Valley as an illustrative example. Over the last decade, the number of squatters has increased from 11,850 in 2000 to 50,000 in 2009. The massive increase in the valley's population from 500,000 in 1970 to more than 3 million in 2010 is characterized by the large-scale migration of the landless to the three major historic cities in the basin–Kathmandu and Lalitpur.

Migration (external & internal mobility)

Between 2011 and 2015, net migration in Nepal was 372,369 (World Bank 2015). In other words, after subtracting the number of individuals who leave Nepal (emigrants) from the number of individuals who come into Nepal (immigrants), emigrants outweigh those immigrants overall by around 4 million.

Net migration is an important contextual factor to look at because roughly 22 percent of Nepal's GDP is comprised of emigrant remittances. Data from 2014 shows that roughly 5.5 billion dollars was sent to Nepal in form of remittances. This source of national income has been identified as a potential key means to reduce poverty and fund capital investment, as well as enable citizens to achieve a higher standard of living.

Nepal Multi-Dimensional Social Inclusion Index (NSII)

The Nepal Multi-Dimensional Social Inclusion Index is a composite index of six dimensions of social inclusion. The NSII is an average of the following six indices; Social Dimension Index, Economic Dimension Index, Political Dimension Index, Cultural Dimension Index, Gender Dimension Index and Social Cohesion Index. The NSII shows the level of social inclusion of caste and ethnic groups in these six major dimensions of inclusion. The major take away from the NSII is that hill Brahmans, Madhesi Brahmans/Chhetris, Newars and Hill Chhetris show high levels while Madhesi and Hill Dalits show low levels of social inclusion (CDSA 2014).

The distribution of values across the 97 caste and ethnic groups shows that there is a wide variation in the levels of social inclusion experienced by the different groups with index values ranging from 0.327 (Musahar) to 0.752 (Kayastha). The caste and ethnic groups with the top ten index values are Kayasthas, hill Brahmans, Thakalis, Thakuris, Newars, Rajputs, Brahmans-Terai, Chhetris, Sanyassi and Marwadis. All except one of the top ten groups (Marwadis) are Hill Brahman/Chhetris, hill Janajatis and Madhesi Brahman/Chhetris.

Hill Brahmans and Newars come out on top of the Social Dimension Index, while Terai Dalits and Muslims are at the bottom. Terai Brahman/Chhetris and Newars are on top of the Economic Dimensions Index while Terai and Hill Dalits are at the bottom. Madhesi and Hill Brahmans/Chhetri are at the top of the Political Inclusion Index, while Terai and Hill

Dalits are at the bottom. Hill Chhetris and Hill Brahmans have the highest scores on the Cultural Dimensions Index values with mountain/hill Janajatis and Newar at the bottom.

The Gender Inclusion Index values are generally lower than the values of other indices except for the Political Inclusion Index. Newari women and mountain/hill Janajati women enjoy the highest levels of gender inclusion. The lowest levels of gender inclusion are experienced by Terai Dalit women and women from other Terai castes. The index also shows high levels of social cohesion (or non-discrimination) enjoyed by hill Brahmans and Newars but low levels for Terai and hill Dalits.

Disaster risk reduction

On 25 April 2015 Nepal was struck by a massive magnitude 7.6 earthquake. This earthquake left a trail of destruction, with schools particularly badly affected. The Post Disaster Needs Assessment (PDNA) recorded more than 27,000 schools that were destroyed, and more than 26,000 classrooms being partially destroyed. This earthquake and the many aftershocks have had a huge impact on the economy with the cost to the education sector recovery estimated to be at almost $415 million dollars (NPC 2015). Nepal as a disaster-prone country needs disaster risk reduction as a major building block in its sustainable development strategy.

Disaster risk reduction (DRR) aims to reduce the damage caused by natural hazards like floods, earthquakes, cyclones and droughts. Disaster risk reduction entails integrating efforts in disaster management, disaster mitigation and disaster preparedness, and sustainable development. Safety studies carried out in Nepal estimate that approximately 89 percent of school buildings are made of load-bearing masonry. However, such building materials are particularly vulnerable to earthquakes in the absence of earthquake resistant techniques. A 2011 assessment estimated that because of Nepal's seismic risk, more than 49,000 schools needed to be retrofitted and another 12,000 schools in need of demolition and reconstruction (NSET 2012).

In response to these vulnerabilities, the government of Nepal worked with donors, international financial institutions, and development and humanitarian agencies to form the Nepal Risk Reduction Consortium (NRRC) in 2011. It is a collaborative approach to disaster risk management. It is aimed to support the government to better coordinate disaster management in Nepal both for reducing risk, as well as responding better to emergencies such as earthquakes. The five priorities of the consortium are school and hospital safely, emergency preparedness and response, flood risk management, and finally policy and institutional strengthening (NRRC 2015). School and hospital safety is about building resilient structures in schools and hospitals through retrofitting, training, awareness-raising and other measures to improve the safety of building structures and their ability to withstand major disasters.

3.3 In Summary

This chapter has shown that progress in MDGs and other social indicators has not ended caste, ethnicity and gender-based disparities that weaken social, economic, political, and cultural inclusion. It is also important to note that in addition, Nepal has been under a severe fuel and commodities blockade since September 2015. The blockade is already threatening to be a humanitarian disaster that significantly disrupts efforts to rebuild after the earthquakes. Considering this, having an equally collaborative approach to *political* disaster risk management is as urgent as natural disaster risk reduction. Nepal is still healing from the ten-year armed conflict. Therefore, reaching a national consensus that secures national unity and addresses local demands for voice, justice, and inclusion will contribute to the needed threshold of political stability to achieve the post-2015 Sustainable Development Goals. Depending on the magnitude of the losses caused by the blockade, SSDP prioritization discussions should consider the preparation of an emergency plan with a disaster risk reduction component that encompasses nurturing social cohesion, inclusiveness, civic engagement, and peace-building, in addition to building back better structures that withstand natural disasters.

4. MACROECONOMIC INDICATORS AND FIDUCIARY ASSESSMENT

4.1 Introduction

The main purpose of this chapter is to identify macroeconomic and education sector financing issues during the School Sector Reform Program (SSRP) period (2009-16) to provide areas for improvement in the financing of education during the SSDP period (2016-23). This chapter covers the overall education financing situation as well as giving a detailed analysis of SSRP expenditure. Most of the information is taken from a recent review of budget expenditure and an economic analysis of SSRP (Bajracharya and Koirala 2015).

4.2 Macroeconomic and Education Financing Issues

4.2.1 GDP growth

Nepal, with a per capita income of US$ 762 in 2014/15, is one of the least developed countries in the world. Agriculture, which is the main sector of the economy, employs over 70 percent of the population, but only accounts for 34 percent of gross domestic product (GDP). Tourism is gaining prominence as an important source of revenue.

The growth in Nepal's GDP has ranged between 3.1 and 5.1 percent in the last five years (Table 3.1). The annual growth rate in Nepal in the last 25 years has been uneven ranging from as high as 8.6 percent in 1994 to as low as 0.16 percent in 2002. The Ministry of Finance (Paudel 2015) reckons that the GDP growth rate in 2014/15 was just 3%, largely because of the earthquakes. It goes on to predict that the trade blockade will cause the growth rate to shrink to 2% in 2015/16, and as of November 2015, it was thought that it could even be negative if the blockade continued.

Table 3.1: Nepal's GDP growth, 2019/10 to 2015/16

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16 estimated
1. GDP per capita ($ current)		714	702	708	717	762	
2. GDP growth (% basic prices)		3.8	4.6	3.8	5.1	3.0	2.0
a. Agriculture		4.5	4.6	1.1	2.9	1.9	
b. Industry		4.3	3.0	2.7	6.2	2.6	
c. Services		3.4	5.0	5.7	6.3	3.9	
3. GDP (NPR billion, producer's current prices)		1366.9	1527.3	1692.6	1941.6	2124.6	
4. Exchange rate (NPR/$, average)		72.3	81.0	88.0	98.2	98.7	
5. Population (million)		26.5	26.9	27.3	27.6	28.0	

Source: MoF annual economic surveys and Asian Development Bank (ADB) economic outlooks

4.2.2 Government expenditure

It is important to break down government expenditure into recurrent expenditure (operations, wages and salaries, purchases of goods and services, and current grants and subsidies) and capital expenditure (the creation of fixed assets and acquisition of land, buildings and other assets). According to MoF (2015), recurrent expenditure has on average been 70% of total expenditure in the previous five years and had increased annually by an average of more than 10 percent. Since revenue is not keeping pace with the increasing expenditure, the deficit is mounting. With the gloomy economic forecast for 2015/16 and the following year, the deficit is expected to increase further (Table 3.2).

Table 3.2: Nepal government finances, 2008/09 to 2015/16

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16 estimate
Revenue and grants (% of GDP)		18.3	18.0	18.9	19.7	20.5	24.2	
Expenditure (% of GDP)		21.8	21.6	22.2	21.2	22.5	29.1	
Overall fiscal surplus (deficit) (% of GDP)		(3.5)	(3.6)	(3.4)	(1.5)	(2.0)	(4.9)	
Absolute amount (government expenditure) NPR billion		227.1	257.5	294.9	302.1	435.1	522.6	819.5
Revenue NPR billion		178.0	198.4	244.4	296.0	368.7	393.5	475.0
Annual change in revenues %	33.3	27.2	11.4	23.2	21.1	20.5	9.4	
Annual change in government expenditures %	36.1	18.2	13.7	14.8	5.7	21.1	13.7	
Annual change in recurrent expenditure %	39.7	18.2	12.6	15.8	1.6	22.7	5.2	
Annual change in capital expenditure %	36.6	23.5	16.8	8.6	6.2	22.1	31.4	

Source: MoF economic surveys and ADB economic outlooks

4.2.3 Government education expenditure

Although the educational budget has increased year on year, its share of government expenditure has decreased from 20.3% in 2009/10 to 12% in 2015/16 (estimated), which is lower than the targeted 20%. Moreover, the average annual increase in government education expenditure has been only 2.8% in real terms and 11.9% in current prices over the last seven years (Table 3.3). Government education expenditure as a share of GDP has hovered around 4% in the last seven years.

Table 3.3: Government education expenditure, Nepal, (2009/10 to 2015/16, %)

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16 estimated	Average annual growth %
1. Education expenditure at current prices (NPR billion)	46.2	55.0	62.1	62.5	78.0	78.19	98.64	11.9
a. Share of GDP %	3.87	4.02	4.06	3.69	4.02	3.68	4.26	

b. Share of government expenditure	20.3	21.4	21.0	20.7	17.9	15.0	12.0	
2. Consumer price index (2008/09 base)	110	120	130	143	156	168	181	8.9
3. Education expenditure at constant prices	42.16	45.77	47.70	43.72	50.01	46.63	54.47	2.8
4. Annual increase % based on constant prices	-6.3	8.6	4.2	-8.4	14.4	-6.8	16.8	

1. Distribution by sub-sector

A decreasing share of education expenditure has gone on basic education and an increasing share on secondary education in recent years (Table 3.4). However, this data may be misleading because the salaries of teachers for Grades 6-8, which is for basic education, is counted as secondary education expenditure. Furthermore, some increase in secondary education expenditure are due to the recent introduction of government grants for higher secondary level community schools to finance the salaries of two teachers in all community schools. If these adjustments are considered, the share of secondary education in education sector expenditure is estimated to be about 15%. MoE does not, however, have a separate program budget head for secondary education as the Joint Financing Arrangement (JFA) with development partners have not required the presentation of data by levels of education. Lower secondary and secondary teachers' salaries accounted for 18% of SSRP pooled fund in 2015/16.

While basic and secondary education programs saw a slight decline in the budgetary allocation against SSRP estimates, other program components significant increased even if their share in the total estimated costs and budget allocations are relatively small. Though the budgetary allocation for basic and secondary education is lower than that envisaged in the SSRP document, increases in other program components, except for literacy and lifelong learning, will also support basic and secondary education. So, the reallocation of funds to other components does not necessarily signify reduced efforts for basic and secondary education.

Table 3.4: Proportion of sub-sector-wise education budgets (2009/10 to 2015/16, %)

Education sub-sector	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
1. ECED		-	-	-	-	1.59	1.47
2. Basic education (Grades 1-8)		63.99	68.86	64.53	60.3	54.41	54.09
3. Secondary education (Grades 9-12)		16.94	16.69	17.87	18.95	21.08	20.99
4. TVET		3.41	3.62	3.34	3.61	4.68	4.00
5. Tertiary Education		13.79	9.02	9.32	9.09	7.69	8.19

Education sub-sector	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
6. Education management and administration		1.82	1.77	2.54	2.48	2.80	2.29
7. Literacy and lifelong learning		-	-	-	-	1.45	0.40
8. Teacher pensions and retirement facilities		-	-	-	-	5.89	8.47
9. Other		0.05	0.04	2.4	5.56	0.41	0.10
Total		100	100	100	100	100	100

Source: Based on ASIP 2015/16

Note: The sub-sector allocation of government education expenditure based on MoF 2014 figures compiled by the National Campaign for Education show slightly different estimates.

2. Sources of financing

Education expenditure is financed from internal government sources and funds from development partners. While education expenditure at current prices has grown by 11.9% from 2009/10 to 2015/16, funding from development partners has remained around the same level (Table 3.5). The government funded 66% of education expenditure in 2014/15.

Table 3.5: Sources of financing government education expenditure

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16 estimate	Growth %
1. Education expenditure, current prices (NPR billion)	46.2	55.0	62.1	62.5	78.0	78.19	98.64	11.9
2. Government	34.7	39.4	49.3	51.1	55.9	65.7	74.6	
3. Development partners	11.5	8.6	12.8	11.4	13.1			
• Grants	8.7	8.4	12.2	11.4	12.8			
• Loans	2.8	0.2	0.6	0.0	0.3			

3. Scope of SSRP

SSRP covered access, quality, and management issues at all levels of school education, and literacy and lifelong learning activities. The target was to allocate 85% of the education budget for the program. SSRP covers programs funded with pooled development partner funds, discrete projects supported by non-pooled development partners and activities funded by the government. The Joint Financing Arrangement (JFA) between the government and the pooled development partners has 13 budget heads for reporting progress against. These heads define eligible expenditure programs (EEP) for pooled donor funding. The JFA did not restrict to implementing discrete projects and some such projects funded by development partners were added after the signing of the SSRP JFA.

Of the 13 budget heads, pooled development partner funds directly supported the SSRP-central level and SSRP district level budget heads, which accounted for 27% of the pooled funds SSRP budget in 2015/16. The share of pooled SSRP in the education budget was only 82% on average which is less than the targeted SSRP share of 85%. The other SSRP program budget heads includes regular expenditure of central and field level agencies, and other non-pooled budget programs such as Higher Secondary Education (Teachers Grants), Second Higher Secondary Education Project (Component 3 and PPTS), the EFA-Early Child Development Program, and the Early Grade Reading Program. The share of school sector that exceeds 85% all budgets related to school sector is included. It is expected that school sector development program adopts the comprehensive definition of the school sector.

4. Sources of financing of SSRP expenditure

The pooled development partners funded between 20% and 24% of expenditure during the original SSRP period (2009/10–2013/14). However, their contributions have declined in the two-year extension period to only 14% and 15% (Table 3.6). This is partly because development partner contributions to financing SSRP were slightly higher in the first three years. Also, the government's foreign aid policy's discouragement of the financing of education through foreign loans also constrained the mobilization of development partner funds.

Table 3.6: Sources of SSRP financing (2009/10 to 2015/16, USD million)

	Original SSRP period					**SSRP extension**			
	2009/10	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**	**5-year total**	**Average annual**
SSRP pooled budget total			721.2	604.47	771.25	826.51	807.84	3731	746
Government			549.7	485.8	601	715.6	689.1	3041.2	608.2
Development partners			171.5	118.7	170.3	110.9	118.7	690.08	138.0
Asian Development Bank (ADB)			40	31.45	20	10	20	121.45	24.29
Development partners share in SSRP %			23.8	19.6	22.1	13.4	14.7	18.5	
ADB share in SSRP %			5.5	5.2	2.6	1.2	2.5	3.3	
ADB share in development partners %			23.3	26.5	11.7	9.0	16.8	17.6	

Source: ASIP. Note: figures are allocations, not actual expenditure or disbursement

*** 2011/12 to 2015/16*

5. Private sector financing

Many parents spend considerable amounts on the education of their children even when they go to government schools. It is estimated that the total expenditure of all Nepali households on education in fiscal year (FY) 2010/11 amounted to NPR 49.1 billion, or 3.6 percent of the GDP (World Bank 2014). The Nepal Living Standard Survey (NLSS) (CBS 2011b) found that households spent 5 percent of their total consumption on education (food expenditure accounts for 62%). Households spent 3.5% of their remittance amounts on education. Note that out-of-pocket education expenditure in real terms decreased in community schools between 2003 and 2010 (Table 3.7). This decline can be partly attributed to the provision of free textbooks and the abolition of school fees.

If both public and private expenditure on education are considered, Nepal's expenditure on education was about 7.6% GDP in 2010/11. However, this figure does not include community contributions. Preliminary findings of education national accounts prepared by MoE National Commission for UNESCO also show similar estimate.

Table 3.7: Average annual out-of-pocket spending on community schooling and college education

Year	Primary	Lower secondary	Secondary	Higher	Tertiary	National
Nominal out-of-pocket expenditure (NPR)						
2003	1,319	2,568	5,047	8,913	11,395	2,509
2010	1,332	2,504	5,386	10,398	13,914	3,329
Real out-of-pocket expenditure (at 2003 NPR)						
2003	1,319	2,568	5,047	8,913	11,395	2,509
2010	740	1,392	2,993	5,777	7,730	1,394

Source: Nepal Report on Human Development 2013, SASED, South Asia. The World Bank.

Exchange rate as of February 2016: NPR 108: $1

The share of private schools in terms of the proportion of students and the number of schools increases at higher levels of education (Table 3.8). However, since the pupil–teacher ratio is higher in public schools, the share of private school students is lower. In any case, many families incur significant expenses sending their children to private schools.

Table 3.8: Share of private schools and students of total schools and students

	Share of private schools	Share of private school students
ECD	14.5%	
Primary	15.6%	15.4%

Lower secondary	25.7%	15.9%
Secondary	31.9%	19.1%
Higher secondary	26.3%	29.6%
Tertiary	61.3%	

Source: DoE 2014a

6. Efficiency of the education system

The internal efficiency of the public education system has improved in recent years. Repetition rates have lowered, and survival rates and completion rates have improved (Table 3.9). However, there is still room for big improvements, especially in Grade 1.

Table 3.9: Repetition, survival and completion rates and coefficient of internal efficiency of schooling in Nepal (2008/09 to 2014/15)

Indicators	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Repetition rate								
Grade 1, %	28	18	26.5	22.6	21.3	19.9	17.5	15.2
Grade 5, %	7		6.7	5.7	5.4	5.3	5.3	5.3
Grade 8, %	13	11	6.5	6.6	6	5.7	5.1	4.5
Survival rate by re-constructive cohort method								
Grade 5, %	54	58	77.9	80.6	82.8	84.1	85.4	86.8
Grade 8, %	37	41	62	66	67.5	69.4	72.2	74.6
Completion rate (primary and basic level)								
Primary level (Grade 5), %						75	77.6	79.7
Basic level (G 8), %						60.8	63.8	66.7
Coefficient of internal efficiency								
Basic education	0.46	0.49	0.61	0.65		0.68	0.71	0.73

Source: ASIP 2015/16

External efficiency is related to employment and earnings. The wage rates received by employees are usually positively related to the education level completed (Table 3.10). Compared to 2003, the average annual wage employees receive has increased for all levels except for those who completed tertiary education.

Table 3.10: Average annual real wage by education level for all employed workers (in 2003 NPR)

Education completed	Wage in 2003	Wage in 2010
No education	8,520	12,839
Primary level completed	17,651	24,528
Lower secondary completed	33,681	44,220
Secondary completed	58,981	67,841

Tertiary (bachelors and higher) completed	172,436	99,695
Average for Nepal	24,776	29,282

Source: Nepal Report on Human Development 2013, SASED, South Asia. The World Bank.

7. Absorptive capacity

The comparison of allocated budget and actual expenditure shows that most allocated funds have been spent (except for 2014/15) indicating that the system is efficient. Actual expenditure has been quite close to annual budget allocations between different budget heads as the viring of funds has been 2% or less of total annual allocated funds for most recent years except for FY 2009/10, for which it was about 7% (though Red Book figures indicate otherwise). Virement has taken place for almost all major budget items but more regularly for primary, lower secondary and secondary education and SSRP districts (recurrent). However, this data does not show the real picture as MoE reports the transfer of funds to school accounts as expenditure. This allows MoE to retain the funds allocated for education rather than surrendering them to MoF at the end of the fiscal year. There are problems in the effective use of funds especially at the school level because of the commonplace delays in budget release to schools (note that more than 47% budget are released in the third and final 4-month semester) and many schools require months and even years to complete activities that involve improving physical facilities. These factors provide room for leakages and malpractices. One initiative to reduce leakages has been DoE starting to transfer scholarship funds to the bank accounts of eligible students through DEOs. However, DEOs have faced several difficulties in implementing this scheme.

8. Equity in education financing

To enhance access and improve equity, the government has 16 different types of scholarships in place that target specific population groups such as conflict-affected, disabled, girls, Dalits, and poor and talented students. Many of these scholarships are not as such targeted to students who are weak financially. Thus, many of these benefits are skewed in favor of females who are in the richest consumption quintile (World Bank 2014). The Terai ethnic groups also do not benefit much from these initiatives. Further details on these scholarships are provided in Section 3.3.

The poor sections of society benefit the most from the primary level budget while the richest quintile benefit the most from tertiary education (Table 3.11).

Table 3.11: Share of educational budget by consumption quintiles

	Primary	**Secondary**	**Higher secondary**	**Tertiary**	**Total**
Quintile 1	34.0	16.6	6.0	1.1	27.1
Quintile 2	26.7	22.1	10.1	4.0	23.3
Quintile 3	20.1	23.9	17.9	14.5	20.3

Quintile 4	13.9	23.5	30.2	23.6	17.0
Quintile 5	5.3	14.0	35.8	56.8	12.2

Source: World Bank 2013

There is a lot of variation in student achievements by gender, location, ethnicity, and school in the National Assessment of Student Achievement (NASA) examinations — see results from 2011 in Table 3.12. The variation is qualitatively similar when one looks are the School Leaving Certification examination held after Grade 10. Similar disparity can be seen in net attendance rate (NAR) for lower secondary level and above in terms of poverty, gender, ecological region, and disadvantaged groups (World Bank 2014).

Table 3.12: Disparities in Grade 8 NASA results in 2011 across different groups

Population group/region/ school type	Average student score (%) in Grade 8 NASA		
	Nepali	Mathematics	Social studies
Male	48	45	50
Female	49	41	49
Urban	55	48	52
Rural	46	41	48
Mountain	49	41	48
Hill	50	38	47
Kathmandu Valley	64	55	59
Terai	42	44	48
Brahmin-Chhetri	52	45	52
Janajati	50	41	48
Dalit	45	37	46
Madhesi	48	49	47
Community schools	46	39	46
Private schools	62	63	63
Nepal	49	43	49

Source: Metsamuuronen and Kafle (2013)

9. Comparison of SAARC countries

Nepal's per capita annual income is $762 which is the second lowest in south Asia. However, Nepal's government allocation to education in terms of GDP is higher than that of other SAARC countries except for the Maldives and Afghanistan (see Table 3.13)

Table 3.13: Key economic and educational indicators in SAARC countries

	Nepal	Bangladesh	India	Bhutan	Sri Lanka	Maldives	Afghanistan	Pakistan
Public education expenditure as % of GDP (2015)	4.26	1.9 (2009)	3.9 (2012)	5.6 (2013)	1.7 (2012)	6.2 (2012)	4.6 (2013)	2.5 (2013)

Public education expenditure as % of total government expenditure (2015)	12	14 (2009)	14.2 (2012)	15.6 (2013)	8.8 (2012)	15.3 (2012)	18.5 (2013)	11.6 (2013)
GDP per-capita (current $)	762	1,092	1,596	2,381	3,631	8,484	659	1,334
Adult literacy (%)	59.6	59.7	69.3	52.8 (2005)	91.1	98.4	31.7	56.8
Access to safe water	91.6	86.9	94.1	100	95.6	98.6	55.3	91.4

Source: World Development Indicators (2015)

10. Medium term expenditure framework

The government produces medium term expenditure frameworks (MTEF) for forward planning for three years for the fiscal account to inject resources into prioritized sectors. The latest MTEF is for 2014/15-16/17. In the education sector the MTEF has however not been effective to guide annual planning and the budgeting process because the estimates tend not to be realistic and MoF has not followed MTEF guidelines.

11. Budgeting process

The annual process of preparation of budget allocation requests by MoE to MoF and the National Planning Commission (NPC) and the production of budget estimates by MoF is sub-optimal as indicated by the planned estimates, allocation, release, and expenditure trends. The budget process for MoE has tended to be quite arbitrary with allocations usually being incremental, i.e., based on the previous years' spending and not on targets or needs of the sector. Annual strategic implementation plans (ASIP) and annual workplans and budgets (AWPB) are finalized after the MoF red book is published, which allows for adjusting available funds based on priorities. The weak annual planning and budgeting process has meant that the SSRP budget has not been tightly linked to the program's outputs, targets, and outcomes.

12. Funding modality

Different funding modalities have been used to mobilize development partner support in Nepal. The common modality is the project approach. To harmonize development partner funding and coordinated interventions, the second Basic and Primary Education Project (BPEP 2) used the basket funding approach whereby participating development partners were required to deposit the agreed amounts in one basket and funds were received by the government using the reimbursement method. The Education for All Program and the School Sector Reform Program used a special type of treasury funding approach with development partner funds mobilized as agreed in a JFA. Global Partnership for Education (GPE) support was recently received based on the deliverable linked incentives (DLI) approach while ADB supported the extended period of SSRP using tranche conditions. The sector wide approach (SWAp) adopted under SSRP helped improve donor harmonization and reduced the government transaction costs. The SWAp also provided the flexibility of earmarking some funds to specific program activities by creating separate line items and

having specific key performance indicators. However, development partner transaction costs still appear high.

Based on their past experiences, the government and development partners have shown their commitment to adopt a results-based approach based on DLI to support SSDP. MoE is preparing SSDP with clear expected key results, which will be the basis for mobilizing development partner funds. ADB and the government have agreed to adopt the results based lending approach to finance the first three years of SSDP.

13. Flow of funds

The achievement of results depends largely on the performance of MoE institutions. The DoE is the main implementing agency of SSDP and many key institutions such as the Curriculum Development Centre (CDC), the National Centre for Educational Development (NCED) and the Office of Controller of Examinations (OCE) are outside DoE while the Higher Secondary Education Board (HSEB) is a semi-autonomous institution. SSRP's central budget is managed by DoE, which channels funds to central level agencies. This arrangement is not effective as these institutions report to MoE directly and thus agencies do not own the DoE financed programs. Similarly, a simplified fund flow mechanism needs to be developed and adopted to ensure that funds are disbursed to school level beneficiaries on time.

14. Public private partnerships

No SSRP pooled funds are allocated to the private sector.

15. Education Management Information System

Because of the provision of school grants based on per capita funding, many schools inflate the number of students (as suggested by the generally poor student attendance). To minimize reporting errors, DoE plans to introduce a student tracking system with unique codes for students. Also, integrated Education Management Information System (EMIS) system which allows tracking of the utilization of school grant funds has been developed.

4.3 SSRP Budget and Expenditure Analysis

4.3.1 SSRP classification

SSRP budget heads: The Joint Financing Arrangement (JFA) identified 13 budget heads under its Eligible Expenditure Program (EEP). These include primary and lower secondary, secondary teacher's salary (higher secondary teacher's salary excluded), non-formal education (recurrent and capital), teacher record office, special education, teacher pensions, capacity development (regular and capital) and SSRP (central and district).

Program line items: SSRP budget heads are grouped into the five categories of teacher salaries, construction, total school grant, program cost and management and

administration for reporting purposes. Financial monitoring reports (FMRs) provide information by these items.

Thematic components: The SSRP was designed by activities which are classified into nine thematic components to prioritize and allocate pooled resources to achieve the SSRP's objectives.

Education sub-sectors: The education sub-sectors envisaged in SSRP are ECD, basic education (Grades 1-8), secondary education (Grades 9-12), TVET, tertiary education, education management and administration, literacy and lifelong learning, and teacher pension and retirement facilities.

The classification of the thematic components overlaps with budget heads. The JFA defined budget heads are mainly for reporting and funding purposes whereas program and plan documents present the budget in terms of thematic components (access, quality, and management by levels). This confusion between the thematic program components and the Eligible Expenditure Program remained among policy making and implementation levels. This is mainly because JFA did not elaborate this issue.

The following sub-section analyses SSRP budget and expenditure by program line items and thematic components. It is not possible to analyses SSRP expenditure by levels of education as SSRP reporting arrangement do not follow the school restructuring reform initiative.

4.3.2 SSRP budget allocation by program line items

There is currently a heavy emphasis upon the inputs for improving quality. For example, priority minimum enabling conditions (PMECs) for improving quality include providing teachers, classrooms, textbooks, sets of reference books for book corners, and separate girls' toilets, with little support for classroom learning processes. The first major program item is teachers' salaries (both for permanent positions, temporary positions [rahat] and provident fund). This item accounted for between 51% in FY 2009/10 to more than 62% in 2012/13. The total school grants are the second major item within which are the earmarked school grants for the costs of textbooks, the construction of physical infrastructure, and other non-salary per capita funding (PCF). Scholarships account for another significant share of the grants. Teachers' salaries and total school grants have accounted for between 80% and more than 90% of actual SSRP pooled expenditure. District level recurrent and capital expenditures together accounted for about 30% of total pooled SSRP expenditures with accounting for 28% in FY 2013/14.

Teachers' salaries

Teachers' salaries and pensions accounted for more than 65% of SSRP's budget including the salaries that come from school grants (42,225 temporary [rahat] positions and PCF non-teaching positions). In the absence of a government policy to rationalize teacher positions based on needs (based on number of students and required subject teachers), it

is not clear what will happen to these temporary positions and teachers deployed in these positions.

Salaries of community school teachers: In five years of SSRP, the beginning salary scale for various classes of teachers increased by between 56% and 67%. In the third year of SSRP (FY 2011/12) alone, there was an increase in the salary scale of between 32% and 42%. That put the average annual increment of 10% to 15% for different classes of the teachers in the SSRP period.

Remuneration for facilitators and motivators: Facilitators are used for program activities for which there are no permanent positions, and for program activities such as community-run ECED centers that change their venues. Facilitators, and motivators in the case of adult literacy programs, are employed for running programs like ECED, school outreach programs, flexible schooling and adult literacy. The remuneration of ECED facilitators varies between the ecological regions it being higher in mountain areas. The salaries of facilitators are about 20% to 25% of the basic salary of primary level teachers. The reasons for this low remuneration are the expectation of the contribution from local government bodies and local communities.

Construction

Some of the physical facilities under this heading are the construction of classrooms, school buildings and separate girls' toilets. The construction of school buildings is a standard two-year program with a grant of NPR 2.4 million to community schools provided in instalments of NPR 1 million and NPR 1.4 million in the first and second years. In the case of separate girls' toilet, NPR 100,000 is provided for one unit and each school is expected to have two such units.

As the construction of physical infrastructure in community schools is undertaken from their grants, the amount spent on construction is reported as grants rather than construction expenditure. MoE in close coordination with MoF has recently managed to create a separate line item for construction. School level construction works are undertaken more as a matching grant rather than earmarked grants because the per unit cost norms for improving physical facilities are less than needed by design as local communities are expected to contribute. This arrangement often allows the community schools to build larger structures sometimes by compromising on the quality of construction. Schools usually mobilize other resources and build physical facilities that would not be been possible from the earmarked grants alone. However, this has implications on the quality of construction and its timely completion.

Total school grants

SSRP has provided three types of grants:

- *Block grants* have not been operationalized. However, there is a strong argument in favor of block grants for allowing schools to have their own programs for improving quality. Although bottom-up planning through school improvement plans (SIPs),

VEPs and DEPs are being more highlighted, field level planning, funding and monitoring processes need to be strengthened to operationalize the block grant tool.

- *Earmarked grants* are provided mainly to support textbooks, physical infrastructures, and non-salary PCF.
- *Textbook grants* are provided to community schools to provide textbooks to all targeted students including to all students up to Grade 8 in community schools, and to all girl and Dalit students of Grades 11 and 12 in community schools. At the given prices, both the semi-governmental Janak Education Materials Centre and private printers are publishing and distributing textbooks with private sector printers. The prices of textbooks ranged between NPR 140 and NPR 730 per set for different grades in FY 2009/10, which increased to NPR 170 to NPR 1,000 in FY 2014/15 – an increase of between 21% and 37%.
- *Non-salary per capita funding* per year is provided to community schools for procuring teaching materials and other necessities for improving quality, while similar support is provided to the schools per level per annum for meeting their operational and stationery costs. The per center and per school support for procuring teaching materials and stationery remained unchanged for the whole SSRP period, and in some cases, particularly the non-PCF support for this purpose decline in the second year of SSRP and was unchanged for the remaining period.

Scholarships

Student scholarships are a large component of school grants. Incentives and support mainly include scholarships for basic and secondary education and a few support activities for science, ICT and establishing libraries.

Basic level: Various types of basic level scholarship programs including for meeting living expenses, meeting hostel costs and incentive payments are included under SSRP and scholarship funds are provided to schools as grants and schools distribute them to beneficiaries. There are girls' scholarships for all girl students of basic level in community schools, basic level students in the Karnali Zone, and for students from 22 specified Janajati and marginalized communities. All target should receive the same amount of NPR 400 per year.

Secondary level: There are different types of scholarships for secondary students and the amounts vary. Target groups include martyrs' children, Kamlaris [bonded laborer's] students, conflict affected children, children from remote mountain areas, Dalit students, differently abled students, science students of Grades 11 and 12, and deserving students. There are also scholarships for providing residential facilities.

There was a significant rise in the scholarships amount in the initial years due to an increase in the coverage (50% girls' scholarships now made 100% girls scholarships), and increase in the amount particularly for secondary students — increase of scholarship amount by more than 64% over the previous year.

However, scholarship funds have often not been effectively used and their impact has been limited because the money has not been distributed according to DoE guidelines, which means that some eligible students have been excluded, ineligible students have received scholarships and some entitled students have not received the full amounts.

The blanket targeting of students for some scholarships, particularly at the basic level, and the scholarship amounts are often questioned for their relevance and usefulness. Better targeting could help increase the amounts within the existing available resources. DoE piloted a pro-poor targeted student scholarship program, but it was not replicated. As out-of-school children are mostly from the poorest of the poor families, there is a strong argument for targeting basic level scholarships to such households and increasing the amounts to help such students to also meet some of their livelihood expenses.

Other program costs

The increasing share of 'other program costs' from the initial 2.4% in FY 2009/10 to 10.7% in FY 2013/14 is a positive trend.

Administrative costs

The share of management and administration costs has expanded in recent years.

3. SSRP expenditure by thematic components

SSRP has nine thematic components to prioritize and allocate pooled resources to achieve its objectives. The annual budget allocation for each of these components is made for central and district level SSRP recurrent and capital costs (which accounted for about 27% of pooled budget in 2015/16). Program activities of other JFA budget heads are cross-cutting in nature for these different thematic components.

Basic and secondary education programs saw a slight decline in the budgetary allocation as against the SSRP estimates, while the other program components (ECED, monitoring and evaluation, and program management) have shown a significant increase. Given that the largest share of SSRP was allocated for primary, lower secondary and secondary teachers' salaries (18% in 2015/16) less than planned budgetary allocation to these sub-sectors, SSRP implemented limited interventions particularly to improve secondary education quality. Improving access to school education, and enhancing quality components have received similar budget allocations. However, support has been input-based for quality improvement without putting much emphasis upon the classroom teaching learning process.

1. *Early childhood education and development* (component 1) obtained an average 5.5% of the SSRP budget under four budget line items. The largest share (almost 30%) has gone to ensuring access to school education closely followed by enhancing educational quality with an average share of 23% in the last six years of SSRP.
2. *Ensuring access to school education* includes alternative provisions for basic and secondary education inclusive education programs, grants to religious schools, free

and compulsory basic education, curriculum reforms, and other physical facility improvement measure.

MoE has made alternative provisions for regular basic and secondary education school programs in the form of flexible programs, open schools and support to religious schools. Such institutions are provided with per student or per institution grants or both for their operations. There are also non-formal education opportunities for housewives (many of whom will not have attended school as girls) at basic and secondary levels covering the costs of facilitators and other running costs and the provision for awarding schools if a sizeable number of students pass the Grade 8 and SLC examinations.

3. *Literacy and continuing education*:
4. *Enhancing educational quality*: Major activities include the grants for free textbooks, midday meals in selected districts, the execution of the continuous assessment system (CAS), NASA, flash reporting, achievement-based incentives to teachers, resource persons, school supervisors and DEOs, and recent program coverage on reading skills. Except for CAS, there are limited activities for improving classroom teaching learning process. Activities for improving classroom teaching and learning are covered under teacher education and development. Besides teachers' professional development, teacher education and development includes various other training activities for traditional schools, CAS, leadership development, and special needs children. The budget allocated for this purpose varied between 0.68% in FY 2009/10 to almost 4% in FY 2013/14.

   A few small activities are important for educational reform. These include grants for managing multi-grade teaching, for multi-lingual education, CAS, and for midday meals in two sets of program districts.
5. *Teacher education and development:* Teacher training activities are included under this theme.
6. *Capacity development for effective service delivery:* School capacity building and community school capacity building are the budget heads for Technical and Vocational Education and Training (TEVT) soft skills with the former being for recurrent and the latter for capital expenses. These heads were introduced to monitor financial progress on the TEVT soft skills component.
7. *School management and monitoring:* Similar amounts are provided to lead resource centers (LRCs), resource centers, and community schools for managing LRCs, strengthening resource centers for monitoring the schools, and the conducting of school audits. These amounts are often reported to be inadequate for carrying out these tasks and the amounts have not changed over the years. The grades covered and the numbers of students are the basis for providing the grants managing staff in community schools. The granted money is expected to cover the expenditure on

facilitators and a school assistant. Various amounts provided for the same type of staff indicate that these jobs could be a part time job for other staff of the schools.

8. *Incentives and support* includes scholarship funds.
9. *PCF non-salary grant support to school*s is to cover the cost of education materials.

4. SSRP financial sustainability

About 98% of SSRP's budget has been used for recurrent activities. Many development and capacity building programs such as teacher training, the construction of school building and classrooms and other school physical facilities are covered under recurrent expenditure. The share of recurrent expenditure would be less than 98% if it was properly defined.

SSRP liabilities include the salaries of 42,225 rahat (temporary) teachers, and more than 30,000 ECD facilitators. The JFA does not have any sustainability strategy and it is not clear whether the government will be able to absorb SSRP activities under its future regular program. Clearly these on-going costs are to be included in SSDP with rationalization and there is a need to include a strategy to sustain these on-going costs in the regular system during or after SSDP.

4.4 Implications for SSDP

The above review findings and their implications for SSDP are summarized in Table 3.14.

Table 3.14: Findings and implications of review findings for SSDP

Areas	Current situation	Implications for SSDP
1. Government allocation to education	The declining trend in terms of the share of total government expenditure. Need to allocate at least 20% of government expenditure as per the constitutional provision of free secondary education (Grades 9-12).	Ensure that the government's education budget increases in real terms in a situation of low GDP growth and high inflation.
2. Share of development partners	The share of development partners funding of the education sector has declined during the extended period of SSRP.	Mobilize both grants and loan resources from development partners
3. Scope of program	SSRP scope is led by agreed eligible budget heads rather than the nature of the activities to achieve sector results	Separate program result areas and eligible expenditure program in the spirit of the DLI approach
4. Budget process	Sub-optimal budgeting processes as indicated by planned estimates, allocations, release, and expenditure trends.	Strengthen planning and budgeting processes
5. Funding modalities	The inadequate focus on results	Adopt a fully result-based approach by using the DLI approach for development partner fund disbursement

Areas	Current situation	Implications for SSDP
6. Flow of funds	Inadequate ownership of central level agencies on programs implemented through funds channeled through DoE Need to revisit fund flows at school level with a view to using commercial banks in disbursements as much as possible	Fully integrate SSDP funding from development partners into the treasury system.
7. Secondary education financing	Secondary education, especially higher secondary education is under-funded	Ensure adequate funding to meet the salaries of subject teachers (math, English and science) and quality interventions with a focus on science
8. Cost estimates	Costing based on input, processes and activities, and not results	Estimate costs by result areas Ensure that adequate funds are allocated for results linked with disbursement linked indicators (DLIs)
9. EMIS	Problem of data reliability due to inflated enrolment figures by schools to get PCF funds	Introduce student tracking system Carry out sample surveys to validate self-reported data. Link sample survey findings to disbursement
10. Reporting of financial information	Financial reports are prepared by 13 budget heads and 5 program line items, not by thematic components and education sub-sectors	Agree reporting to meet financial management requirements as well as to facilitate analysis by results and education sub-sectors
11. Scholarships	Basic level scholarship program is not targeted; secondary level scholarship is targeted by type of beneficiary.	Implement poverty targeted scholarship program
12. Construction	Problem of quality of construction and timely completion of work because of the use of matching grants for the community led construction of classrooms	Review the system of matching grants and adopt a new construction policy to ensure the quality of construction.
13. School grants	Lack of information on the use of school grants	Rationalize items for school grants and develop a mechanism to track the disbursement and use of such grants. Encourage the use of commercial banks in disbursement and obtain reconciliation statement from them. Carry out periodic sample surveys to validate flash report information.
14. Remuneration of ECD facilitators	The low remuneration of ECD facilitators (school and community-based)	Revise the salary levels of school based one year ECD facilitators (assuming this level as 0 grade) and support community based ECD based on contracts ensuring that communities pay reasonable salaries

Areas	Current situation	Implications for SSDP
15. Financial sustainability	On-going SSRP activities, especially financing temporary teacher positions, need to be sustained	Include a strategy to rationalize teacher and facilitator positions and absorb them in the regular government program

4.5 SSDP Fiduciary Management

Public financial management (PFM) is defined as the system by which financial resources are planned, directed and controlled to enable and influence the efficient and effective delivery of public service goals. The government is responsible to its citizens, taxpayers and external fund providers for implementing effective PFM systems and for using those systems to safeguard, and ultimately enhance, the country's economic sovereignty. Good PFM ensures that public money is well used for its intended purpose to realize development objectives.

There is a growing consensus about the importance of PFM at the national and sectoral levels. Nepal has made substantial progress on deepening the structures and processes of PFM, particularly using information technology (IT). Various PFM reform initiatives are being undertaken in the education sector. However, various studies have shown the challenges that hinder the proper implementation of reforms to minimize fiduciary risks. National and international studies have identified the eight key elements in Box 3.1 that are necessary to create a comprehensive and coherent system of PFM.

Box 3.1: The eight elements needed to create a comprehensive and coherent PFM system

1) Climate for reform: Recognition and acknowledgment, at all levels, that change is required and the commitment from key persons to affect necessary reforms.
2) Legal and institutional framework: A well-defined legal and regulatory framework including appropriate institutions and a set of recognized codes, standards and practices.
3) Values system: An open, honest and responsible approach to the way services are planned, executed and reported with an intent to work in the public interest.
4) Fiscal and policy framework: A credible budget reflecting the expected financial impact of the government's policies and its use of resources.
5) Performance management: The budget must be well managed, monitored and reported to achieve anticipated outcomes, with value for money, the efficient and effective delivery of services and financial compliances.
6) Reporting: Appropriate and transparent reporting against planned outcomes for government accountability for its fiscal actions.
7) Scrutiny and assurance: Subjecting information to effective scrutiny and assurance, thus generating confidence on its veracity.
8) Capacity and capability: Appropriate resources are available to support the application of each aspect of PFM, in terms of people and systems.

Source: Confederation of Asian Pacific Accountants/Improving Financial Management in the Public Sector.

This section proposes an initial financial management framework for the education sector under the six core dimensions of PFM[9]. The framework is intended to facilitate further improvements in MoE's program and service delivery through a roadmap for implementing reform initiatives. The following elaborates the five key areas of the proposed financial management framework:

4.5.1 Links with overarching legal documents

The framework will be implemented under the following legal and other documents and must therefore comply with and support them:

- Audit Act, 1991
- Financial Procedural Act/Rules, 1999
- Local Self Governance Act and Rules, 1999
- Education Act and Rules, 2001/02
- Public Procurement Act and Rules, 2007
- Good Governance (Management and Operation) Act, 2008
- Directives, circulars and guidelines issued by MoE and DoE
- The Joint Financing Arrangement with development partners
- Financial Risks Governance and Improvement Action Plan (draft), 2015
- The Constitution of the Federal Democratic Republic of Nepal, 2015

4.5.2 Resilience and risk mitigation

The level of risk that the education sector can adopt involves a trade-off between:

- excessively funding regular activities such as teachers' salaries, text-books, the blanket funding of scholarships, unplanned physical infrastructure development, which will endanger the long-term viability and sustainability of education funding; and
- undertaking insufficient investments in program related activities to achieve objectives such as enhancing capacity and improving the quality of service delivery (teaching).

An important role of MoE is thus to determine the 'right' level of risk and to set the overall risk management framework within which education funding should operate. This may involve setting values for key risk parameters, such as:

- teachers' salaries not to exceed 40-50% of total school budget;

[9] The six core PFM Dimensions are: i) planning and budgeting, ii) budget execution, iii) procurement and distribution, iv) financial reporting, v) auditing and assurance, and vi) legislature scrutiny and actions

- 2 to 3-year rotational system for purchase of new text books;
- 100% scholarships only for students from needy and disadvantaged groups;
- the planned development of infrastructure; and
- 10-20% investment in capacity enhancement at school level (for information technology (it) and human resources).

It is recommended that MoE/DoE periodically review the risk monitoring data that shows actual levels of financial risks assumed by the sector to enable it to carry out necessary course corrections in funding approvals and management.

4.5.3 Identification and management of risk factors and sources

Studies show that the main financial risks assumed by the education sector are as follows:

i) *Adequate resource mobilization to meeting costs:* The risk here is the non-availability of funds for all the activities related to the education sector. This may be due to the limitation of the national budget as well as development partners' priorities. Hence, it is necessary that the required resources are regularly assessed and additional sources of funding are identified to meet the costs of education.

ii) *Effective allocation and management of expenses:* To meet the over increasing demand for educational activities and avoid mismatches between available resources and demand, it is necessary to fund the right mix of activities based on reliable data and clear cut priorities. The allocation of resources should be 1) based on reliable primary data from and 2) be within the parameter of approved plans and strategies. It is also necessary to keep in mind the implications of funding such that the funding of one activity does not happen at the costs of the funding of other activities, without proper justification and analysis.

iii) *Tracking fund flow from center to schools:* To ensure the proper use of funds, a mechanism is needed to track expenditure against approved budgets and plan. This should be done at least for major activities. The need is to establish sound accounting and reporting systems that meets the minimum conditions of data integrity of timeliness.

iv) *Commitment to comply with rules, regulations and financial reporting,* and their due observance is vital to ensure value for money and effective service delivery. This requires not only producing policies and guidelines but also commitment from top to bottom of the system to ensure full compliance and accountability to the public interest. This necessitates rewarding best performance and stringent action against wrong-doers.

v) *Technical and human resource capacities and capabilities*: While the proper functioning of the above four areas should ensure expected result; their operational effectiveness will depend upon the technology and human resources supporting them. Thus, it is vital that adequate attention is given to strengthening information

technology and human resources to enable the latter to discharge their duties effectively and efficiently.

4.5.4 Fiduciary risk mitigation policies

The fundamental financial risk mitigation policies of the education sector should be as follows:

i) All key stakeholders are committed to effect necessary changes and there is widespread recognition and acknowledgement that changes are needed and essential for the public interest.

ii) All resources received and disbursed by MoE/DoE are managed in accordance with the government's financial rules and regulations, procurement laws and the JFA with development partners.

iii) Resource maximization is achieved through theme-based allocation as per the approved plan or strategy and external grant and loan contributions are directed only to core program related activities.

iv) Participation in planning and budget execution is ensured as far as practicable.

v) Education funds are used through identified entities with expenditure according to implementation guidelines for central level agencies, districts and schools. These guidelines should be prepared in line with approved plans and strategies.

vi) To minimize cross-subsidization risks, all school level funding should be made through the government's budgetary/treasury system and the consolidation of school level investments at the center by DoE.

vii) Standard procurement, accounting and auditing practices should be followed, and these should be strengthened in collaboration concerned agencies.

viii) Appropriate information technology should be used for collecting and interfacing education and financial data to improve quality and timeliness and to achieve better results.

ix) MoE and DoE should have sufficient flexibility and authority to manage education budgets. They will ensure ex-ante internal controls while executing budgets.

x) Transparency is promoted by regularly publishing information related to authorizations, budget and expense, and study reports and social auditing in the public domain.

xi) Adequate provision for technical support is provided to schools for the initial years (1 to 2 years) to support the maintenance of financial records and reporting and for overseeing construction activities.

xii) The Audit Committee at MoE level and the Audit Observations Regularization Team at DoE level will be made functional and responsible for regularly monitoring controls and for recommending appropriate actions against wrong-doers and changes in the system and procedures.

xiii) The minimum conditions for financial management performance will be set to provide additional financial incentives and establish a fair competitive environment. The school grants operational manual and directives, 2004 will be revised and implemented for better internal controls in schools.

xiv) A single door capacity enhancement technical assistance pool should be established for providing technical support in the areas of PFM, procurement, M&E, capacity development and participation in national level reform undertakings.

4.5.5 The framework

The financial management framework should have the following elements:

Planning and budgeting

i) *Threshold:* MoE and DoE will develop a medium-term expenditure framework (MTEF) based on the approved plan document and hold discussions with MoF and NPC on the allocation of sufficient resources on an annual basis during the implementation of SSDP.

DoE provides district level ceilings based on MTEF allocation as agreed with MoF/NPC and recent flash data so that planning and budgeting workshops focus on prioritizing activities rather than conventional incremental budget preparation.

The budget for activities added because changes in policies or priorities will be identified separately while preparing annual strategic implementation plans and annual work plans and budget (ASIPs, AWPBs).

ii) *Timing*: MoE and DoE follow MoF and NPC directives on timing for the preparation and submission of plans and budget for each fiscal year. A planning and budgeting calendar with final deadlines is prepared and circulated to spending units.

iii) *Approval*: MoE and DoE seek approval of the education program each year from NPC on a national and district-wise basis so that the subsequent approval of programs is not required after the passing of the budget by the legislative parliament. Subsequent changes will only be forwarded for their approval.

iv) *Links*: ASIPs and AWPBs will have links with the SSDP document and MoF's budget head economic classification. Major program activities will have current MoF economic head (line item) classifications[10] and only recurrent block grants will be provided under line items 26412 and 26413. Similarly, the plan document and ASIP/AWPB will clear distinguish which activities are to be carried out by the various central level agencies.

[10] For instances, line item code 22313 for text books and other education materials, 27211 for scholarship and 26423 for construction.

Budget execution

i) *Budgetary control:* MoE/DoE should be intimately involved with forecasting trimesterly expenditure in accordance with annual appropriations and plans. District units should be fully responsible for planning disbursement to schools in accordance with norms and standards and verified education data and in accordance with the School Grants Operational Manual and directives.

MoE and DoE hold the authority for variations in approved budgets under any economic or programmatic heads and will carry out analysis and approval process in advance. All variations more than 5% of allotted budget of any specific heads will require justification from spending units and prior approval from MoE/DoE. DoE will carry out periodic (trimesterly) budget variance analysis and take appropriate actions to regularize variations.

ii) *Authority and disbursement:* MoE will ensure the timely release of approved budgets and hence provide authorizations to DoE within a week of the date of receipt of authorizations from MoF. DoE will subsequently provide budget authorizations and release authorizations within 15 days to all spending units. The actual date of release of authorizations will be publicly announced on MoE's and DoE's websites.

Budget release will be based on fund request from spending units at central, district and school level, submitted in line with updated trimester plans and budgets and updated flash data. Disbursement to schools shall be accounted for as an advance to head-teachers and the settlement of these advances shall be based on the submission of periodic statements of expenditure and compliances.

iii) *Internal controls:* MoE/DoE will liaison with Public Expenditure and Financial Accountability (PEFA) Secretariat for development of internal control guidelines and implement the same within its jurisdiction.

DoE will draft and send program implementation guidelines together with the budget authorizations to spending units for each year. The School Grants Operational Manual/Directives, 2004 will be revised to incorporate recent developments and with minimum controls provided to schools together with first trimester budget release information.

Financial monitoring plans (for central and district levels) with standardized templates will be prepared and implemented. There will be periodic as well as for case-based financial monitoring. Status reporting of financial monitoring will be done to the audit committee each trimester.

Responsible officers at spending units will be awarded for not only clearing backlogs of audit observations but also steps shall be taken to minimize audit observations and increase compliance with rules and regulations.

iv) *Decentralization:* MoE/DoE will hold talks with the Local Body Fiscal Commission to streamline the flow of education budgets to schools and strengthen their roles

in exercising budgetary control and monitoring school level funding. This should smoothen education budget management through local bodies in the new national federal structure.

v) *Capacity enhancement:* The financial management information system (FMIS) cannot be run without adequate and appropriate resources. DoE will ensure that spending units are fully equipped with necessary logistics and required skills for maintaining sound financial management system by providing physical facilities, technologies, training and fulfilling adequate human resources at spending units (central or districts or schools).

Procurement and distribution

i) *Procurement plan:* MoE/DoE will prepare a procurement plan for central and district levels each year together with the ASIP and AWPB in accordance with public procurement laws and regulations. Districts will also require the submission of simplified procurement plans from schools together with their first trimester fund requests. DEOs and DoE and will report on the status of procurement each trimester to MoE and make the information available through respective websites.

ii) *Technical support to schools:* DoE will ensure that school construction activities follow specified standards and are comply with MoE's standard technical specifications by providing technical support like drawings in easily understandable form, by providing human technical resources for supervision and public participation during construction processes.

iii) *Private sector involvement:* MoE/DoE will promote the involvement of the private sector for printing and distributing education materials and manage contracts with them.

Financial reporting

i) *Application of Nepal Public Sector Accounting Standards (NPSAS):* MoE and DoE commit to adopt NPSAS and implement it as a priority for recording and reporting financial information for public consumption and meeting their statutory obligations. MoE and DoE work closely with the PEFA secretariat for its implementation and training staff. MoE and DoE commit to preparing annual financial reports in line with the NPSAS.

ii) *Standardization and simplification of financial record keeping:* MoE and DoE ensure that adequate and appropriate records are maintained to facilitate the adoption of NPSAS and financial monitoring. For this purpose, DoE requires central level agencies and DEOs to maintain financial records of disbursements as per the Office of Auditor General (OAG) formats (at least forms 8 [budget sheets], 13 [monthly expense statements], 14 [outstanding advances], 17 [annual financial statements], 18 [payables] and 47 [non-expendable inventory]) and the programmatic record as per ASIP and AWPB heads.

To simplify financial record keeping at schools, MoE, using the authority provided by the Education Rules (Rule 194), will amend Schedule 23 of the Education Rules and simplify financial record keeping at school.

iii) *Capacity enhancement:* Management and staff in charge of reporting functions should be qualified to produce high quality, timely reports and identify inconsistencies or potential issues. This can be achieved through the provision of technical support and targeted training and a strengthened information system. A skilled person should be provided at each resource center to support all head teachers under the jurisdiction of and through DoE's technical cooperation pool.

iv) *Automation and coherence:* An integrated system is necessary to increase timeliness and accuracy of financial reporting. This will cover planning, budgeting, budget execution including procurement, inventory management, payroll and reporting. Hence a simplified financial reporting system needs to be developed and linked with education data system.

Financial reports received from schools will be consolidated at district level and a national level consolidation will be carried out at DoE level on a quarterly basis after the automation of the financial reporting system. Before automation at central and district levels, a link will be established with the Financial Comptroller General Office (FCGO) to obtain data from their FMIS system to prepare and submit financial monitoring reports. Self-developed reporting systems will be phased out once the MoF/FCGO's Computerized Government Accounting System (CGAS) is fully functional.

v) *Timely reporting:* MoE will meet the government's reporting deadlines and the JFA by establishing necessary systems and facilities. DEOs will liaise with their district treasury and control offices (DTCOs) for timely and accurate recording in the FCGO's FMIS monthly and send the specified OAG forms to DoE on time.

MoE/DoE will ensure that financial reports are prepared and analyzed periodically to help control the budget and provide grounds for taking corrective actions and to guide future budgeting.

Auditing and assurance

i) *Towards a risk based audit approach:* MoE and DoE will work closely with OAG and the Institute of Chartered Accountants of Nepal (ICAN) for the adoption of suitable auditing standards in conducting audit of MoE, DoE, central level agencies, DEO and school accounts:

- MoE will liaise with OAG and ICAN to improve audit practices by focusing on potential systemic issues and the prioritization of audit findings.
- MoE and DoE will work closely with FCGO and the PEFA Secretariat to revise the internal audit manual and incorporate a risk based approach.

- MoE and DoE will take steps for the amendment of the Education Laws on carrying out audits, applying NSA70011 to selected risky schools annually, and on a rotational basis (say every 3 to 5 years) for all other schools. In the meantime, the auditing of less risky schools will be conducted by applying NSA440013.

ii) *Audit guidelines and planning:* MoE and DoE will work closely with OAG to plan the auditing of agencies other than schools and ensure timeliness in producing final audit reports within the deadlines agreed with development partners in the JFA:

- MoE will work closely with ICAN to revise school audit guidelines in line with the risk-based approach and compliance with school grant operation manual and directives.
- DoE will develop and provide standard terms of reference for school auditors and make it compulsory to include all resources received by schools in their audited financial statements.
- Emphasis will be given to produce audit reports that clearly show what needs to change, why it must change and how improvements can be made, using plain language.
- School inspectors and supervisors will be made responsible to facilitate social auditing by schools.

iii) *Audit follow-up action plans and settlements:* DEOs and central level agencies will submit preliminary audit reports together with audit follow-up action plan within a week of receipt of the same from the OAG team to the Audit Observations Settlement Team at DoE.

- DoE will prepare a consolidated status report on audit follow-up action plans and submit reports to MoE's Audit Committee.
- The Audit Committee will fix the amounts of ineligible audit observations within one month from the receipt of the consolidated status of audit follow-up action plans.
- MoE and DoE will establish a mechanism to reward staff for reducing non-compliances and audit observations and clearing backlogs of audit observations. Staff will be held responsible for audit observations related to them, even after their transfer away from the concerned office.
- DEO will be made responsible for reviewing audit reports submitted by schools and will be given authority to stop funding concerned schools until serious audit observations are resolved.

iv) *Capacity enhancement of auditors and stakeholders***:** MoE and DoE will liaise with ICAN for trainings school auditors on the revised school audit guidelines and monitoring the conduct of audits by reviewing audit reports.

- School inspectors and supervisors will be given additional responsibility to guide school, SMC and PTA members on the conducting of social audits as per the social audit guidelines. Resource persons will oversee the proper conduct of social audits as per these guidelines and submit reports on each audit to the DEO.

Legislative scrutiny

This is a three-pronged process of policy dialogue, legislative change and framing an education communication strategy.

Policy dialogue: To ensure the allocation of the education budget in priority areas, MoE will engage relevant policy makers, including relevant parliament committees, MoF, NPC and major political parties in discussions and presentations on the SSDP. MoE will liaise with the Parliament Secretariat and provide technical support to improve legislatures' ability to debate technical issues and analyses proposed budgets.

i) *Change in legislation:* MoE will establish stringent actions against wrongdoers by making the Education Act an overarching act that covers all financial duties, accountability and possible penalties and by providing for actions to be initiated by identifying perpetrators and areas of non-compliances, intentional frauds, loss of assets, etc. MoE will take necessary steps to suggest amendments to the Education Act for this purpose.

ii) *Education communication strategy:* MoE and DoE will amend Education Communication Strategy 2063 (2007) to incorporate recent developments and policy and procedures for making different reports for public consumption and enhancing transparency in the budgeting and spending.

Fiduciary risk governance

Fiduciary risk refers to the risk that funds are not used for the intended purposes; do not achieve value for money; and are not properly accounted for. The realization of fiduciary risk can be due to a variety of factors, including lack of capacity, competency or knowledge; bureaucratic inefficiency; and active corruption (DFID 2011). Table 3.15 gives an overview of the roles and responsibilities of the various actors related to education sector financial risk governance.

Table 3.15: Roles and responsibilities for fiduciary risk governance in Nepal's education sector

Authorities/ areas	Roles and responsibilities	Timetable/frequency
1. Parliament		
Legislative scrutiny	1. Budget analysis and approval	During budget discussion and approval/each year Within a month of start of fiscal year

Authorities/ areas	Roles and responsibilities	Timetable/frequency
	2. Amendment and passing of act and rules	As and when submitted by the government
2. MoF/NPC		
Planning and budgeting	1. Implementation and observance of MTEF	When providing threshold for Education Sector, each year
	2. Discussion and approval of overall and spending unit-wise programs and budget	During budget discussions and approvals and before the start of new fiscal year.
3. MoE		
Planning and budgeting	1. Preparation of ASIPs and AWPBs and submission to MoF/NPC	Within calendar fixed by NPC/MoF each year
	2. The holding of policy dialogues with key stakeholders (parliament, NPC/MoF)	Before preparation of ASIPs and AWPBs each year
	3. Technical support to improve legislatures' ability to debate technical issues and analyses proposed budget	After tabling of budget in the parliament/each year
Budget execution	1. Issue of authorizations to DoE and central level agencies	Within 7 days of receipt of authorizations from MoF each year.
	2. Publishing authorizations issue amounts and dates on MoE website	The day authorizations to DoE and central level agencies are issues, every time
	3. Review of budget variance analysis on theme basis	Within one month of reporting period, trimesterly
	4. Approval of budget variations as per the financial procedure regulations.	Within 1 week of submission of request by DoE and central level agencies
	5. Liaise with LBFC for strengthening its roles and responsibilities in school level funding	Immediately and regularly
	6. Formation of audit committee and meetings of audit committee	Immediately and every trimester
	7. Liaison with FCGO for development of internal control guidelines	Regular
Financial reports	1. Liaison with PEFA Secretariat for adoption of NPSAS	Immediately
	2. Submission of periodic FMRs to development partners	Within deadline fixed in JFA, every trimester and annually
	3. Amendment of the Education Rules (schedule 23) for simplifying school record keeping and reporting	Within a month of recommendations by DoE or at the beginning of the new plan
	4. Make provision for one skilled person (e.g. a primary teacher with accounting knowledge or new personnel) in each resource center to	At the beginning of new plan for initial 1 to 2 years.

Authorities/ areas	Roles and responsibilities	Timetable/frequency
	support head teachers to keep financial records, prepare reports, and oversee social audit functions.	
Audits	5. Liaise with OAG and FCGO to apply risk based approach and improve quality of audit reports	Immediately
4. DoE		
Planning and budgeting	1. Provide expenditure thresholds to DEOs and central level agencies for the plan period and review adherence	First year of new Plan implementation and every year
	2. Guidelines for the preparation of district ASIPs and AWPBs and links with the plan document and schools' SIPs.	Before December every year
Budget execution	1. The issuing of authorizations to spend to DEOs and central level agencies based on trimesterly forecasts of plans and budgets	Within 15 days of receipt of authorizations from MoE, every trimester and every year
	2. Publishing authorization amounts and dates on DoE's website	Every time immediately after issuing
	3. Developing and sending program implementation guidelines to central level agencies, DEOs and schools	Every year together with release of first authorizations
	4. Disbursement to schools shall be considered as 'advances to head teachers' and they shall be settled based on schools' statements of expenses.	Immediately every trimester
	5. Preparation and monitoring of financial monitoring plans	Within a month of start of each fiscal year, trimester
	6. Forming of an Audit Observations Regularization Committee under the DG, comprising of responsible persons from Planning, M&E and Finance divisions. Drafting of their operational procedures.	Immediately
Procurement and disbursement	1. Preparation of procurement plans for central level and districts	Together with ASIPs and AWPBs each year
	2. Review of procurement and preparation of status reports and publishing them on websites	Within 7 days of end of trimester and each year
	3. Manage contracts with private sector actors for printing distributing education materials	Regularly and every year
Financial Reports	1. Preparation of NPSAS compliant annual financial reports	Within 6 months of the end of fiscal year/every year

Authorities/ areas	Roles and responsibilities	Timetable/frequency
	2. Liaison with PEFA Secretariat for training on NPSAS	Regularly
	3. Require the maintenance and submission of reports on specified OAG formats (at least forms no. 8, 13, 14, 17, 18 and 47) by DEO and central level agencies	Within the period specified in the Financial Administration Regulations, every reporting period and every year
	4. Establish linkages with FCGO and prepare FMRs based on data available from the FCGO's FMIS	Immediately until successful implementation of own financial management software
	5. Develop financial management software for use in central level agencies and DEOs.	Within 6 months of start of new Plan
	6. Interface financial management software with EMIS at the center	Within 6 months of start of new Plan
Audits	1. Participate in audit planning meetings with the OAG and discuss audit methodology and collect preliminary audit reports	By end of October every year
	2. Liaise with ICAN on revising school audit guidelines and training school auditors	Immediately and in September every year
	3. Liaison with ICAN on monitoring schools' audit performance	Immediately and in March every year

5. NEPAL EDUCATION SECTOR: PROGRESS AND CHALLENGES

5.1 National Education Progress and Challenges

Nepal's history of education reform is a story of remarkable accomplishments in expanding access to education alongside almost intractable challenges in improving both equity and quality. This is as much a global challenge as a Nepal specific issue.

Nepal has come a long way since 1951 when there were only 9,000 students in primary schools 1,700 in secondary school, and a little over 100 students in the two undergraduate colleges (Mathema 2007). This section highlights the overall progress on the major education indicators. Table 4.1 shows the progress made between 2001 and 2012 and the targets for 2015 while the rest of this chapter summarizes the progress made.

Table 4.1: General education indicators, Nepal (2001 to 2012)

Indicator		Achievements			Targets 2015
		2001	2006	2012	
1	Gross enrolment rate of ECD/pre-primary education	12.8	41.4	73.7	**80**
2	% of new entrants at Grade 1 with ECD/PPE experiences	7.8	18.3	55.6	**80**
3	Gross intake rate at Grade 1	122.9	148	137.7	**102**
4	Net intake rate at Grade 1		86	91.2	**98**
5	Gross enrolment rate of primary level	124.7	138.8	130.1	**105**
6	Net enrolment rate of primary level	81.1	87.4	95.3	**100**
7	% GNP channeled to primary education	1.8	2.0	2.0	**2.5**
8	% of education budget to primary education	56.7	60	60	
9	% of teachers with required qualification and training	15	60	98.4	**100**
10	% of teachers with required certification/license		100	100	**100**
11	Pupil–teacher ratio	39.9	46.0	26.9	**30**
12	Repetition rate in Grade 1	38.7	29.8	19.9	**10**
13	Repetition rate in Grade 5	9	10.4	5.3	**8**
14	Survival rate to Grade5	65.8	80.3	84.1	**90**
15	Coefficient of efficiency	60.0			**80**
16	Percentage of Learning Achievement at Grade 5	40			**80**
17	Literacy rate for age group 15–24	70		84.7	**95**
18	Literacy rate for age group 6+ years	54		67.2**	90
19	Adult literacy rate (15+ years)	40.7		62.2 **	75
20	Literacy gender parity index (15+ years)	0.6		0.7	1.0

Source: Joint Evaluation of Nepal's School Sector Reform Plan Program, p 33.

*** The literacy rate for age group 6+ years is 77.5% for males and 58.4% for females. The adult literacy rate is 75.2% for males and 51.9% for females.*

5.1.1 Early childhood education

Some 11,500 new ECED centers have been established bringing access to ECD to approximately 73 percent of the population when combined with other educational centers. This equals a 40% increase in ECED centers and a 20% increase in enrolment.

This has resulted in an increase in the percentage of students entering Grade 1 having gone through ECED from 36 percent in 2008 to 59.6% (60.5% for girls and 59.1% for boys) in 2014. The GER of ECED has increased from 63% in 2009 to 77.7% in 2013-2014 (Roadmap of Early Child Development after 2015 AD, Equity and Access to ECED. SSDP TWG Background Paper. p. 3).

The Education For All National Plan of Action (EFA/NPA) 2001-2015 (NNC-UNESCO 2003) had targeted an 80% enrolment rate for children aged 3 to 5 years and a similar percentage of new entrants in Grade 1 with ECED experience. The trend of ECD/PPCs shows that fast changes are possible with appropriate strategies and initiatives. The enrolment of children in ECD/PPCs increased rapidly from 38,000 in 2000 to 1,047,117 (girls 501,288, boys 545,829) in 2012/13. An equitable progress for both girls and boys is reflected in the GER increase from 11.7% in 2000 to 73.7% in 2012/13 (73.1% for girls and 74.3% for boys) (MoE and UNESCO 2015: 15).

5.1.2 Basic and secondary schools

Enrolment increased for primary education from 92 percent in 2008 to 95.3 percent in 2012. Lower secondary schools' enrolment increased from 1.6 million in 2009 to 1.83 million in 2013 representing an average annual growth rate of 3.3%.

Data from the three Nepal living standard surveys shows that the overall percentage of households who could reach a primary school in 30 minutes or less from their homes increased from 88.4% in 1995/96 to 91.4% in 2003/4, and to 94.7% in 2010/11 (Table 4.2). Almost all households (99.25%) in urban areas and 93.43% of households in rural areas have primary schools within 30 minutes' distance. The mean time for reaching the nearest primary school is seven minutes although it is almost double this for the poorest households at 13 minutes (MoE and UNESCO 2015: 19).

Table 4.2: Travel duration from home to nearest primary school, Nepal (1995/96 to 2010/11)

Year	<30 Minutes	30-60 minutes	60-120 minutes	120-180 minutes	>180 minutes
1995/96	88.44	7.95	2.81	0.34	0.47
2003/04	91.4	6.5	2.0	0.1	0.1
2010/11	94.7	4.4	0.9	0	0.1

Sources: Nepal living standard surveys: CBS 1996 2004 and 2011

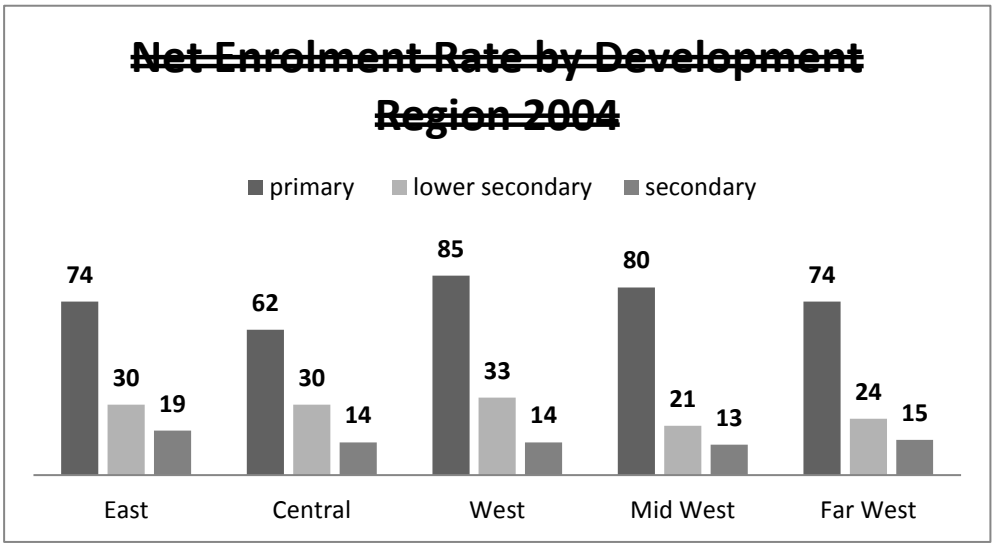
NLSS 3 (2010/11) reported that almost 71.5% of households had a primary school within 30 minutes' distance while 56.3 percent of households were within 30 minutes of a secondary or higher secondary school.

Seventy-six-point two percent of all schools offered primary education from Grade I to 5 in 2012 while 36 percent of all schools offered basic education from Grade 1 to 8. The latter figure was an increase of 6.8 percent from 2010. This rise in the number of schools offering primary/basic education was the major factor reducing the duration of travel time between home and schools.

In secondary schools, enrolment increased from 40.8 percent in 2009 to 56.1 percent in 2014. The average growth rate was 54.6 percent for girls and 55.1 percent for boys in 2014 (DoE 2013a, 2014b and 2014a).

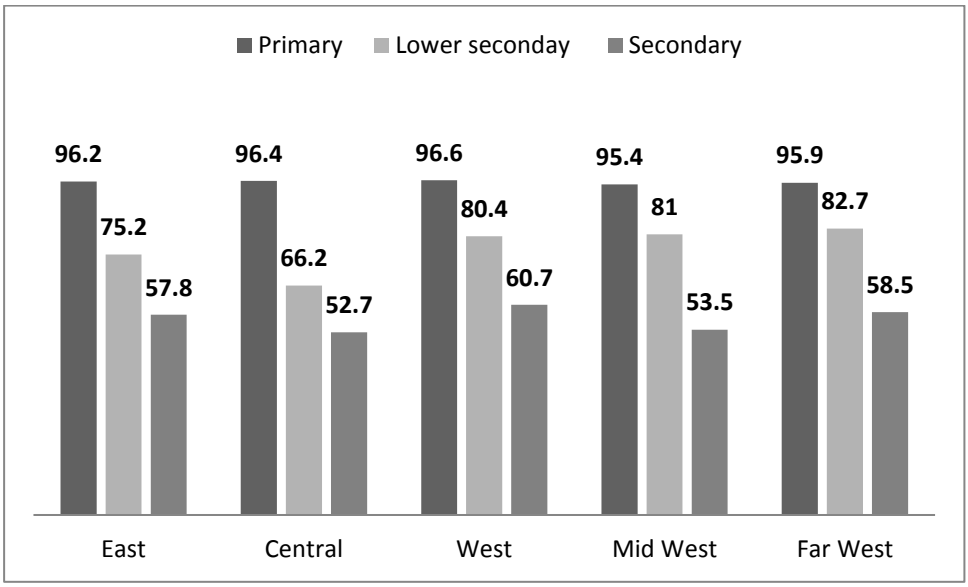
From an equity perspective, the last ten years have witnessed concrete progress in closing regional disparities in terms of net enrolment in primary, lowest secondary, and secondary schools with the net enrolment rates being much more similar across all development regions in 2014/15 compared to 2004, especially for primary schooling (Figures 4.1 and 4.2).

Figure 4.1: Net enrolment rate by development region in 2004, Nepal



Source: Unicef Equity Study (2007)

Figure 4.2: Net enrolment rate by development region in 2014/2015, Nepal



Source: NASA 2014/2015

5.1.3 Private education

In recent years, the extent of private schooling in Nepal has grown rapidly despite the solid presence of public education. According to MoE, enrolment in private schools nearly doubled at all levels between 2005 and 2010 — from 6 to 13 percent at primary level, from 7.6 to 15 percent at lower secondary and from 9.7 to 17 percent at secondary level. Moreover, according to the Private and Boarding Schools Organization of Nepal (PABSON), nearly 20 percent of total enrolments in school education have been in private schools.

In 2013 private schools accounted for approximately 14% of the student population (an increase of 2% since 2011) while public schools accounted for 84% (a decrease from 87% in 2011) (Table 4.3).

Table 4.3: Number students enrolled in community and private schools, Nepal, 2011 to 2013

Year	Enrolled in public (community) schools	Enrolled in private schools	Totals
2011	7,444,134	1,077,654	8,521,788
2012	7,153,270	1,130,512	8,283,782
2013	7,127,050	1,131,335	8,258,385

5.1.4 Non-formal education

Nepal has adopted four strategies for mitigating the challenges of providing non-formal education:

- Flexible schooling, alternate schooling and open schooling to support those who never enrolled in a school or could not complete their school education.

- Curriculum reform and teacher training to incorporate relevant life skills and appropriate learning in school education.
- Different NFE programs for youths and adults covering the wider needs of basic literacy, functional literacy, and literacy integrated in income generation, social mobilization (e.g., mother's group) and others.
- Job oriented technical and vocational education. (MoE and UNESCO 2015).

The government adopted non-formal education policy (NFEC 2006) outlines comprehensive guidelines for increasing literacy, life skills education and continuous learning.

Community learning centers (CLCs) are used to provide life skills and appropriate learning needs for youths and adults. Additionally, the non-formal education policy emphasizes expanding NFE resource centers and technical vocational schools. The policies and directives concerning CLCs describe the provisions for continuing education and lifelong learning through non-formal means. In collaboration with UNESCO, efforts have also been made by NFEC to establish NFE equivalency programs in the country.

The establishment of CLCs started in Nepal in 2002 with five pilot programs that were supported by the UNESCO Office in Kathmandu. The Tenth National Development Plan (2002-2007) included establishment of 205 CLCs, with one in each electoral constituency. MoE and UNESCO (2015: 25) reports that 2,199 CLCs have been established and are in operation.

Finally, MoE has recently initiated the Literate Nepal Mission (LINEM) 2012-2015 with the goal of freeing every community from illiteracy. Given current trends, the country is likely to have achieved or at least come close to the 95 percent target for youth literacy in 2015 (Joint Evaluation of Nepal's School Sector Reform Plan Program, pg. 33.).

5.1.5 Challenges

Quality

The pass rates of the School Leaving Examinations (SLC), which are administered at the end of Grade 10, have ranged between 30 percent and 60 percent, with only 47% of students passing their SLC in 2011. Likewise, the pass rates for the Grade 11 and 12 exams in 2011 were 38.2 percent and 47.5 percent respectively.

The Nepal Early Grade Reading Assessment (RTI 2014) found that 34 percent of second graders and 19 percent of third graders could not read a single word of Nepali! This is consistent with earlier studies reported by MoE (2014) on the abilities of students from different grades to read. Some of the findings were as follows:

- Grade 5 students scored 51 out of 100 on their ability to read Nepali, with high standard deviations of 15 or more, and no significant improvement in scores over time.

- Students mean score in writing was 30 out of 50 (in regards to dictation, creative writing, and letter writing).

Other sources report that:

- only 43 percent of Grade 2 students could read all the letters correctly (Room to Read 2009); and
- 36 percent of native Nepali speakers in Grade 3 could not read a single word of Nepali "Grade 3 text" (EQUIP 2 2010).

Only around a half of students in Grades 3, 5 and 8 meet the NASA criteria for science, math and English (Figures 4.3, 4.4 and 4.5). They also show girls lagging boys. The percentage of achievers slightly decreases in Grades 5 and 8.

Figure 4.3: Percentage students meeting NASA achievement criteria in science in Grades 3, 5 and 8 (2013/14)

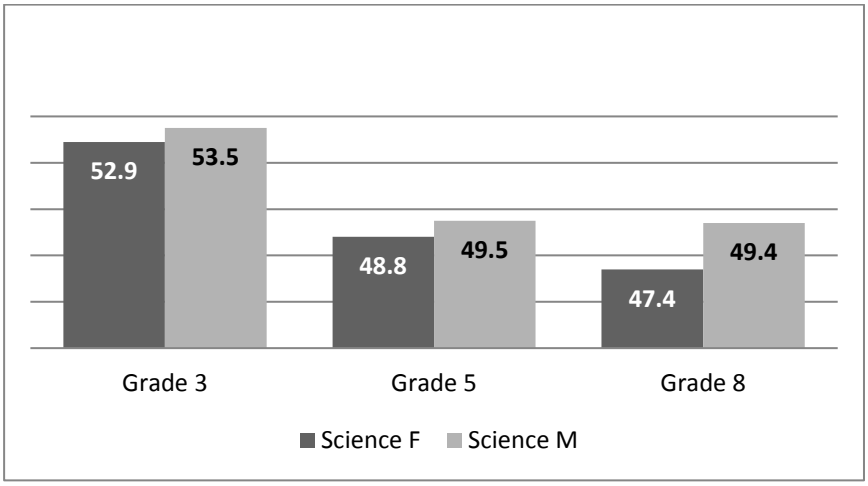


Figure 4.4: Percentage students meeting NASA achievement criteria in math in Grades 3, 5 and 8 (2013/14)

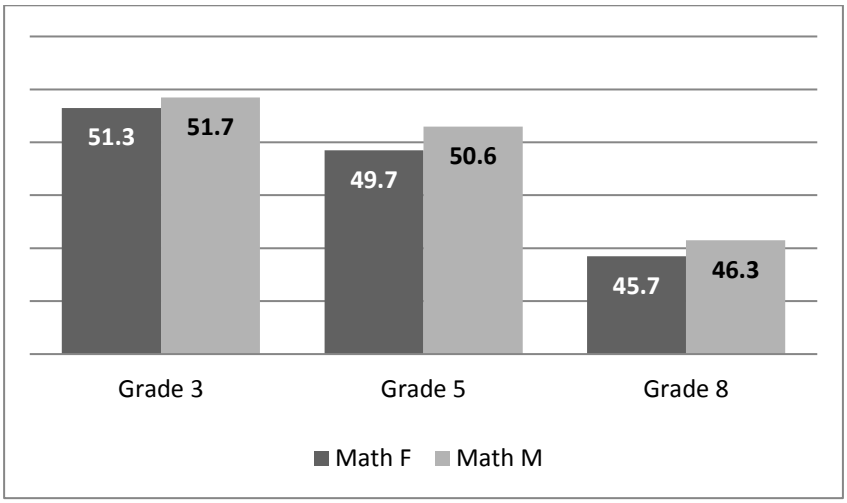
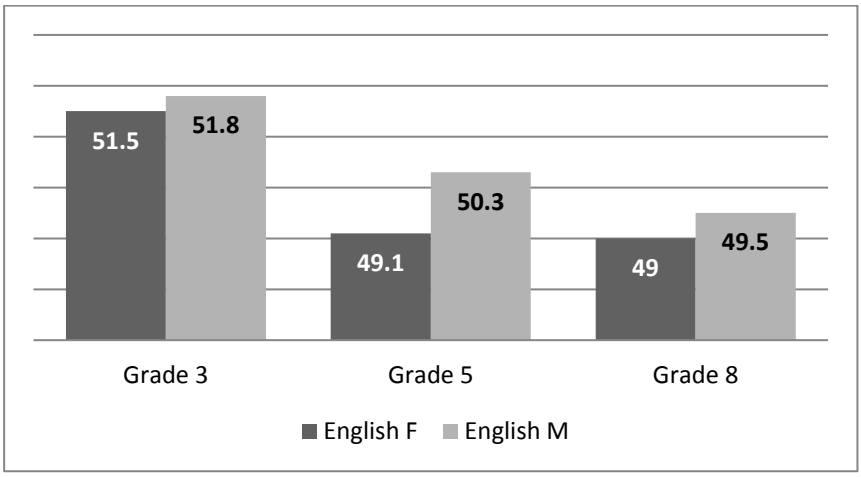
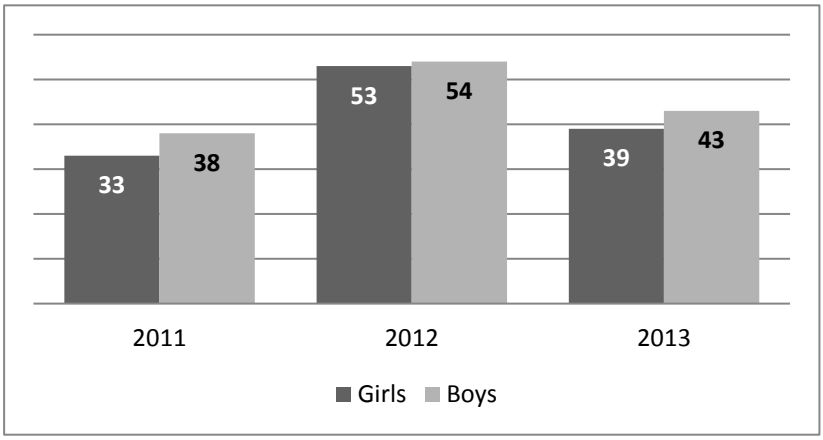


Figure 4.5: Percentage students meeting NASA achievement criteria in English in Grades 3, 5 and 8 (2013/14)



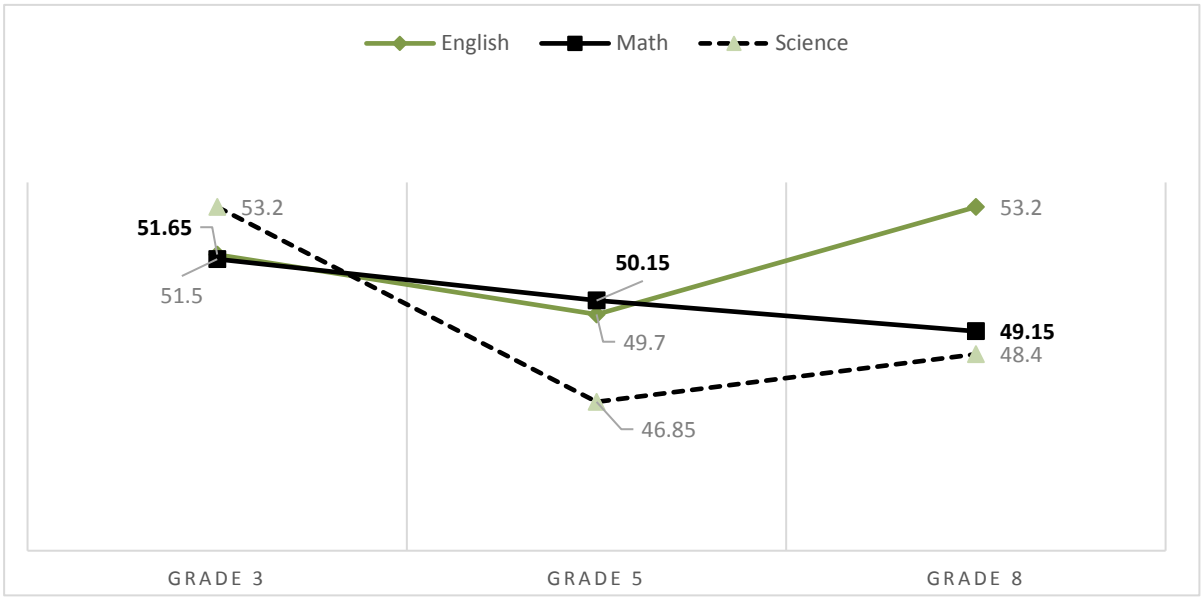
And the 2011 and 2013 data shows that around 60% of Grade 5 students did not achieve the achievement criteria for mathematics (Figure 4.6).

Figure 4.6: Achievements of math NASA criteria in Grade 5, (2011 to 2013)



In summary, the above data signals red flags that begin with reading difficulties in the early grades and expand to less than half of students achieving at expected levels in Grade 8 math, science, and English. Students' performances in all these subjects show that performance in one has a bearing on the performance in the others. Figure 4.7 illustrates the correlation between English, math, and science. More student level data should help demonstrate the extent to which performance in reading in one subject would predict performance in the others, or whether the three subjects share common denominator competencies that need to be acquired for learning to occur.

Figure 4.7: Student mean scores in English, math, and science, grades 3, 5 and 8 (2013/14)



Source:

OECD (2014) reports on what students know and can do in mathematics, reading, and science shows that the students from the top countries achieve equally well in mathematics, reading and science. This likely indicates the existence of core policy, leadership, and instructional practices that allow these countries and economies[11] to raise student achievement equally well in the three subjects.

In conclusion, Nepal aspires to leverage the skills of its workforce to graduate from LDC status. However, the fact that more than 50 percent of students reach Grade 8 without demonstrating the expected standards in English, math, and science should focus the national debate on the fact that business as usual quality measures have not helped more than 50 percent of the country's students achieve basic competencies to participate in the 21-century knowledge economy. In addition to posing an economic threat, the high wastage that characterizes Nepal's educational system is also indicative of unequal learning opportunities that affect some sub-groups.

[11] The countries and economies with the top ten OECD averages listed in descending order are: Shanghai-China, Singapore, Hong Kong-China, Chinese Taipei, Korea, Macao-China, Japan, Liechtenstein, Switzerland and the Netherlands.

6. EQUITY

MoE's Consolidated Equity Strategy for the School Education Sector in Nepal (DoE 2014c: 1) states the problem with education equity as follows:

> *"While Nepal has come a long way in exposing and addressing equality within its society, stark discrepancies remain with regards to the effect that people's socioeconomic status, gender, caste, ethnicity, language, geographical location and ability on their life and learning opportunities. As Nepal's population is in several ways highly diverse and is still in the transition phase from a country with deeply rooted foundation for inequitable participation of its citizens to public life to a democracy that values and embraces its diversity, it seems crucial to intensify efforts to strengthen equity with education being the obvious medium for this."*

Equity as defined in MoE's strategic framework, as presented in DoE 2014c, has the three areas of equity in access, equity in participation, and equity in learning outcomes. The framework also identifies the following eight dimensions of inequity: (1) gender, (2) socioeconomic status, (3) geographical location, (4) health and nutrition status, (5) disabilities, (6) caste and ethnicity, (7) language, and (8) children of vulnerable groups.

The following are some of the equity challenges as reported by DoE (2014c) and other documents:

6.1 Equity in access:

- Students with disabilities as well as those from poor, remote, low caste families or from disadvantages ethnicities are disproportionately affected by the access to education gap.
- There are more than 770,000 out-of-school children between ages 5 and 18 (Unicef Nepal 2015).
- The number of children with disabilities between 5 and 18 is estimated at 179,000. More than 105,000 of these children are out-of-school (Handicap International 2015)
- Girls from the lowest quintile and from Madhesi and Muslim communities are under-represented in secondary education enrolment.
- Access to education decreases when girls come from low castes or disadvantaged ethnic groups.
- The poorest and second poorest quintiles have twice as many children out-of-school compared to the average number of out-of-school children.
- According to Nepal's poverty index, the concentration of out-of-school children is higher in the districts that have been identified as the most deprived in terms of poverty (NPC and UNDP 2014).
- Children from Dalit communities have the lowest access to basic education (88%).

- Children from the Chepang ethnic group are the most severely marginalized ethnic or linguistic group, with only 50 percent enrolment in basic education

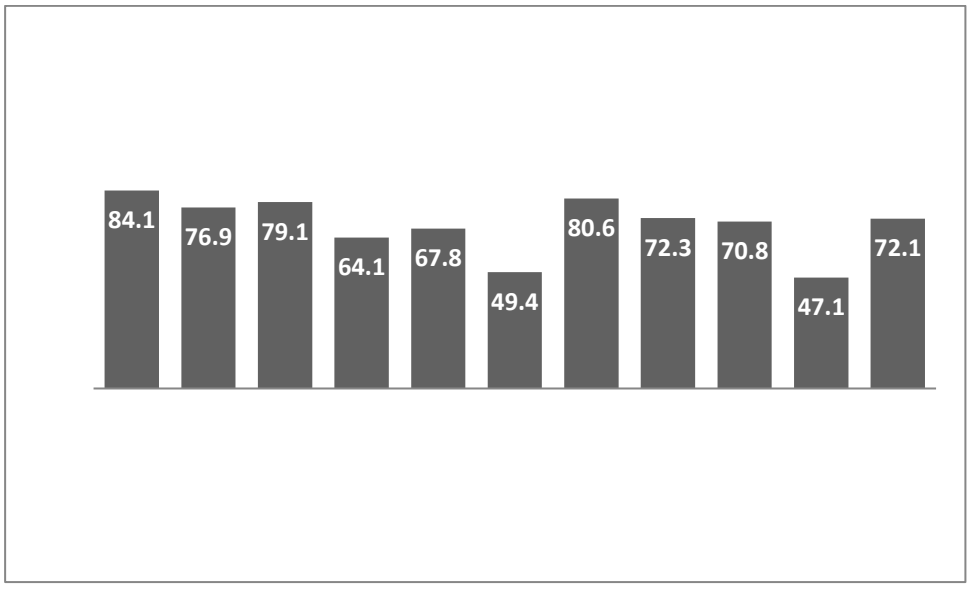
Consolidated Equity Strategy for the School Education Sector In Nepal

– reaching 78% in pre-school children - Goiter Rate (40% in school children), helminthes infestations (66%), Vitamin A deficiency with sub-clinical Vitamin A deficiency (32%) among children. Poor health indicators among school children in Nepal profoundly limit their ability to attend school regularly.[46]

Children of Chepang ethnicity are the most severely marginalized ethnic/linguistic group, only securing 50% enrolment against groups like Sherpa that have 100% enrolment and Newar having 97% enrolment. The Government of Nepal has identified 22[47] indigenous (ethnic) groups as marginalized within the education sector. Children within Muslim communities have the lowest overall access of all religious groups, around 80%[48], thereby significantly lower than children from Dalit communities. In regards to language several ethnic groups do not speak Nepali as their first language, which may also explain low enrolment of some groups.

- Children with disabilities are by far the most marginalized in terms of access and participation in education.
- The chances to access education among children with disabilities in rural areas are limited, and disabled girls are less likely than boys to access education.
- 30.7 percent of female children are engaged in child labor and 4.3 percent are employed and not in school.
- 19.3 percent of male children are engaged in child labor and 2.1 percent are employed and not in school (Unicef Nepal 2015).

Figure 4.8: Net enrolment rate by caste/ethnicity, Nepal 2014 (%)



Source: CDSA (2014)

Table 3.1: Education Domain: mean (percent) and index score

Caste/Ethnicity	Adult Literacy Rate		Net Enrolment Rate	
	Mean	Index	Mean	Index
Hill Brahman	78.5	0.7846	84.1	0.8406
Hill Chhetri	66.4	0.6635	76.9	0.7687
Tarai Brahman/Chhetri	80.0	0.8005	79.1	0.7913
Tarai Other Caste	45.0	0.4502	64.1	0.6408
Hill Dalit	51.8	0.5180	67.8	0.6783
Tarai Dalit	23.1	0.2312	49.4	0.4939
Newari	76.5	0.7649	80.6	0.8065
Mountain/Hill Janajati	61.5	0.6152	72.3	0.7232
Tarai Janajati	54.1	0.5406	70.8	0.7084
Muslim	35.4	0.3543	47.1	0.4711
Others	78.0	0.7796	72.1	0.7213
Total	59.6	0.5957	71.1	0.7107

6.2 Equity in participation

Following are some of the main lingering issues that demonstrate inequity in participation in Nepal's education system:

- The high repetition rates in Grade 1 and the low level of transition from basic to secondary levels, which disproportionately affect marginalized groups.
- While the difference between boys and girls may not seem major in terms of repetition rates, it is striking that throughout Grades 3, 5, 8, and 9, and with few exceptions, girls repetition rates are consistently higher than boys' (see Figure ?).
- In Nepal students go to school for an average of six years, with the richest students staying for eight years and the poorest leaving after only three years.
- Young women who have never been married remain in school longer than women who get married at an early age.
- There is a high prevalence of child marriage among Terai ethnic groups.
- The net attendance rate is lowest for households in the poorest and the second poorest quintiles.
- Poor health indicators profoundly limit children's ability to attend school regularly. Diseases such as diarrhea, parasitic worm infections, skin diseases and trachoma reduce children's ability to access education.
- Seventy-eight percent of pre-school children have anemia, 40 percent have goiter, while 66 percent of children have helminths and 32 percent have Vitamin A deficiency.
- Only resource teachers in integrated schools receive a 45-day mandatory training in working with children with a specific type of disability (Handicap International 2015).

Figure 4.9 shows the consistently higher repetition rate of girls in Grade 8:

Figure 4.9: Grade 8 repetition rate of students in Nepal

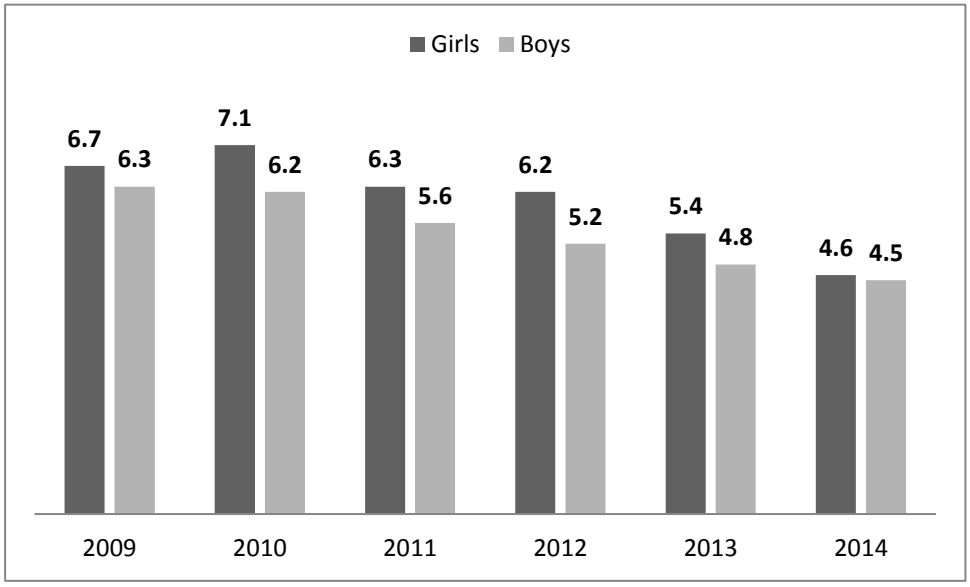
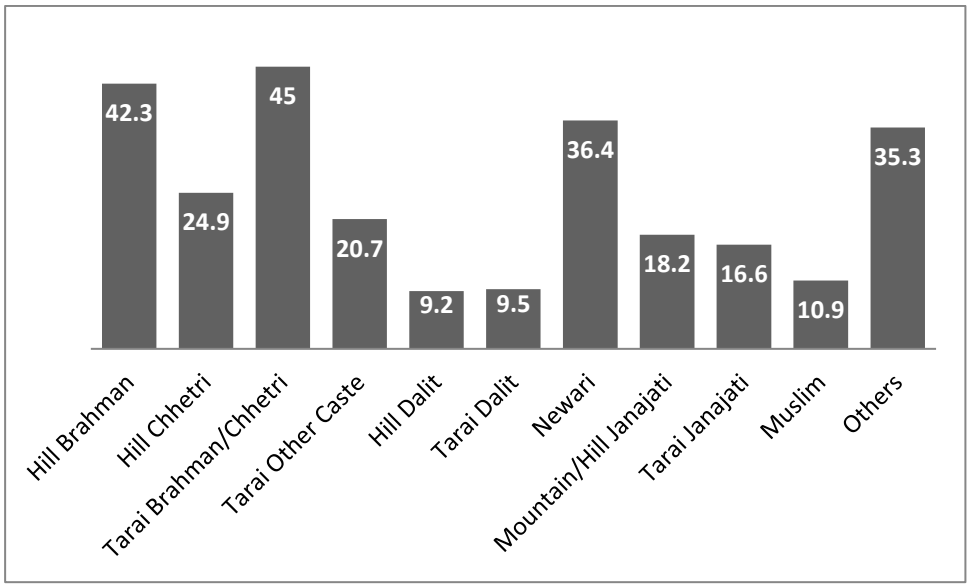


Figure 4.10 shows inequity by caste and ethnicity in regards to children who complete basic education. Hill Dalits, Terai Dalits and Muslims are the least likely to complete basic education.

Figure 4.10: Basic schooling completion rate by caste and ethnicity



Source: CDSA (2014)

6.3 Inequity in learning outcomes

The data in Figures 4.3 to 4.6 above show that while the differences are not major, the fact that boys' advantage is consistent across grades, school subjects, and years strongly

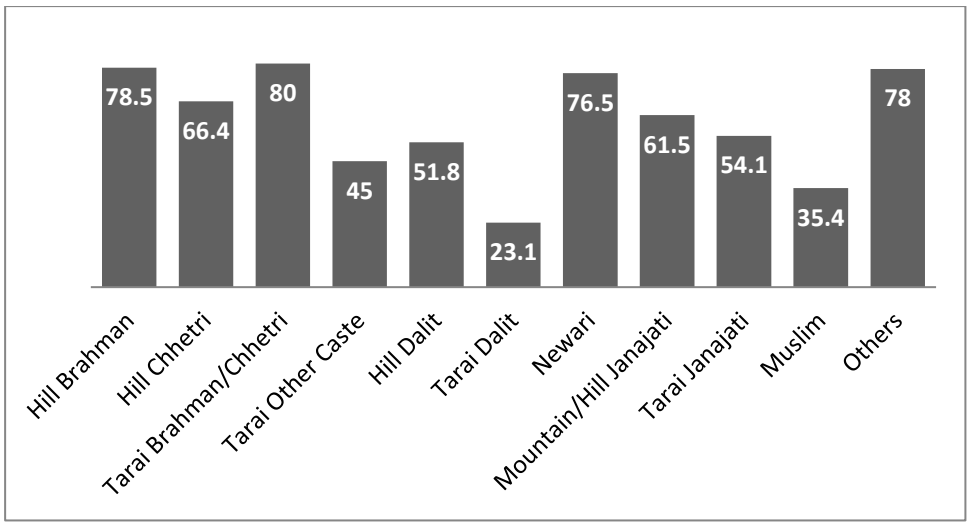
suggests that the opportunities to learn are more favorable to boys than girls. The new constitution commits that:

> *"Women shall have the right to special opportunity in the spheres of education…based on positive discrimination."*

The results indicate that more efforts are needed on advocacy, training, the laws and regulation to promote a culture that provides equitable opportunities to learn for girls and boys in their communities, homes, schools, and universities.

Figure 4.11 shows data on adult literacy by caste and ethnicity — another dimension of inequity in learning outcomes. Only 23.1 percent of Terai Dalits and 35.4 percent of Muslims are literate, compared to 80 percent of Terai Brahmans. This is consistent with AASSO 2015 Medium of Instruction and Languages for Education Study which reports that the NASA results for Grade 8 (2013) for the Nepali language were lower than international standards for equivalent national languages. The scores were even lower for children who did not use Nepali as their home language. Similar results were confirmed when conducting the early grade reading assessment (EGRA).

Figure 4.11: Adult literacy % by caste and ethnicity



Source: CDSA (2014)

In summary, inequity has serious moral, ethical, and political implications. Lack of equity jeopardizes the sense of belonging to a community or the whole nation because it strips a sub-set of the population from its constitutionally protected rights of quality education. In the first chapter, we argued that building a cohesive society is a post-conflict imperative. When a segment of the society does not receive equitable attention in education, the country is not only losing human potential, but it risks the alienation of bitter and disenfranchised individuals whose marginalization represents a lasting threat to the nation's peace and cohesion.

6.4 Efficiency

MoE and UNESCO (2015) says that while Nepal has steadily improved the efficiency of its educational system, efficiency is still a challenge. This section discusses the internal and external dimension of education inefficiency in Nepal.

6.4.1 Internal inefficiency

The EFA National Plan of Action (NPA) targeted an 80% efficiency rate by 2015 in Nepal's education system. Survival rates to Grade 5 for primary education and transition rates to upper levels of education, i.e. from primary to lower secondary, lower secondary to secondary and secondary to higher secondary, are still low, and overall the internal efficiency of the school education system is low. Khare and Slaney (2011) reported that in 2008 only 43 percent of students attained the primary education level, 32.6 percent attained secondary education level and 3.7 percent attained a university degree.

Table 4.4 presents the results of efficiency indicators reported by MoE in 2012. Available data indicates that the survival rates, coefficient of internal efficiency, and cohort graduation rates may fall short of meeting the EFA National Plan for Action targets. The efficiency indicators are better for primary education than lower secondary where only 69.5 percent of students who survived through Grade 5 reach Grade 8. This is consistent with the cohort completion rate where only 58.8 percent of the students who begin primary school end up graduating from Grade 8.

Table 4.4: Efficiency indicators for Nepal's public school system

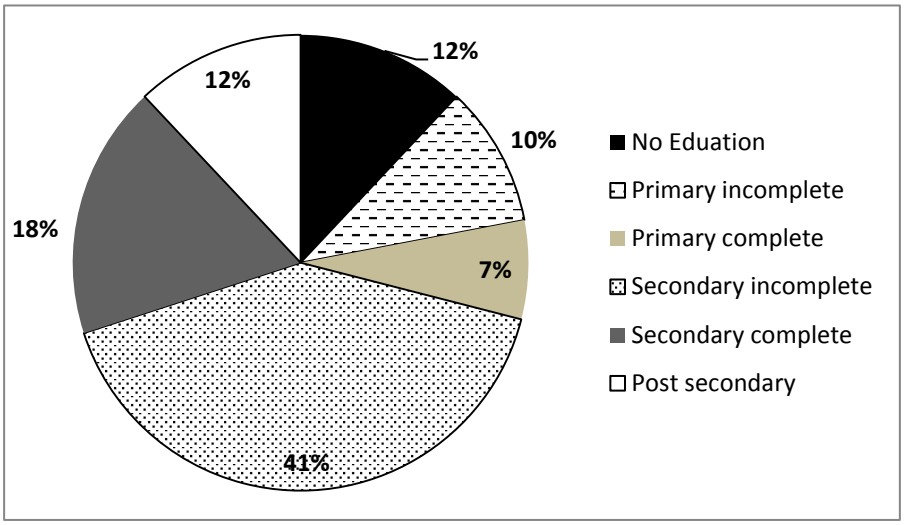
		Grade 5	**Grade 8**
Survival rates	Girls	84.3	69.5
	Boys	81.7	66.2
	Total	82.8	67.5
EFA national plan survival rate target for Grade 5		90%	
Coefficient of internal efficiency		**Primary**	**Lower secondary**
	Girls	74.9	67.1
	Boys	74.8	66
	Total	75.2	66.5
The EFA national plan target efficiency rate by 2015	80%		
Cohort graduation rates	Girls	75.8	60.2
	Boys	72.6	57.7
	Total	73.6	58.8
The EFA national plan target completion rate by 2015		100%	100% (Grade 8)

Source: MoE (2012), and MoE and UNESCO (2015)

Internal efficiency had improved in 2012 as 75.8 percent of students had completed primary schooling and 67.5 percent had completed lower secondary, compared to only 42 percent and 32.6 percent in 2008. While there were large improvements to 2012, the country has still not attained its EFA national Plan targets for survival rate, the efficiency coefficient for internal efficiency, and cohort graduation rates.

MoHP (2011) presented a sobering reminder of the human cost of the relatively low internal efficiency of Nepal's education system. It reported that 12 percent of Nepalese youth aged 15-24 years had no education, 10 percent had not completed their primary education, and 41 percent had not completed secondary education. This translates to a total of 63 percent of youth who were either unprepared or underprepared for gainful jobs inside or outside Nepal (Figure 4.12).

Figure 4.12: Educational attainment for youth aged 15–24 years



Source: EPDC (2014)

6.4.2 External efficiency

External efficiency is about the extent to which the competencies and skills of school and college graduates are compatible with the changing needs and technologies of the job market. Graduate unemployment remains high in South Asian countries despite a pressing need for skilled workers in the labor market (EIU 2014). This Economist Intelligence Unit report goes on to say that the region's secondary and tertiary education systems are not producing graduates with the skills that match the needs of many modern-day employers. The report asserts that this is partly due to instructional approaches that emphasize rote learning and do not equip graduates with the 'soft' skills needed in the modern-day labor market.

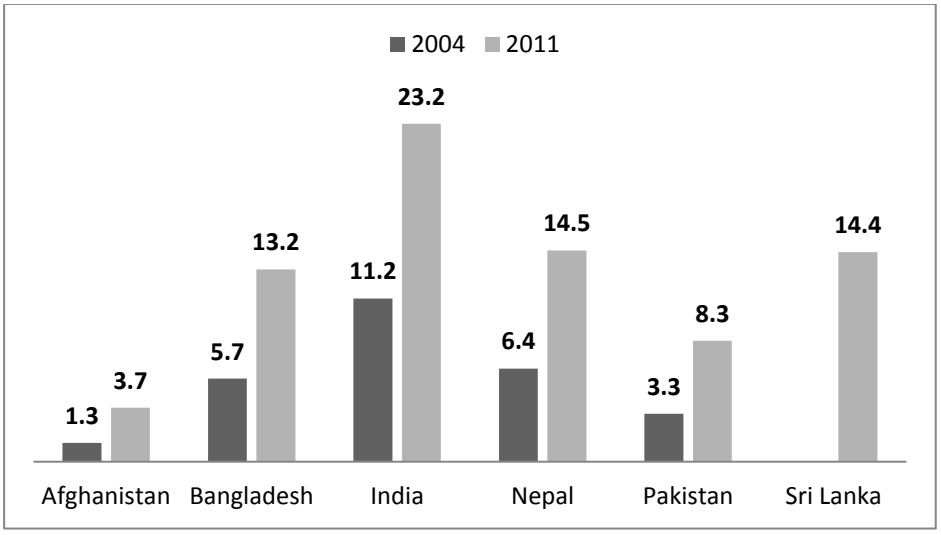
The Program for the International Assessment of Adult Competencies (PIAAC)[12] of the Organization for Economic Cooperation and Development (OECD) measures the cognitive

[12] https://nces.ed.gov/surveys/piaac/

and workplace skills needed for successful participation in the 21st century society and the global economy. Under the domains of literacy, numeracy, and problem solving, PIAAC assesses educational background, workplace experience and skills, occupational attainment, use of information and communications technology, and cognitive skills.

Between 2000 and 2011, Nepal increased its public budget for higher education from NPR 1.68 billion ($16.9m) to NPR 4.6 billion ($46.4m) and managed to more than double the percentage of its secondary school graduate enrolled in higher education (Figure 4.13). Nepal, like its neighboring South Asian countries, has witnessed a significant growth of its service sector between 15 and 20 percentage points Noland et al. (2012). The growth in the labor market has not, however, been accompanied with a growth in employment. According to EIU (2014: 10), university graduate unemployment is estimated at more than 20%.

Figure 4.13: Percentage of secondary graduates who enroll in higher education



Source: EIU (2014)

Unemployment in Nepal is defined as the share of the labor force that is without work but available for and seeking employment (Index Mundi 2016). Note that this definition does not encompass workers who are skilled but working in different jobs, or working part-time and would prefer to work full-time. Table 4.5 and Figure 4.14 provide a more detailed picture of unemployment and underutilized labor that also has implications to the efforts needed to improve education external efficiency.

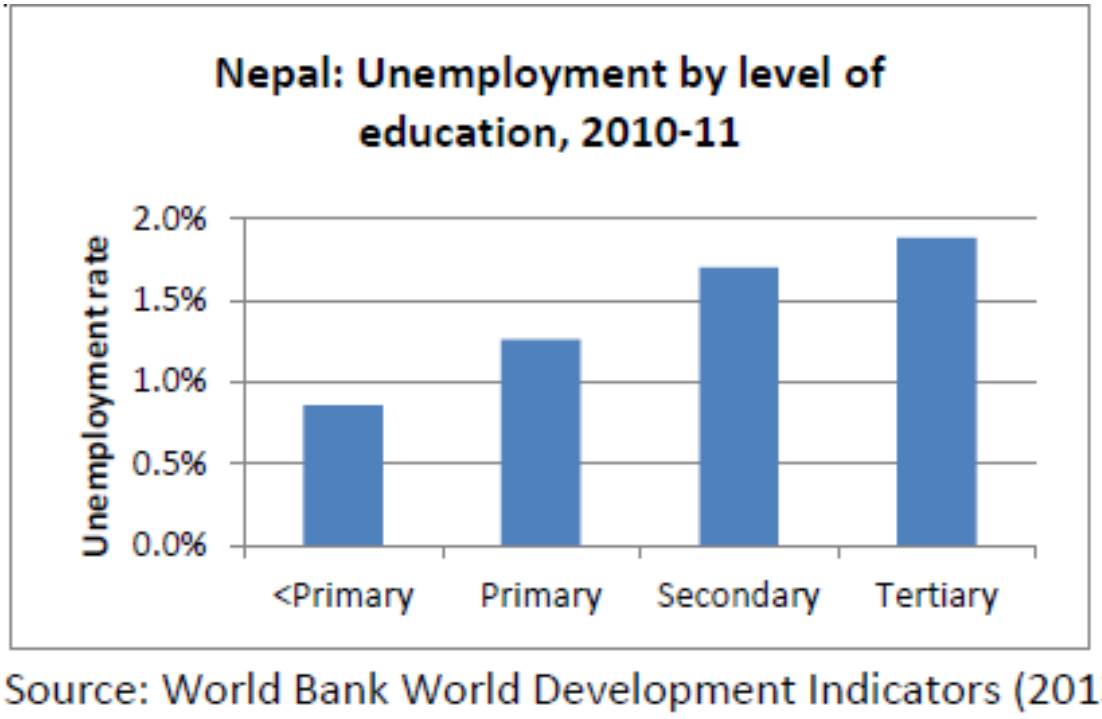
Nepal 13th Three Year Plan for 2014–2016 identifies three key growth sectors, tourism, infrastructure, and hydroelectricity. Describing the disconnect between the course and curriculum offered in schools and the employment market, EIU (2014) quotes Dr. Bhawani Shankar Subedi, the Executive Director of the Training Institute for Technical Instruction, who explains that sectors such as tourism, hotel management and banking services have "tremendous scope for expansion and growth" but, there are few degree programs offered to fill them.

Table 4.5: Breakdown of youth (age 15–29 years) under-utilization in Nepal's labor market (%)

	Unemployment	Time related unemployment	Inadequate earnings	Skills mismatch	Total underused
Nepal	**3.6**	**7.2**	**8.8**	**20.4**	**40**
Male	4.2	8.3	12.8	24.1	49.4
Female	3.1	6.4	5.8	17.6	33
Urban	12.6	6.8	13.6	30.2	63.3
Rural	2.1	7.3	8	18.8	36.3

Source: UN 2016

Figure 4.14: Unemployment in Nepal by level of education, 2010–2011



Source: World Bank (2015)

It is estimated that about one third of Nepal's population benefit from remittances from abroad (CBS 2014). These remittances accounted for 15.5 to 25% of Nepal's GDP. However, Nepalese workers have a low per capita rate of earning. According to World Bank data, Indian workers earn approx. $5.5 per unit of labor while Nepalese workers earn only $3.5 per unit of labor (EIU 2013). CBS (2014) identified low levels of skills, and hence low salaries and poor professional development as major contributing factors to the low average low earnings of Nepalese workers.

In 2010, around 40 percent of Nepal's labor force had no education, around 30 percent had completed primary education, and roughly 28 percent had completed secondary education. In 2030, EIU (2014) projects that less than 20 percent of Nepal's labor force

will have no education, primary school education attainment will be more than 20 percent, 55 percent of the labor force will complete secondary school, and 5 percent will have a tertiary education degree.

Measures to improve external efficiency thus must start as early as primary education. And given the projected 20 percent of laborers without education, career readiness through TVET, non-formal education and lifelong learning need to be prioritized to maximize the productivity of Nepal's labor force and thus improve the external efficiency of Nepal's education system.

6.5 Impact of Education: The Large Untapped Potential

Education has many social and economic benefits (see Table 4.6).

Table 4.6: The social and economic benefits of education

Economic		**Social**	
Public	**Private**	**Public**	**Private**
Increased tax revenues	Higher salaries and benefits	Reduced crime rates	Improved health and life expectancy
Greater productivity	Employment	Increased charitable giving and community service	Improved quality of life for offspring
Increased consumption	Higher savings levels	Increased quality of civic life	Better consumer decision making
Increased workforce flexibility	Improved working conditions	Social cohesion and appreciation of diversity	Increased personal status
Decreased reliance on government financial support	Improved personal and professional mobility	Improved ability to adapt and to use technology	More hobbies and leisure activities

Source: Forest and Altback (1998)

The economic impact carried out for this sector analysis principally gauged the private economic gains as they apply to salaries and employment. For the social benefits, this analysis presents the literature on the effect of education on health and life expectancy, the improved ability to adapt to and use technology, and social cohesion.

6.5.1 Economic impacts

A team of economists working on behalf of the Government of Nepal and the Millennium Challenge Corporation (MCC) conducted a study of the main constraints to economic growth in Nepal (MCC and GoN 2014). Using data from the 2010-2011 Nepal Living Standards Survey (CBS 2011b) it was calculated that for Nepal one additional year of schooling would lead to a 13 percent increase in GDP per capita. Compared to a 2006 estimate, which had calculated that the return on an additional year of school was a 6

percent increase in GDP per capita, analysis of the 2010-2011 data represents a 7-percentage point gain in five years.

According to MCC and GoN (2014), between 1996 and 2011, the marginal return to primary education has increased from 6% to 14%. It has also increased from 4% to 10% in secondary education. However, the marginal return to tertiary education has remained the same. The stagnant marginal return for tertiary education is consistent with the higher unemployment and under-employment levels among university graduates. This, as noted under the write-up on external inefficiency above, is due to the mismatch between university training and the different competencies and skills needed in the labor market, and to the limited gainful (high added value) job opportunities.

In summary, MCC and GoN (2014) demonstrates that the return to primary and secondary education is worth the cost it incurs. The 70 percent of youths aged between 15 and 24 years who have not attained secondary education represent a great reservoir of untapped potential that the government and its partners need to reach with programs of non-formal education, lifelong learning, and TVET to boost the country's economic growth.

About tertiary education, the smaller marginal benefits are an indicator that the skills and competencies of Nepali university graduates need to be retooled to respond to twenty first century enterprises both within Nepal and abroad. According to EIU (2014), this is contingent on a partnership between policy makers, universities, and employers that improve the quality and relevance of university education and the links between work and school that promote college and career readiness as early as primary school.

6.5.2 The social impacts of education

Reporting on success factors for women's and children's health in Nepal, the World Health Organization, (WHO 2015) reports that women's educational status has been inversely linked with maternal and neonatal mortality in Nepal. The same report notes that between 1996 and 2011, the proportion of women with no education reduced by 50 percent, and that the female literacy rate for the population aged 15 and above tripled by 2011. Women became more empowered and more aware of their health thus. Finally, the report points to clear evidence that the percentage of women aged 15–19 years who did not marry rose to 71 percent of their population in 2011. Key informant interviews indicate that education has led to changes in attitudes about early marriage and teenage pregnancy. Finally, the report cites women's education through literacy programs as a contributing factor for reducing neonatal mortality. Similar findings were reported by Ghimire and Samuels (2014) finding that positive changes in higher education enrolment coupled with the increasing age of marriage have had positive impact on girls' access to education. The report also found that strong female role models inspire young adolescent girls who look upon them as agents of change.

Jamison and Moock (1984) found a positive effect of education on efficiency for the cultivation of three major crops. The efficiency here refers to (1) the increased output per

change in education, (2) ability to acquire and process information about the cost and productive characteristics of other inputs, and (3) the willingness of individuals to adopt profitable new technologies. Calculations from the results suggest that a one-standard deviation improvement in the numeracy test score had a present value in efficiency gains in farming that was high relative to the probable cost of effecting such an improvement.

Education and improved civic engagement is another instance of social benefits that would be highly valued in Nepal. The French philosopher Pierre Bourdieu used the concept of symbolic violence to refer to the tacit and almost unconscious forms of cultural and social domination often intended to reinforce existing hierarchical structures of ruling and dominated classes. He designated education as one socialization institution that serves to perpetrate symbolic violence by reproducing the same social norms governing gender, socioeconomic status, caste, religion, geographical area, and disability. In other words, education is often a potent vehicle for socializing individuals to know and accept their places in society. In this regard, education can be as much a tool for inclusion as it is for division and exclusion.

The little anecdotal evidence about the role of education in peace building in Nepal is from a Unicef Nepal case study on the role of education in peace building (Vaux 2011). The study showcases the peace building role of schools as zones of peace (SZOP) as an example of the potential of schools to reduce violence in times of conflict. Another manifestation of the impact of education on civic engagement is Nepal's civil society. Dahal (2001) argues that the "third wave" of democracy in the 1980s sparked a global associational revolution. He also argued that to support democracy in Nepal, education has a decisive role to play in encouraging political participation and strengthening power and influence of citizens in national and local governance. Bîrzéa (2000) further expands the concept of the civic engagement potential of education to encompass the cultivation of experiential learning, collaborative learning, intercultural learning, action learning, and contextual learning. Bîrzéa argues that learning to live together in a diverse society necessitates an education system where students have the space to learn by doing (experiential), to learn from and with each other (collaborative), acquire the ability to empathize with other cultures (intercultural), encourage learners to understand their own actions through reflection (action learning), and foster a global vision of themselves and their societies that is rooted in understanding their values and identities (contextual learning).

The fact that civil society is vibrant in Nepal is a testimony to the social impact of education. It remains to be seen, however, that the education received is fostering unity, pluralism, and cohesion through the five dimensions of citizenship learning listed by Bîrzéa.

Finally, Nepal experienced armed conflict from 1996 to 2006. It is currently going through a difficult political transition to reinvent itself as a multiparty democracy that is committed to ending all forms of discrimination and oppression created by the previous feudal, autocratic, centralized and unitary system. Political activism in the country is rich

and vibrant, but can also be highly contentious and divisive. When this results in political gridlock and unrest, it can turn into moving sands that jeopardize the country's stability and ability to provide basic services to its citizens. It is important to note in this regard, that at the time of the preparation of this sector analysis, the country has been experiencing the fourth month of an economic blockade that threatens to reverse the socioeconomic gains made after the end of the decade long conflict. In this regard, civic education is critical because it teaches individuals the rights and obligations inherent in being a citizen or a resident in a sovereign country. It is, therefore, fair to claim that students who are raised to understand what it means to be a citizen, to live in a democracy, to treat people equally, to be accountable, to demand transparency, and to uphold the rule of law are more likely to promote social cohesion than those who don't. A diverse, pluralistic, and unified Nepal is, undoubtedly, a social benefit all policy makers, educators, and students should strive to achieve.

6.6 Cross cutting issues underlying problems with access, quality, equity, and efficiency

Many of the cross-cutting issues affecting access, quality, equity, and efficiency are captured by the questions posed in Koirala (n.d.). Inquiring about who to hold accountable for the quality of education quality, Dr. Koirala framed the questions as follows:

> *"Here comes the question of accountability for quality education: is this the business of the teachers? Is this the absence of monitoring from the immediate supervisor? Is this the professional colleague? Is this the incompetent School/College graduates who have been involved in teaching business? Is this the parents who seek the betterment of their children? Is this the SMC/PTA members who are supposed to improve school system? Is this the employer who hired the low-quality graduate's teachers? Is this the university/college/school who certified such candidates as successful? Is this the local community elites who are obliged to take care of the education of the children in their catchments? Is this the head teacher/principal who is supposed to mobilize the human, money, and material resources? Is this the rules and regulation providing agencies? Is this the evaluating agency (ies)?" (Koirala n.d.: 9)*

The short answer to the question is that all the above contribute to the problem and can contribute to the solution; but the magnitude of their respective responsibilities varies depending on their power, influence and engagement, or lack thereof.

MoE and UNESCO (2015) attributes some of the problems of access, equity, quality, and efficiency to the low literacy levels of parents in rural areas, low awareness among parents, and lack of capacity in school management committees and parent teacher associations to implement appropriate interventions. MoE (2015a) described system factors and factors related to teaching and learning contributing to problems in access,

equity, quality, and efficiency. Those challenges, summarized in Table 4.7, also apply to cultivating other academic and social skills.

Table 4.7: Factors related to low education achievement in Nepal

System factors	Teaching and learning factors
• Low instructional time allocated to teaching and learning of Nepali languages • No clear strategies for students with limited understanding of Nepali at school entry • Inadequate supervision, monitoring, and academic support • Teacher professional strategy is not working well • Inadequate focus on learning outcomes and accountability for student learning • School based assessment not focused on learning and outcomes • A significant number of schools do not have the identified priority minimum enabling conditions	• Low teachers' time on task • Teacher centered instruction • Lack of a comprehensive approach to teaching reading • Focus on teaching content, not reading skills • Reading outcomes are not assessed regularly • Multi-level classrooms with high disparities in reading levels • Lack of appropriate reading materials • Teaching practice does not provide for adequate revision, and consolidation, and specific remediation for weaker students.

Khaniya et al. (2015) found that current curriculum objectives are not formulated in terms of standards specifying performance, conditions of performance, and acceptable level of performance. This makes it difficult to align the curriculum with assessment and instruction. In the area of student assessment, the report notes that continuous assessment was not used effectively by teachers, resource persons and staff members of DEO, DoE, CDC and NCED as a tool for enhancing learning. Without effective continuous assessment, the system is deprived of access to data about how students are learning in real-time. This further undermines the ability of teachers to design data-based remedial work that addresses learning difficulties in a timely manner.

As noted in the section above on external efficiency, the inadequate focus on balancing academic training with life skills such as leadership, team work, and problem solving undermine job seekers abilities to be gainfully employed and limit their opportunities for professional advancement because they lack basic competencies to learn on the job. In a country where a significant proportion of the population is projected to have no education or primary education by 2030, non-formal education and lifelong learning should be significantly strengthened to ensure that education (formal, non-formal, public, or private) contribute to resolving the career and college preparedness and the readiness challenges facing the education sector. In this regard, funded solutions should be in place to reverse the trend of falling investment in technical education and TVET, which is now at a level of below 2 percent of the total educational budget (Khaniya et al. 2015).

Finally, students do not choose their gender, socioeconomic status, human and nutrition status, geographical location, disabilities, ethnic group or caste, language, or type of vulnerability. These factors, however, affect students' access, participation, and education

outcomes. The education sector has a legal, ethical, and moral responsibility to ensure that these conditions do not impede students' opportunities to learn, thrive, and improve their human and social condition. The equity lens must, therefore, be front and center in SSDP to break the cycle of vulnerability and marginalization and ensure that the diverse inhabitants of Nepal enjoy their full citizenship rights, and contribute in their turn to creating a more cohesive and prosperous society. There is no doubt that the intentions to achieve access, equity, quality, and efficiency goals are positive. The question to pose is the extent to which the existing system has the capacity to achieve results that reflect positive intensions.

7. READINESS FOR EDUCATION REFORM

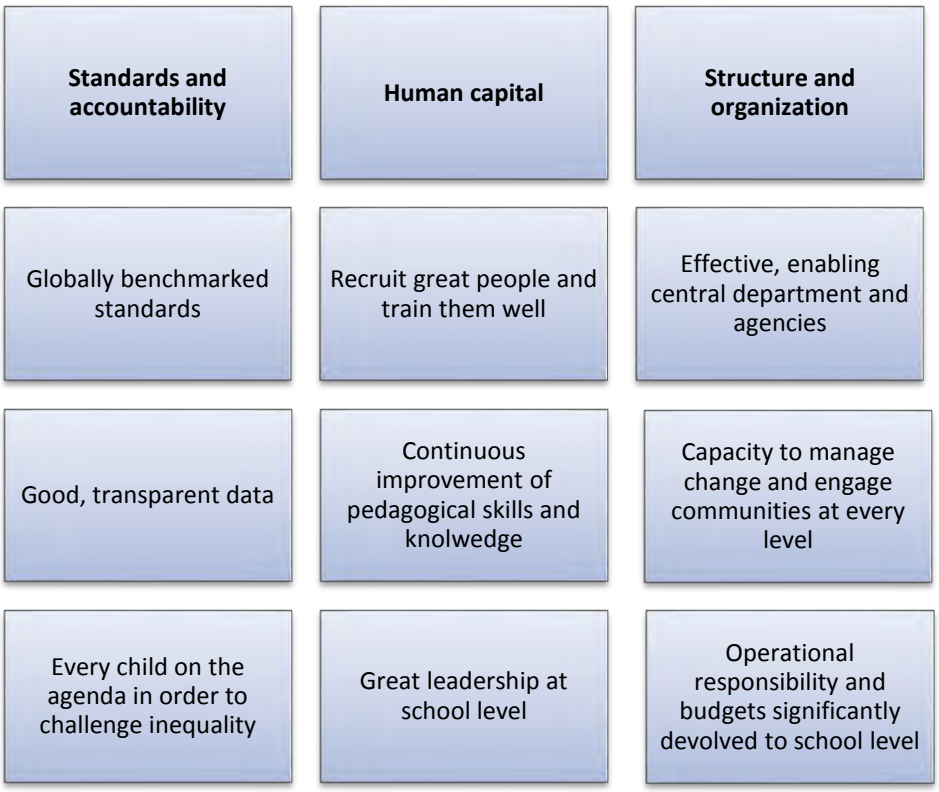
Nepal's public education system has accumulated a wealth of experience, expertise, and institutional knowledge. There have been great accomplishments in expanding access to education largely due to the efforts and resourcefulness of teachers, school administrators, and regional and central offices, often acting with limited resources. This system is analyzed here to figure out how to better support teachers and administrative staff to execute reforms. Many of the system's leaders share the realization of the need for reform. They must improve school sector effectiveness under the new federal structure.

Nepal is going through a transition with many voices demanding political, macro-economic, and social change. The need is to decide on a direction to meet the multiple demands of its citizens. The new direction will likely entail deep changes that may be difficult to sell as they do not seem to immediately fix pressing problems. In this regard, the challenge is to make a compelling case about prioritization that immediately addresses urgent problems, and produces a long-term plan for addressing structural and cultural issues. An important exercise in informing prioritization is to assess if it is possible to carry out needed changes. This is what this chapter is about.

At the systems level, factors contributing to student performance are interrelated. Barber and Mourshed (2009) summarized world class-education in terms of 12 building blocks (Figure 5.1). This shows that high quality human capital alone will not improve an education system. Of equal importance to improving student performance are the quality of standards and system accountability, and the support provided by organizational structures. In this chapter, we discuss readiness for education reform from two angles:

- the extent to which the policy framework provides needed legal backing for SSDP; and
- the extent to which the current system has the capacity quality standards, functional systems of accountability, effective human capital, and a result-focused structure and organization to support the implementation of SSDP. (This question is discussed under 'system readiness'.)

Figure 5.1: The building blocks of world-class education



7.1 Policy Framework

Nepal's new constitution, the current Three Year National Development Plan, the Education Act, and the School Sector Reform Plan encapsulate the mission, goals, strategies, culture, and national appetite for investing in education reform. The following write-ups examine the extent to which these documents support a shared vision for further developing Nepal's education sector.

7.1.1 Nepal Constitution

Nepal promulgated its new constitution on 20 September 2015. The new law of the land defines the State of Nepal as an "independent, indivisible, sovereign, secular, inclusive, democratic, socialism-oriented federal democratic republican state." (p.1). It enshrines education as a right in articles 31, 38, 39, 40, and 42 (see Box 5.1). It highlights the basic right to education with special references to the rights of women, children and persons with disabilities.

The constitution provides special rights for Dalits. Article 40 says that Dalit students shall be provided with free education through scholarships from primary to higher education. It also has a provision to enable Dalits to pursue higher education in technical and professional subjects.

Article 42 provides for special opportunity and facilities to be provided to citizens who are very poor and for whose communities are on the verge of extinction. Other

populations identified by the constitution as special groups that shall be prioritized for access to education are the families of martyrs, families of those who disappeared in the conflict, persons who fought for democracy, victims of conflict, and displaced persons.

Box 5.1: Rights to education in Nepal's constitution, 2015

31. Right to education:

(1) Every citizen shall have the right to access to basic education.
(2) Every citizen shall have the right to compulsory and free basic education, and free education up to secondary level.
(3) The physically impaired and citizens who are financially poor shall have the right to free higher education as provided for in law.
(4) Visually impaired persons shall have the right to free education with the medium of brail script.
(5) Every Nepali community living in Nepal shall have the right to acquire education in its mother tongue up to the secondary level, and the right to open and run schools and educational institutions as provided for by law.

38. Rights of women:

(5) Women shall have the right to special opportunity in the spheres of education, health, employment and social security based on positive discrimination.

39. Rights of children:

(2) Every child shall have the right to education, health care nurturing, appropriate upbringing, sports, recreation and overall personality development from family and the State.
(3) Every child shall have the right to formative child development, and child participation.

The constitution describes the following policies to be implemented to fulfil the basic educational needs of citizens as follows:

- Make education scientific, technical, professional, skill-oriented, and employment and people-oriented to prepare human resources that are competent, competitive, moral, and committed to national interest.
- Increase the investment of the State in the educational sector, and regulate and manage the private sector investment in it to make education service oriented.
- Make higher education easily available, high quality and accessible, and gradually make it free.
- Establish and promote information centers and libraries for the personality development of citizens.

The following social justice and inclusion policies of the constitution is tied to education:

> *"(7) [Provide] appropriate opportunities to youths for their contribution to the all-round-development of the State by increasing their participation in it, through the creation of an atmosphere for them to use their political, economic, social and cultural rights, and by providing special opportunities in educational, health and employment sector through their personality development for their empowerment and all-round-development."*

The new constitution thus establishes a clear and compelling vision about a right based education system that serves the national and human development goals of the country. It also represents a watershed in education delivery in Nepal because it institutionalizes the transition from a unitary system of education delivery to a federal system. The provisions, however, are only as real as the laws and policies that enforce them. This is discussed follow.

7.1.2 National Development Plan

Education reform should be integrated within the broader vision of national development. Nepal's national development plans represent the cross-sectoral road maps to meet the overarching development goals. However, education is not one of the five priorities of the 13th National Development Plan (2014/15 to 2016/17) (Box 5.2). Education, together with health, and the other Millennium Development Goals seems to compete for space under the priority area of social services and social protection. Related to this the website of the National Planning Commission[13][14] sets seven goals of:

- rebuilding a resilient nation
- entrepreneurial farmers and productive farms
- gender equality with conscious empowered women
- policy reform for growth take off
- nurturing nature to harness its riches
- connecting communities with markets
- building infrastructure and creating jobs.

Equitable access to quality education is a prerequisite for the achievement of the above seven goals. However, it is not explicitly given as a national priority.

The fact that education is not given as a national development priority highlights what may be a mismatch between what education reform architects and other government decision makers believe is most urgent. This, in turn, is perhaps rooted in an organizational mismatch in perceptions of:

- the need for education reform;
- the fit with other sector-specific programs (infrastructure, agriculture, tourism, health, social protection and social services, and governance and public financial management);
- needed and available resources;
- evidence to support the urgency of education reform;

[13] http://www.npc.gov.np/en

[14] The NPC is the apex advisory body of the Government of Nepal for formulating a national vision, periodic plans and policies for development.

- the readiness to work across sectors to support educational improvement; and
- the capacity of government leadership to synergize all its programs so they are mutually supportive, and converge to achieve the overarching national development goals.

Box 5.2: Nepal's Three-Year Plan

The objective of Nepal's current Three-Year Plan (FY 2014–FY 2016) is to achieve sustainable, broad-based, inclusive economic growth. It has five priority areas.

1. Infrastructure

Develop energy, transport, and urban services infrastructure as a means to underpin growth and inclusion. Large sections of the population lack access to services and economic opportunities:

i) **Energy.** Nepal lacks energy security in both its rural and urban areas. The plan calls for a build-up of electricity generation capacity, mainly through storage dam hydropower and renewable energy schemes, as well as expansion of transmission and distribution systems. A rural electrification program is a priority and based on renewable sources (solar, wind, and hybrids) and mini run-of the river hydro plants. Nepal also intends to become an exporter of hydroelectricity, with India as the initial target market. This effort is being conducted under the South Asia Sub-regional Economic Cooperation program.

ii) **Transport.** The plan aims to expand the strategic and rural road networks and air transport capacity to increase connectivity, provide greater access to basic services and markets, and promote tourism and trade. The South Asia Sub-regional Economic Cooperation program will be the platform for strengthening cross-border connectivity, an effort matched by work on trade facilitation, including customs modernization.

iii) **Urban services**. The plan aims to improve such basic services as water supply, wastewater management, and urban transport in large, medium, and small urban centers. Water and sanitation quality and service levels are poor. Several projects will be given priority, including the completion of the Melamchi Water Supply Project to address the water shortage in Kathmandu Valley).

2. Agriculture

Increase agricultural productivity and transformation. Productivity is affected mainly by poor water management and incomplete irrigation systems. It is also affected by ineffective input supply arrangements and low quality extension services, limited processing, and high post-harvest losses. The plan envisages investments in rural roads, water management, and reforms around input supply and extension.

3. Tourism

Modernize infrastructure (airports) and create conditions for private sector investment. The latter efforts will include improvements in governance and public financial management (PFM). The sector needs more and better-skilled workers, especially from the young entering the labor market.

4. Social Services and Social Protection

Invest in health, education, and skills. The plan also includes gender actions to improve equality. Other activities will focus on improving the indicators in areas under the Millennium Development Goals where Nepal lags behind the rest of the region. A food and employment program will also be put in place.

5. Governance and Public Financial Management

The priority is strengthening PFM. This will include improvements to public procurement, results-based management, and corruption prevention and control. The government also intends to accelerate basic reforms to encourage greater private sector investment and public–private partnerships.

6. Environment

The plan addresses climate change adaptation and mitigation and overall environmental protection.

7. Reforms

Encourage private sector investment, especially in the energy sector. PFM is part of the agenda, with a special focus on regulatory and legal frameworks.

8. Gender

Pursue gender equality and reduce regional disparities.

Source: NPC 2014

7.1.3 The Education Act

Six years after the adoption of the School Sector Reform Program (SSRP) in 2009, the government approved the bill to amend the Education Act (Kathmandu Post 2015). The SSRP proposed restructuring school education to include the two levels of basic education (Grades 1 to 8), and secondary education (Grades 9 to 12). SSRP also proposed compulsory education to Grade 8 and the formation of a Central Examination Board. None of these provisions were legally binding because there was no amended Education Act to enforce them. As of the time of writing this sector analysis, the final approval of the amendment to the Education Act has yet to become a reality.

The fact that key parts of SSRP have yet to be fully implemented due to the delays in amending the Education Act represents a major hindrance to proposed reform and fuels skepticism about the usefulness of drafting the follow-on SSDP. The six-year delay in amending the Education Act is symptomatic of what the Asian Development Bank's Institutional Analysis and Capacity Development Plan (Moriani et al. 2013) characterized as a state capability trap where reform is not supported by legal measures to support implementation (see Table 5.1).

Table 5.1: Nepal's state capability trap for implementing SSRP (Moriani et al. 2013)

Incorrect assumptions	Form over function	Unrealistic expectations	Too much too soon
An amended Education Act	Education Policy Committee, Education Review Committee	Pace of change to match that of more stable, strong countries	Unwieldy reforms
Local government with elected leaders	School management committees, parent teachers' associations	Breadth of change that can cover all aspects with limited financing	Improper sequencing

High bureaucratic efficiency	Social and financial audits		Inadequate financing for critical elements.
A shared vision			

The School Sector Reform Program (SSRP, 2009–2016) is the latest of a series of national education programs implemented by the Government of Nepal since the 1990s — Basic Primary Education Projects I and II (1992-1998 and 1999-2004), Community School Support Program (CSSP, 2003–2008), Secondary Education Support Program (SESP, 2003-2009), and Education for All (EFA, 2004, 2009).

Landmark reforms pursued include:

- the devolution of decision making powers to communities and school management;
- the expansion of demand-side intervention schemes to bring children from marginalized groups to schools through per student financing and scholarships;
- the decentralization of teacher hiring through the provision of teacher salary grants;
- opening the textbook printing and distribution system to the private sector in selected regions in Nepal; and
- focusing support from development partners on a set of coherent and common education objectives.

We began this sector analysis report by noting that Nepal is currently at a crossroads marked by post-earthquake reconstruction, the rollout of the federal system established under the new constitution, the transition to the Sustainable Development Goals, and a national goal to graduate from least developed country status by 2022. When the process of designing SSRP implementation began in 2009, the country was also at a crossroads. A comprehensive peace agreement had recently been signed, a new Constituent Assembly had been elected in 2008, the country was declared a Federal Democratic Republic, and the monarchy abolished. SSRP represented the educational roadmap for (1) expanding access and equity, (2) improving quality and relevance, and (3) strengthening the institutional capacity of the entire school system. Some notable reforms under SSRP include (1) organizing school education into basic (1-8) and secondary levels (9-12); (2) resetting the minimum qualifications of teachers; (3) revising the curriculum for the integrated secondary education, and (4) revising the examination system to reflect the proposed new basic secondary education structure. Unfortunately, none of these reforms have materialized because the requisite amendments in the Education Act and related regulations have yet to be approved.

In summary, the low prominence of education reform in the Three Year National Development Plan, delays in amending the Education Act, and the resulting delays in implementing key reform provisions of SSRP suggest that the mission, goals and strategies in the constitution and SSRP are not adequately supported by national and

sector specific policies that would elevate education sector reform from a sector specific to a national priority.

SSDP is not just an educational priority; it also represents the vision for the education system that will graduate Nepal from LDC status by 2022. Unless the proposed reforms are accompanied by legislative measures that allow it to be implemented fully and deeply, it is unlikely to be taken seriously and will be dismissed as another example of the state capability trap that will fizzle out as it is based on incorrect implementation assumptions. Successful policies and compelling strategies depend on adequate system capacity to implement change with integrity and fidelity.

7.2 Institutional and system readiness

Kingdon (2003) argues that policies only become prominent in the political arena if they:

- respond to problems that should and can be solved
- provide solutions that are technically sound and financially feasible
- garner political support by building wide coalitions that advocate for them.

The fact that important provisions of SSRP have not been implemented because the Education Act has not been amended begs the question about what has been done to build the political pressure for the full implementation of SSRP and to ensure that SSDP provisions do not go the same way.

As SSDP's architects make the political case for its full implementation, the following are some big issues that will need to be unpacked and operationalized in terms of policies and programs:

a) The transition from a unitary to a federal education delivery structure in the Constitution

Except for describing which type of education falls under which jurisdiction, the Constitution only broadly indicates how federalism will be implemented in the education sector.

For example:

- Schedule 6 lists higher education under provincial powers and jurisdiction.
- Schedule 8 lists basic and secondary education under the powers and jurisdiction of the local level — referring to village and town executives.
- Schedule 9 lists education under the concurrent power/jurisdiction of the Federation, provincial and local levels.

After the elections to the first Constituent Assembly in 2008, the transition from a unitary to a federal system was the subject of wide national debate among policy makers, politicians, academics, and non-state organizations. In 2009, UNESCO's Kathmandu office facilitated the establishment of a "Federalism and Education Support Group" made up of leading scholars in the education sector. The Support Group members authored thematic

papers around free and compulsory education, private schooling, language issues, student pathways, teacher management, and financing education (AASAMAN Nepal 2014). In 2009, the papers were disseminated to Constituent Assembly members, political party leaders, government officials, and development partners through a workshop at the Centre for Constitutional Dialogue, a National Symposium on Federalism and Education, and in the weekly newspaper *Aajako Shiksha*.

The Federalism and Education Support Group (FESG) then authored four papers around the transition to federalism in higher and tertiary education. In 2011, the group produced four papers about (1) curriculum for Federal Nepal, (2) higher education governance, (3) financing of higher education, and (4) open and distance higher education in Nepal. These papers inform the tertiary education strategy about transitioning from a unitary to a federal education delivery structure.

b) Lingering challenges to transition from a unitary to a federal education structure

National debates on federalism and education have tackled the following challenges. The overarching gap is to translate proposed solutions into a road map for transitioning from a unitary structure to a federal structure. This road map should articulate feasible plans that address:

1. Free and compulsory education for all as a shared responsibility of federal, provincial, and local governance structures (Parajuli and Acharya 2014).
2. The regulation and management of private schools, including the issue of ensuring free education in private schools (Bhatta 2014).
3. Issues of language instruction and languages of instruction in a federal Nepal (Aryal 2014).
4. Providing student pathways that ensures equitable access to quality education for all,
5. The modalities of teacher recruitment and appointment in the federal structure (Lal Bhomi and Suwal 2014).
6. Equitable financing of the transition that spells out how resources should be equitably distributed at the federal, provincial, and local levels (Lohani 2014).

c) Policy considerations to support the transition toward a federal education system

Coming up with a strategy that addresses the above six areas fits under the policy directions and the strategies of the SSDP as described in its concept note (MoE 2015b). As SSDP implementers work on reforming rules and regulations to align school governance and management with the Federal constitutional mandate, part of the transition challenge is to propose a plan with policies that, according to Kingdon (2003), demonstrate the following criteria for survival:

1. *Technical feasibility:* Do the policies reflect understanding of the mechanisms by which they will be implemented in practice? Have these mechanisms been tried before?

What is the evidence that the proposed policies succeeded or will succeed? Are there adequate staff at federal, provincial, and local levels who understand the proposed changes and will implement them successfully?

2. *Value acceptability:* Are the proposed changes compatible with the values of the subject matter specialists? Among the many value laden issues about which specialists' values may collide are: language(s) of instruction; role of government in education; type of school governance; efficiency vs. equity; public vs. private; student assessment; and school to career pathways. Reflecting on value compatibility, Aryal (2014) wonders how the Nepali school and educational system, which is linked to the political ideology of Panchayat, will handle the federal implications of history content, language use, school management and financing, and religious schools. The challenge with value acceptability is that, if not addressed, it can result in policies that are too polarizing to implement.
3. *Tolerable costs:* The rights, educational policies, and social justice articles in the Constitution are equity concerns with cost implications. An essential component of the financial feasibility of the SSDP rests on the proposal of actionable and fundable strategies that politicians, interest groups, and funding organizations will support.
4. *Political viability:* Kingdon (2003) argues that many reform agendas either achieve prominence or are shelved because of the direction of the political winds. These winds often reflect the public mood, pressure group agendas, election results, and the ideological positions of political stakeholders. Education reform architects should be able to argue that SSDP reflects public aspirations about equitable and quality education. The preamble to the constitution commits to

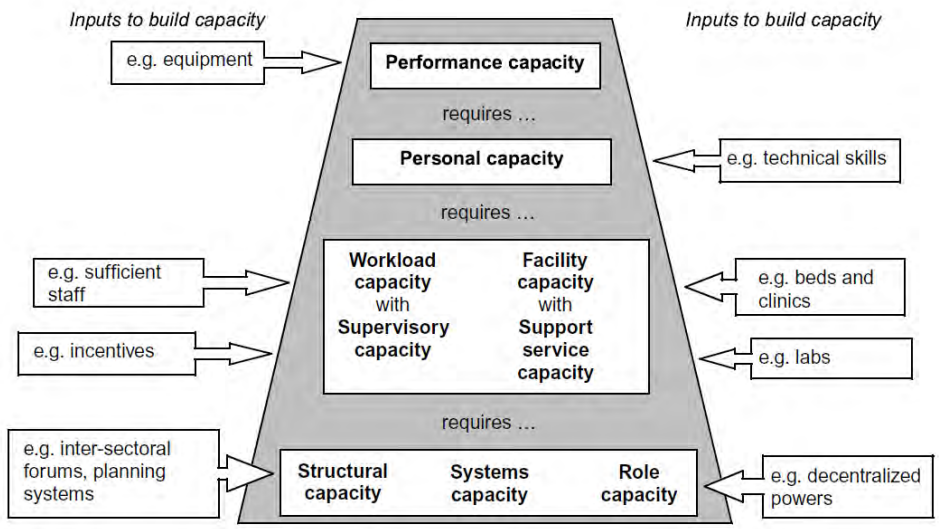
   "ending all forms of discrimination and oppression created by feudal, autocratic, centralized, and unitary system. It further commits to … ending discrimination relating to class, caste, region, language, religion, and gender."

   Making the case in the public arena that SSDP contributes to achieving these ideals is an important step in security its political viability.

7.3 Capacity to Undertake SSDP

Using the lens of the dimensions of system capacity described we operationalize system capacity in terms of nine dimensions to assess system capacity in the Nepal education sector. Figure 5.2 and Table 5.2 visualizes how they are related using an example from the health sector.

Figure 5.2: A hierarchy of needs of system capacity building:



Source: Potter and Brough (2004)

Table 5.2: The nine dimensions of capacity in systems

System component	Description
1. Performance capacity:	Are the tools, money, equipment, consumables, etc. available to implement SSDP? Regardless of how well trained they may be, teachers or administrative staff need minimum enabling material conditions to fulfil their roles.
2. Personal capacity:	Are staff sufficiently knowledgeable, skilled and confident to perform properly? Do they need training, experience, or motivation? Are they deficient in technical skills, managerial skills, interpersonal skills, gender-sensitivity skills, or specific role-related skills?
3. Workload capacity:	Are there enough staff with broad enough skills to cope with the workload? Are job descriptions practicable? Is the skill mix appropriate?
4. Supervisory capacity:	Are reporting and monitoring systems in place? Are there clear lines of accountability? Can supervisors physically monitor the staff under them? Are there effective incentives and sanctions available?
5. Facility capacity:	Are training centers big enough, with the right staff in sufficient numbers? Are classrooms of a suitable size to cope with the student workload? Are there enough offices for administrative support staff?
6. Support service capacity:	Are there training institutions, education materials supply organizations, research facilities, and quality control services? These services may be provided by the private sector, but they are all required.
7. Systems capacity:	Do the flows of information, money and managerial decisions function in a timely and effective manner? Can purchases be made without lengthy delays for authorization? Are proper filing and information systems in use? Are staff transferred without consulting with local managers? Can private sector services be contracted out as required? Is there good communication with local communities? Are there sufficient links with NGOs?
8. Structural capacity:	Are there decision-making forums where inter-sectorial discussions occur, decisions are made, records are kept, and individuals are held accountable for non-performance?

9. Role capacity:	This applies to individuals, to teams and to structures such as committees. Have they been given the authority and responsibility to make the decisions essential to effective performance, whether regarding schedules, money, or staff appointments, etc.?

Source: Adapted from Potter and Brough (2004)

7.3.1 Performance capacity:

'Performance capacity' assesses the extent to which the educational system has the minimum enabling tools, money, equipment and consumables available to implement SSDP. Realistic estimates of what it will cost to implement SSDP is foundational to determining whether the country can raise the needed resources. Discussing the financing of SSDP, the authors of SSDP's concept note listed five policy directions and five strategies to achieve them (see Boxes 5.3 and 5.4 for details). These policies and strategies represent assumptions about the financial viability of SSDP.

Box 5.3: Policy directions for financing SSDP

1. The government to bear the cost of school education including one year's PPE/ECED.
2. Cost-sharing between central and provincial governments.
3. Schools to be the standard cost unit for government education grants and provisions to ensure minimum standards.
4. Enhance the roles of the private and public sector to fund educational programs.
5. External support in education to focus on major areas of investment.

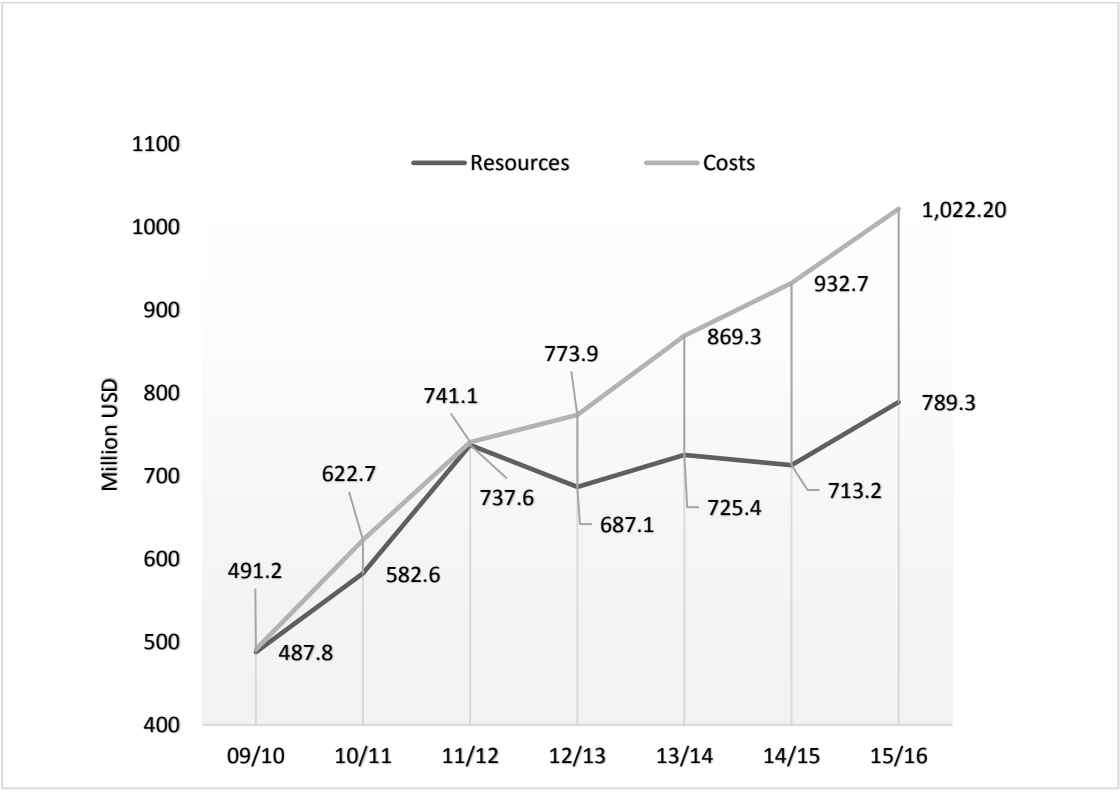
Box 5.4: Strategies for implementing policy directions for financing SSDP

1. Adopt a formula based allocation of resources such as basic/committed grants, incentive grants, and special package grants.
2. Adopt the results-based resource allocation system.
3. Develop an overall investment framework for education to harmonies the roles and responsibilities of federal, provincial, and local governments.
4. Develop standard types of schools, such as large, residential and special schools, and use approved minimum standards for these types of schools as standard units for cost estimates and disbursing education block grants. Develop a system for cost-benefit and output analyses to help ensure value for money.
5. Maintain financial discipline and good governance by carrying out public expenditure tracking surveys, service delivery surveys, regular monitoring, and public hearings and by administering report cards.

It is important to investigate whether the financial viability assumptions in Boxes 5.3 and 5.4 are correct. This could include, among other things, a detailed account of how proposed policies and strategies are or will be implemented to ensure that SSDP is financially viable. In the meantime, here are a few cautionary notes on current performance capacity:

Using data from the Government's Medium Term Expenditure Framework (MTEF), under any scenario, the costs of SSRP have been substantially higher than envisioned in 2009 (Cumming et al. 2012). The Asian Development Bank estimated the cost to be 57 percent higher than originally planned. Cumming et al. (2012) made a separate estimate that included development partner funding. There has been an increasing gap between resources and costs beginning in 2012/2013 with a gap between resources and costs of $232.9 million dollars in 2015/2016 (Figure 5.3). More current cost and resources data will help provide more accurate figures about the gap.

Figure 5.3: SSRP financing gap in $ million according to mid-term review (Cumming et al. 2012)



Starting in 2014/2015, the gap between the resources available for SSRP and the costs of implementing it have significantly widened. As Nepal transitions from SSRP to SSDP, it is crucial to find out if the financing gap is indicative of real needs in performance capacity rather than symptomatic of an inefficient system that will not necessarily be fixed with more money. The other dimensions of capacity indicate potential areas of inefficiency.

On a positive note, the SSRP Extension Plan for 2014/15–2015/16 (MoE 2014) highlighted the joint financing agreement among development partners as the most important achievement of SSRP. The implication of the sector wide approach (SWAp) lies in the introduction of a holistic perspective for school sector reform, and providing the framework and the demand for a coherent and sector-wide development approach to education that consolidated development partner's sub-sectoral interests.

In summary — does the country have the performance capacity to provide adequate resources for SSDP? The answer depends on:

- what measures are taken to close the existing resource gap;
- the costing of SSDP activities and how this informs financing priorities;
- the ability to diversify and augment sources of funding from non-government sources; and
- the overall performance of the country's economy.

Regarding the fourth condition, NRB (2015) predicted that the country's economic growth could contract to minus 0.9 percent in the current fiscal year (2015/16) due to the fuel and commodity shortage caused by the blockade imposed by India from 23 since September 2015, and the protests in the Terai region. NRB predicted growth of minus 0.9 if the blockade continued until January when in fact the blockade continued until February. The macroeconomic implications of the loss in revenue has direct implications on the budget available to expand the performance capacity of SSDP in, at least, the short term.

7.3.2 Personal capacity

This section looks at the extent to which staff are sufficiently knowledgeable, skilled, and confident to perform properly and at staff needs in terms of training, experience, and motivation. Some of the skills examined in a personal capacity assessment include technical skills, managerial skills, interpersonal skills, gender-sensitivity skills and specific role-related skills (roles of teachers, administrative support staff, principals, local, provincial, and central ministry leaders and support staff).

As Nepal transitions to the federal education delivery structure, the challenge is to:

- train and support teachers to provide high quality instruction; and
- ensure that the human resources at the central, provincial, local, and school level provide effective and enabling support to teachers, students, parents and local communities.

Personal capacity of teachers and head teachers

During SSRP, good progress has been made on increasing the number of qualified teachers. The backlog of untrained primary teachers has been cleared and significant advances have been made in clearing the backlog of untrained lower secondary teachers (Cumming et al. 2012). By 2014, 94.4 percent of primary school teachers, 80.6 percent of lower secondary teachers, 90.4 percent of secondary school teachers, and 67.6 percent of high secondary teachers were trained.

While good progress has been made on increasing the number of trained teachers, student results (see Section quality section at 4.1.3) cast doubt about teachers' capacity to deliver quality instruction. In this regard, Poyck et al. (2016: 44) concluded: "Even though the

percentage of trained teachers has increased significantly in recent years, it appears that the training is not being translated into classroom practice."

Regarding head teachers, Moriani et al. (2013) describes the roles of head teachers as largely managerial. However, their qualifications do not align with their managerial roles since they are sourced from teaching staff. The above report continues to note that there is hardly any investment in improving the managerial capacities of head teachers. And while management is important, it is only one of the many competencies an effective school leader should demonstrate to lead a twenty-first century school. In this regard, leading Nepal into the future requires expanding the list of head teachers' competencies to include, in addition to effective management, (1) visionary leadership, (2) instructional improvement, (3) inclusive practice, (4) ethical leadership, (5) and understanding the socio-political context. For an illustrative example of what each of these competencies means, please consult the competencies of effective educational leadership in Massachusetts DoESE (2016) in Appendix B2.

Personal capacity of support services at central, provincial, and local levels

Discussion about personal capacity often focuses on teachers, when, in fact, there are crucial staff at all levels of education delivery who support teachers. Examples are staff in charge of curriculum development, testing services, non-formal education, monitoring and evaluation, planning, human resources, capacity building, TEVT, information and communication technology, school supervision, and community outreach.

At the personal capacity level, De Grauwe and Calliods (2014) identified three areas for urgent consideration in building the capacity of support services at federal, provincial, and local levels:

- Stronger knowledge and deeper insights into the implications of the new federal structure to the organization of educational administration.
- Strengthening the skills of provincial and local officials in educational planning, management, and budgeting.
- Developing clear professional profiles and recruitment criteria to ensure that staff in the provincial and districts levels have the competencies necessary to fulfil their duties successfully.

The three above areas are consistent with the results of the rapid assessment survey of Moriani et al (2013)[15]. At the level of personal capacity mid-to-senior managers viewed human resource capacity as partially developed in (1) engaging in multi-stakeholder dialogue, (2) analyzing a situation and creating vision, (3) formulating policy and strategy, (4) budgeting, management, and implementation, and (5) monitoring and evaluation.

[15] Note that the response rate to this rapid assessment was reported to be very low, so the findings should be treated as only illustrative of some of the personal capacity needs, rather than representative of the full scale of those needs.

They also stressed the need for investing in developing the leadership and management skills of district education officers.

Aryal (2014) and De Grauwe and Calliods (2014) noted that decentralized local governance structures have a long history in Nepal. In the education administration, the central ministry is at the top of a hierarchical structure that comprises regional education directorates, district education offices, resource centers and schools. District and village education committees play a central role in approving the education plans prepared by their DEOs, resource centers and schools. This shows that the decentralized governance of educational services is not new. The challenge is to ensure that staff at provincial, district, and local levels have the personal capacity to improve local educational governance and demonstrate the ability to resolve local educational issues better than business-as-usual in the unitary education system. As noted earlier, Moriani et al (2013) identified the following competencies for targeting further capacity building:

- leadership and management skills
- stakeholder engagement
- situation analysis
- vision creation
- policy and strategy formulation
- budgeting management
- program implementation
- monitoring and evaluation.

From an education standpoint, this sector analysis reaffirms the centrality of these competencies, but cautions that these areas of personal capacity should be centered on ensuring that all students in Nepal get equitable access to quality education. If we tie this to the building blocks of world class education detailed in Box 5.5, personal capacity for educational administrators should ensure that they understand and demonstrate the standards for effective administrators. These include:

- clarity about educational outcomes;
- ability to use data to track progress;
- commitment to promoting equity and ensuring that all children have equitable opportunities to learn;
- understanding the competencies needed in effective teachers;
- supporting teachers and head teachers to improve their instructional practices; and
- communicating effectively with teachers, teacher unions, parents, interest groups, and community members to capitalize on existing assets and address challenges before they become disruptive.

The quality of administrative support staff at the federal, provincial, and local levels should be defined by the same standards to promote coherence in performance within the envisioned administrative layers of the federal structure.

Box 5.5: Examples of standards for professional practice in education

The six domains for administrator professional practice:

1. Setting a widely-shared vision for learning.
2. Developing a school culture and instructional program conducive to student learning and staff professional growth.
3. Ensuring effective management of the organization, operation, and resources for a safe, efficient, and effective learning environment.
4. Collaborating with faculty and community members, responding to diverse community interests and needs and mobilizing community resources.
5. Acting with integrity and fairness and in an ethical manner.
6. Understanding, responding to and influencing the political, social, legal and cultural context.

Source: Oregon DoE (n.d.).

See detailed description at Appendix B1

In Nepal, the challenge is not just to increase the number of young people who meet the required competencies that enable them to be successful and productive citizens. There is a much more fundamental challenge that partly accounts for the protracted political transition since the Comprehensive Peace Agreement, 2006. This challenge is to affirm diversity and protect social cohesion, pluralism and unity. Educational administrative staff are at the forefront of this battle because of their central role in children's socialization. Ensuring that personal capacity balances management and interpersonal skills with commitment to access to equitable quality education is crucial in strengthening their readiness for SSDP.

Workload capacity

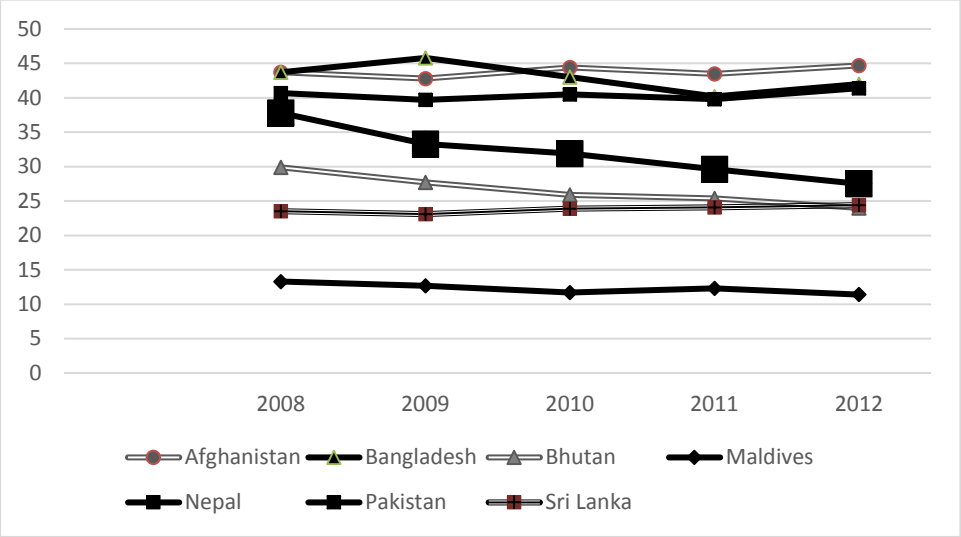
Workload capacity has quantitative and efficiency dimensions. The first dimension is simply about the availability of staff to fulfil their job requirements. The second-dimension measures whether staff have the appropriate mix of skills to undertake multiple assignments efficiently. We look at the teacher/student ratio as the quantitative indicator of workload capacity. For the efficiency capacity, we use measures of workers' productivity as a proxy for the workload capacity of teachers and administrative staff.

Pupil-teacher ratios

In 2014, Nepal's primary school pupil-teacher ratio was estimated at 24 (Consolidated Report III Paper 2070). Nepal's primary student-teacher teacher ratio has been steadily decreasing compared to neighboring countries in South Asia (Figure 5.4). The ratio has

decreased across Nepal's five development regions, and for the most part in primary, lower secondary, and secondary schools (see Figures 5.5, 5.6 and 5.7).

Figure 5.4: Primary school pupil-teacher ratio in South Asia

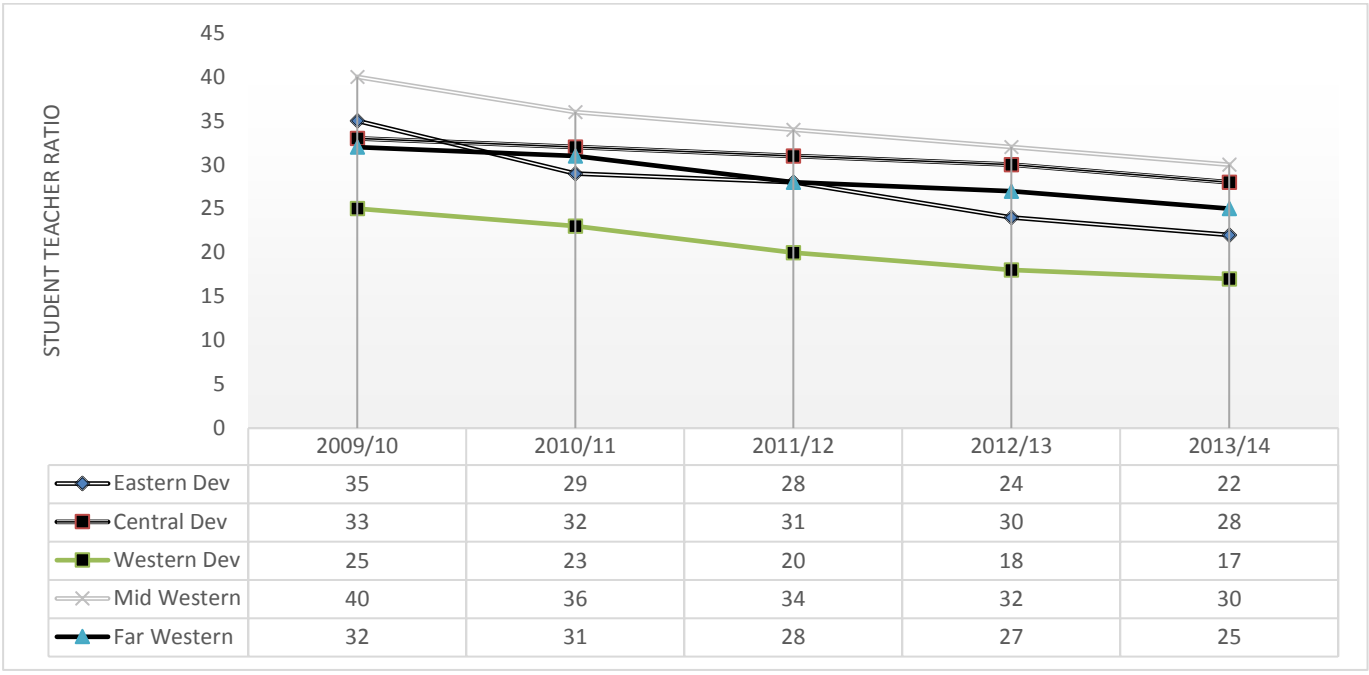


Source: World Bank (2016)

While the trend of lower pupil-teacher ratios is consistent across all development regions, some regions seem to have higher workloads than others, on average. The Mid-Western region has the highest pupil-teacher ratio, while the Western region has the lowest. Of concern is the more than 50 pupil-teacher ratio in lower secondary schools in the Mid-Western Region. This ratio has hardly decreased since 2009/2010. NPC and UNDP (2014) ranked the Mid-Western Region as having the highest rate of poverty. This high rate of poverty reflects deprivations in health, education and sanitation. These factors would probably also explain the difficulty in attracting teaching staff to the Mid-Western region, especially in lower secondary and secondary schools.

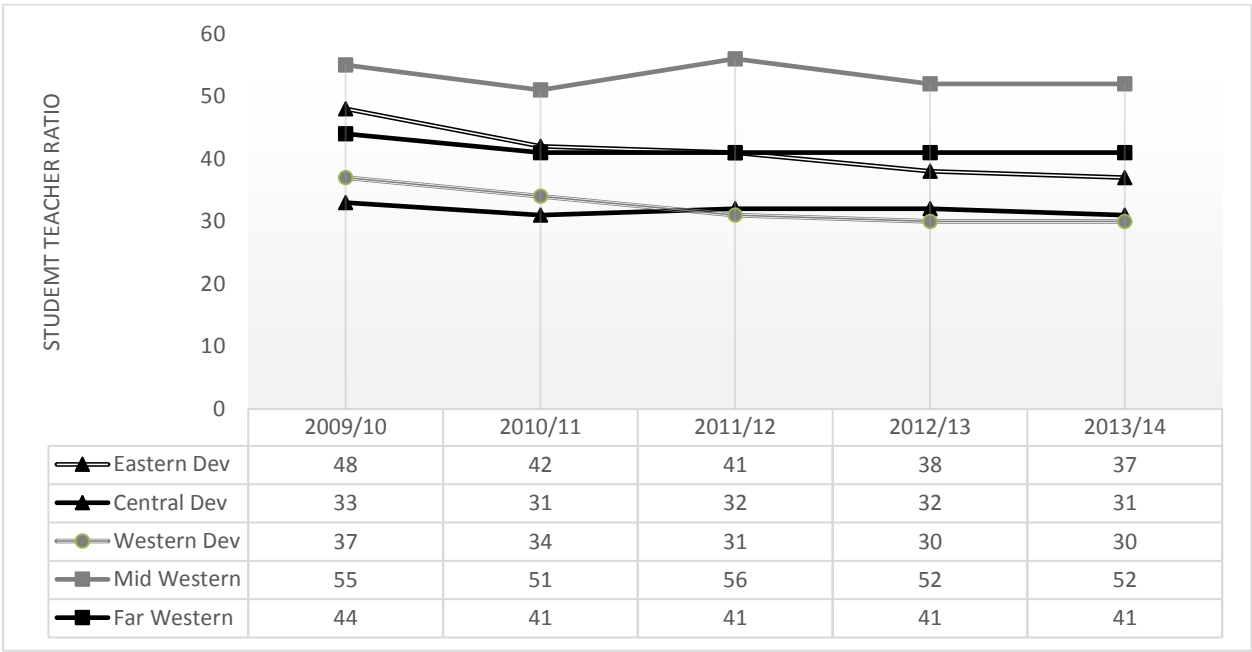
In summary, data about teacher-pupil ratios suggests that the workload capacity, especially in primary schools, is within the norm of countries in South Asia, which is an average of 24.8. Nepal's average secondary school teacher-pupil ratio is 27.4. This is also not too far from the South Asian average of 25.6 in 2013 (World Bank 2016). However, primary and secondary teacher-pupil ratio averages belie significant regional disparities, especially in lower secondary schools. These range from a ratio of 30 pupils per teacher in Western region to 52 pupils per teacher in the Mid-Western region.

Figure 5.5: Student–teacher ratio in primary schools by Nepal's development regions (%)



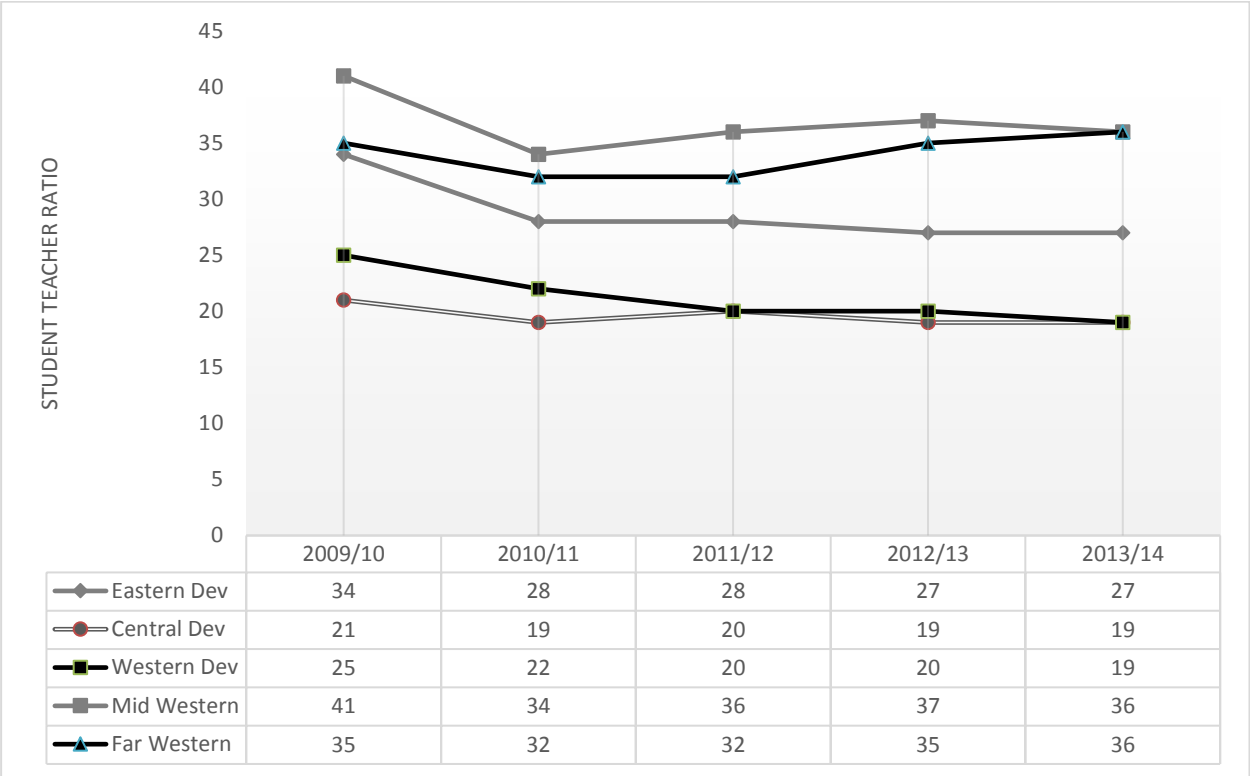
	2009/10	2010/11	2011/12	2012/13	2013/14
Eastern Dev	35	29	28	24	22
Central Dev	33	32	31	30	28
Western Dev	25	23	20	18	17
Mid Western	40	36	34	32	30
Far Western	32	31	28	27	25

Figure 5.6: Student teacher ratio in Nepal's lower secondary by development region (%)



	2009/10	2010/11	2011/12	2012/13	2013/14
Eastern Dev	48	42	41	38	37
Central Dev	33	31	32	32	31
Western Dev	37	34	31	30	30
Mid Western	55	51	56	52	52
Far Western	44	41	41	41	41

Figure 5.7: Student teacher ratio in Nepal's secondary schools by development region (%)



	2009/10	2010/11	2011/12	2012/13	2013/14
Eastern Dev	34	28	28	27	27
Central Dev	21	19	20	19	19
Western Dev	25	22	20	20	19
Mid Western	41	34	36	37	36
Far Western	35	32	32	35	36

Productivity and capacity

As explained in the previous section, high teacher-pupil ratios are often associated with other forms of deprivation pertaining to health, education and sanitation. This in turn affects the hiring conditions under which teachers are recruited and the conditions in which they work. It is important to note here that, according to a 2015 evaluation, over half of teachers work under various forms of temporary status contracts with lower salaries, weaker benefits, and fewer opportunities for training (CfBT Education Trust and EU 2015). This is consistent with Cumming et al. (2012) that characterized the variation in teachers' salaries and conditions of employment as a bewildering recipe for industrial unrest. Little is known, however, about the productivity of education support staff at all levels of education administration. Many of the existing administrative structures will be used to transition to the federal education delivery system. Learning about the workload capacity of the existing administrative workforce will help inform realistic expectations about what they can accomplish and their training needs to maximize their productivity.

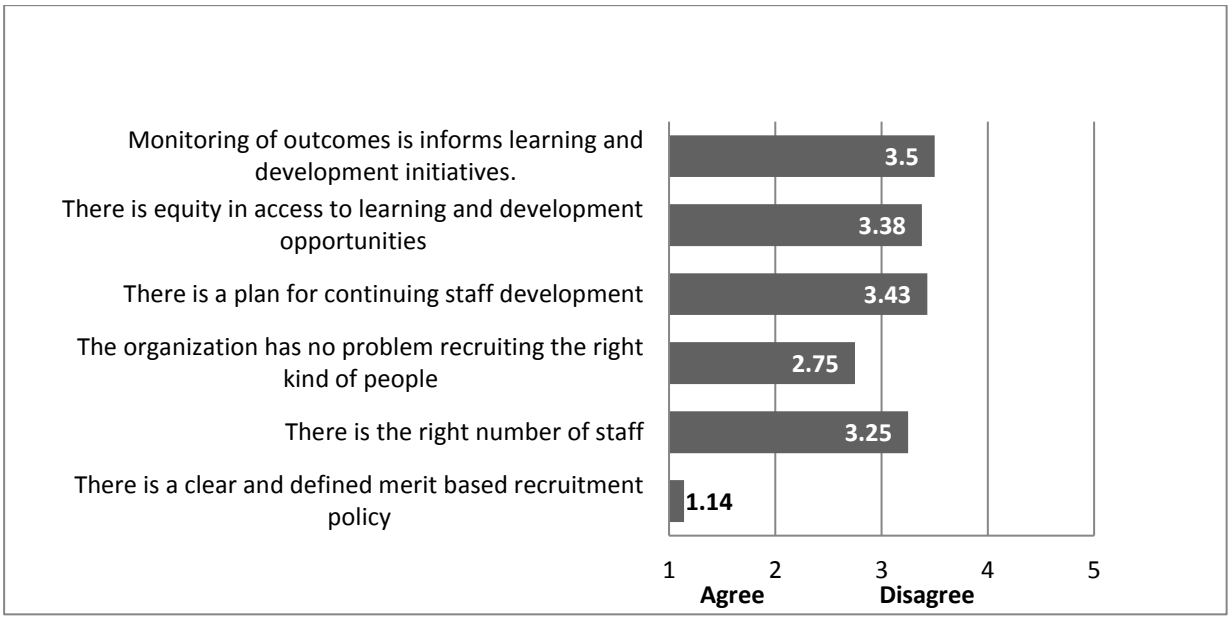
Assessing workload capacity requires a systematic study of indicators of administrative staff productivity, and to investigate the extent to which staff at all levels of the education structure fulfil these indicators. In the absence of such a study, we use findings from Moriani et al. (2013) to illustrate the state of workload capacity at MoE, DoE and DEOs. We emphasize that the findings are only illustrative because of the low response rate to the rapid assessment survey. Figure 5.8 displays a few indicators of education employees'

productivity and their average scores on a rating scale from 1 to 5, where 1 indicates respondents' total agreement and 5 total disagreement.

Note that the original table from which the items in Figure 5.8 were drawn comprises 11 questions. The items kept in this analysis focus on respondents' perceptions of concrete actions taken by the administration to promote their on-going development.

Respondents largely agreed that recruitment policies were clear and well defined. However, there was less consensus about the quality of the people recruited and the adequacy of the number of employees. Additionally, more respondents disagreed with the statements that their organization (1) had a plan for continuing staff development, (2) granted learning opportunities in an equitable manner, and (3) tied human resources development initiatives to systematically monitoring employees' outcomes. This suggests that not all MoE administrative personnel have the workload capacity to handle decision making responsibilities that are different from the business-as-usual administrative routines of the unitary service delivery model. Findings from the 2014-2015 index about the productivity of Nepal economy ILO Nepal (2010) are consistent with these trends.

Figure 5.8: Perception of quality of human resources management as indicator of workload capacity

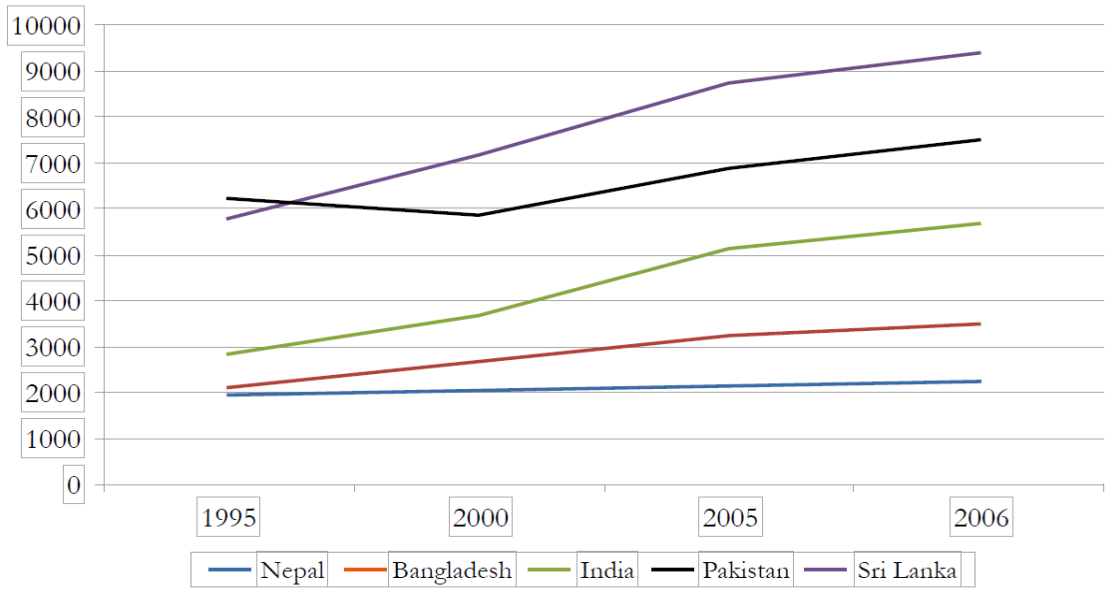


The Global Competitiveness Index (GCI) assesses the productivity of a country's economy compared to other economies. The report cited Hall and Jones (1996) who showed that around 89 percent of the variation in GDP per capita is due to variation in the level of productivity. And in 2014-2015 Nepal 102 among 144 countries on the Global Competitiveness Index, but 132nd out of 134 countries for the quality of staff training.

ILO Nepal (2010) also points to challenges in labor productivity. Education was among the sectors analyzed. The study found that the output per education employee increased

by 1.45 percent between 1999 and 2008. It would have been more informative if there was trend data about growth in education employees' productivity, and a regional benchmark against which to measure staff productivity. That said, it is still sobering to note that the country was found to lag the four-other selected South Asian countries on the contribution per worker to GDP (Figure 5.9).

Figure 5.9: GDP per worker in five South Asian countries (current US $)



Source: ILO Nepal (2010)

In summary, this section shows that except for within country regional disparities in lower secondary schools in the Mid-Western region, teacher-pupil ratios are, on average, within the South Asian norms for primary education but less so for secondary education. While this ratio is a measure of the time teachers can dedicate to individual students, it does not necessarily predict workload capacity in terms of teachers' productivity.

The information available from Moriani et al. (2013) about educational staff productivity, coupled with broader information about labor productivity in Nepal casts doubt on the extent to which existing staff, especially at the provincial and local levels, can handle education management issues that were part of the central government prerogatives under the unitary education system. While more focused investigation will help gauge the extent to which such capacity exists, provisions to enhance existing capabilities, especially at provincial and local levels should be a core component of the SSDP.

Supervisory capacity

Supervisory capacity refers to the reporting and monitoring systems in place. It is also about the extent to which there are clear lines of accountability that designate (1) who is responsible for what, (2) what are the sanctions or rewards in place to ensure action, compliance, and performance, and (3) the extent to which the mechanisms for reward and

sanction are enforceable and effective. Operational rigidities, weak public disclosure, weak governance, and weak public finance management are manifestations of weak supervisory capacity. Institutional innovations such as the Education Policy Committee, the Education Review Committee, parent teachers' associations and school management committees seldom meet. They are not acting as independently as they were intended to be are inadequately funded. This has been the case throughout SSRP implementation. This is symptomatic of weak supervisory capacity, where such problems are known about, but little seems to be done to solve them.

Facility capacity

Facility capacity is about the availability and quality of existing facilities to function as safe child-friendly spaces for quality instruction that are accessible to all children and are conducive to learning. On 25 April 2015, a 7.8 magnitude quake struck Nepal causing devastation across the nation. MoE estimates the value of the damage caused by the quake and its aftershocks to the education sector at NPR 28,064 million ($280.6 million). Table 5.3 gives a breakdown of estimated damage to infrastructure and physical assets according to the MoE post-disaster needs assessment (PDNA, 2015) report.

Prior to the earthquake, the SSRP extension plan for 2014/2015-2015/2016 (MoE 2014), identified the enhancement of facility capacity as a priority area in early childhood education and development (ECED), and in basic and secondary education. This includes the provision of ECED facilities in sparsely populated areas, and meeting priority minimum enabling conditions in all schools, with the provision of library corners. The estimated damage caused by the earthquake is presented in Table 5.3 and points to facility capacity gaps in ECD, basic and secondary education, TVET, and NFE/lifelong learning (NFE/LLL).

Table 5.3: Estimated damage to infrastructure and physical assets by April and May 2015 earthquakes

	ECD	Schools (Grades 1-12)	TVET	Higher education	NFE/LLL
No. of classrooms/rooms fully destroyed	784	26,090	356	1,292	40
Number of classrooms/rooms partially destroyed	-	26,080	184	3,040	7
Number of toilets and wash facilities	-	4,416	-	-	-
Number of compound walls destroyed and damaged	--	1,791	-	6	-
Equipment destroyed and damaged (in NPR million)	-	140.4	90.0	155.5	-
Furniture destroyed and damaged (in NPR million)	-	1,867.6	4.5	5.6	0.6

Other assets destroyed and damaged (textbooks, education materials, uniforms) (in NPR million)	9.8	2,086.5	1.3	16.7	0.4

Source: Ministry of Education Post Disaster Needs Assessment (2015).

MoE together with its development partners are committed to the principle of 'building back better.' The PDNA defines this as:

- resilient building with safe and adequately sized staircases;
- proper exits;
- furnishing and equipment installed to minimize potential harm to school occupants;
- displays and equipment for early warning and evacuation;
- clean water drinking supplies;
- separate sanitation facilities for girls and boys;
- energy and communication connectivity;
- libraries, laboratories and playgrounds.
- Safe schools that are inclusive in terms of access, acoustics and light.

It is important to note that PDNA (2015) summarizes the vision of what's needed, and not the current reality. The reference to inclusive education measures comes under a separate section on inclusion of children with disabilities. As the country prepares for the SSDP, providing access to quality education for all should mean that all students and the interests of excluded groups should be front and center in the 'building back better' commitment. These include girls, individuals with disabilities, Dalits, Janajatis, Madhesis, Muslims, conflict-affected children, street children, child victims of sexual exploitation and trafficking, child laborer's, children suffering from poverty, children in prison, orphans, sick children, and students in remote areas (DoE 2010; Asian Development Bank and World Bank, 2012).

Facility capacity should also be gauged by the extent to which principles of universal design are used in building, reconstructing, or retrofitting new facilities. An example of this is the design principles of the US Department of Education (see Box 5.6)

Box 5.6: Accessibility and design principles of the OCTAE, U.S Department of Education

- *Equitable use:* The design is useful and marketable to people with diverse abilities.
- *Flexibility in use:* The design accommodates a wide range of individual preferences and abilities.
- *Simple and intuitive:* Use of the design is easy to understand regardless of the user's experience, knowledge, language, skills, or concentration level.

- *Perceptible information:* The design communicates necessary information effectively to the user, regardless of the user's sensory abilities.
- *Low physical effort:* The design can be used efficiently and comfortably with a minimum of fatigue.

Source: OCTAE 2016 — Office of Career, Technical, and Adult Education

One policy challenge that may limit the government's ability to implement principles of universal design to improve its facilities may stem from the current understanding of the many facility-wise barriers faced by marginalized children that prevent them from accessing schools and learning in school. One example is the government definition of disability and its prevalence.

According to Handicap International's (2015) assessment of inclusive education, the quality of data on people with disabilities is poor in Nepal. The 2011 national census reported 1.94 percent of people living with disabilities while the World Disability Report (WHO and World Bank 2011) estimated the proportion at around 15 percent of the world's population. The Handicap International assessment said that the government classification of disability was much narrower than internationally accepted definitions of disability. Handicap International (2015) used the World Health Organization estimate of 5.8% of disability prevalence among children from 0 to 14 years of age that. This would translate to a figure between 250,000 and 735,000 children with disabilities in Nepal. Handicap International notes that many mild disabilities are hardly identified in Nepal. These include dyslexia, dyspraxia, and attention deficit hyperactivity disorder. And Handicap International estimates that 650,000 primary school children need glasses, of whom at least 65,000 cannot access them.

In summary, MoE formally adopted the National Framework of Child-Friendly Schools (CFS) for Quality Education in 2010 (DoE 2010). The framework is very clear on the centrality of inclusiveness as a hallmark of child-friendly schools. As the country rebuilds after the earthquake, and considering the new constitution and the new federal education structure, the CFS National Framework should be implemented at the new levels of education delivery to existing and projected plans to improve facility capacity. In that regard, building back better should be based on proper understanding of access barriers for marginalized children. This understanding is also contingent on more fine-tuned classifications of how various conditions of marginalization deprive children from their constitutional right to quality education.

Support service capacity

This section covers Nepal's education training institutions and the capacity of training facilities to support research that improves learning in the Nepali cultural context. There is a huge need for evidence-based practices that improve student achievement. The following practices were identified as priorities for teacher professional development and management by the SSRP extension plan (MoE 2014):

- Understanding how reading skills are acquired and effectively taught in early grades.
- Understanding how to support struggling readers.
- Providing language teachers in early grades.
- Teaching in line with the child friendly schools' framework (DoE 2010).
- Induction training for all teachers.

Other areas that require support services include:

- evidence based practices in inclusive education, including children with disabilities and all other vulnerable minorities.;
- effective assessments;
- effective course design;
- effective school management and leadership;
- education policies;
- data driven decision making;
- multilingual and multicultural learning; and
- the effective delivery of education in a federal system.

The above list of proposed topics illustrates the breadth of support needed to secure a national knowledge base for effective education delivery. Appendices B1 and B2 show the competences that teachers and administrators need to fulfil their professional roles in the USA.

The National Centre for Educational development (NCED) conducts certification and recurrent training courses for primary and secondary education teachers through education training center (ETCs) and other training providers (MoE 2014). NCED provides a one year teacher training course, in addition to the minimum academic qualification for teacher posts. A question here is whether the minimum academic qualification plus the one year teacher training course is adequate to produce teachers who exemplify the standards for effective practice detailed in Appendix B.

The need to base educational practice on science begs the question about the absence of Nepal's big universities as partners in strengthening education support service capacity. The implementation matrix in the SSRP extension plan (MoE 2014) makes no mention of a flagship university role in training ECED, basic, or secondary education teachers. As institutions of instruction and research, they are naturally placed to strengthen support service capacity by 1) gathering evidence about what works and does not work, 2) training the trainers, and 3) providing in-service and pre-service training. Not including universities as partners in capacity building cuts MoE from an important provider of

support services, which will weaken the sustainability and innovativeness of its support services in the long term.

Systems, structural, and role capacity

The three facets of the capacity of entities and people are highly interdependent:

- System capacity indicates the extent to which information, money, and decisions flow in a timely and effective manner.
- Structural capacity captures the extent to which individuals and units within an organization have structures that facilitate communication, cooperation, coordination, and collaboration (the 4 Cs).
- Role capacity describes the extent to which individuals, teams and committees have the authority and responsibility to make decisions essential to effective performance.

These three dimensions of capacity are interdependent because the flow of information, money, and decision making is contingent on clear structures for the 4 Cs. In turn the 4 Cs are meaningful and authentic when the individuals or entities involved have the requisite decision making authority and demonstrate the necessary accountability for the effectiveness of their actions because of the ownership inherent in empowering them with authority and responsibility.

A "state capability trap" is the phrase used by the IACD plan (Moriani et al. 2013) to describe the school sector's problems with capacity at the level of systems, structures, and roles in general and SSRP (see Section 5.1.3 for earlier discussion and Box 5.7 for manifestations of the trap).

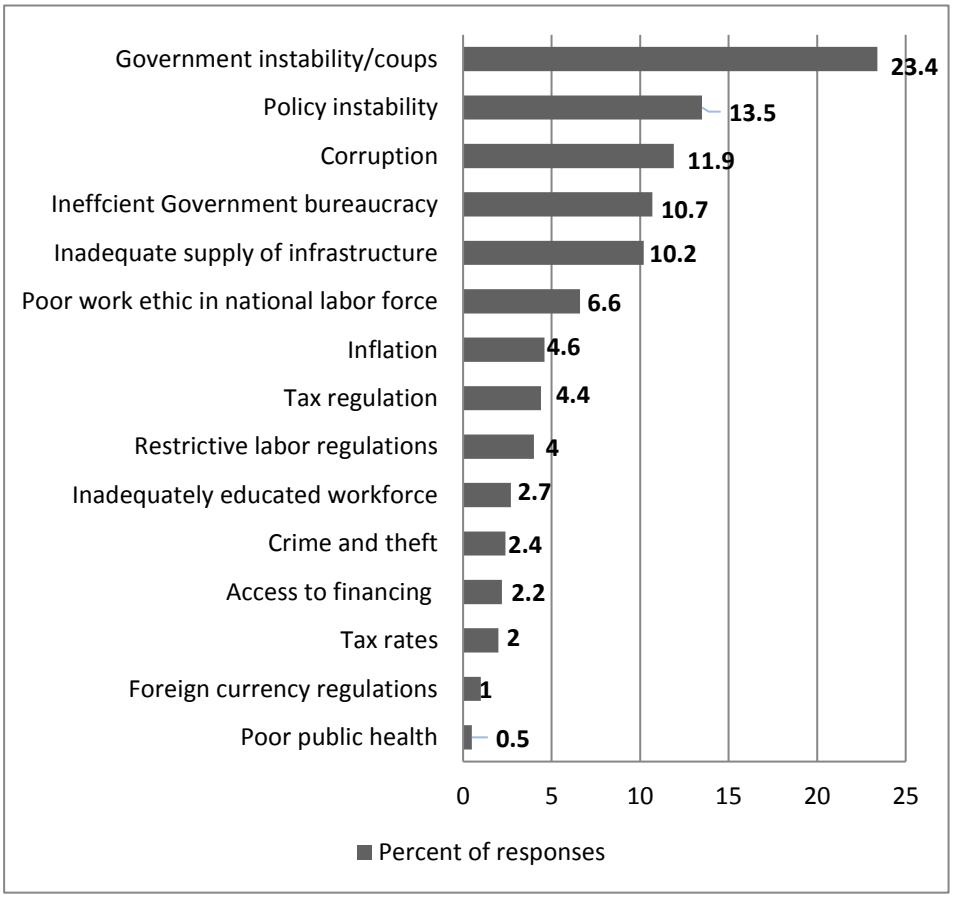
Box 5.7: Manifestations of the capability trap

1. Political issues and bureaucracy led solutions
2. Operational rigidities that curb innovations in institutional design
3. Weak horizontal and vertical institutional coordination
4. Weak public disclosure
5. Redundancies in structures and processes
6. Underfunded institutional innovations
7. Issues with teacher management
8. Dependence on other institutional reforms
9. Challenges with integrating the development partners' agenda within a sector-wide national development agenda
10. Solutions that do not address the root causes of problems with service quality
11. Weaknesses in the governance of central agencies

12. Challenges in public finance
13. Untapped resources of informal institutions
14. Asymmetric structures and roles
15. Red tape and cumbersome procedures.

These challenges are symptomatic of broader public administration governance issues that affect the quality of public services, and have implications on the nation's attractiveness as an investment destination. The Global Competitiveness Report (Schwab 2014) points to comparable system challenges identified by business executives that are consistent with the 15 factors listed by IACD. Figure 5.10 summarizes those views.

Figure 5.10: Most problematic factors for doing business in Nepal (% of responses) (Schwab 2014)



To address the limitations of system, structure, and roles capacity, the IACD Plan (Moriani et al. 2013) recommends a mix of solutions that challenge the incremental approach to reform, are integrated in on-going or planned change initiatives, and consider current capabilities and political economy. In this regard, the new constitution, post-earthquake reconstruction and the transition to federal governance, represent critical junctures at which the education sector must break with the 'broken' unitary system and top-heavy education delivery. It helps here

to be clear about what the indicators of a functional education system are, and to use these as result indicators to plan needed interventions through backward mapping. Table 5.4 illustrates some result indicators for a well-managed education system. Table 5.4: Indicators of effective management of an education system

1. Indicators of effective system level management (central ministry level):
a) Textbooks are produced in sufficient numbers and distributed to schools on time b) Instructional supplies are delivered to schools on time c) Supply of qualified teachers meets demand d) Teachers are appropriately assigned/deployed to schools e) Teachers' salaries are paid on time f) Schools have copies of syllabuses g) The ministry knows the location of schools throughout the country h) Schools are appropriately located across the country i) A national plan is available which provides vision and focus for education activities.
2. Indicators of effective intermediate level management (regional and district levels):
a) Teachers are appropriately assigned/deployed to schools b) School inspection occurs on an appropriate and regular basis c) Teachers receive instructional supervision d) Questions from head teachers and teachers receive timely responses e) Ministry information flows to schools in a timely way f) School information is conveyed to the ministry in a timely way g) Staff development activities for school personnel are well designed and implemented.
3. Indicators of effective school-level management:
a) Instructional supplies are ordered on time b) Teachers come to school on time c) Teacher absenteeism is low d) School facilities are in good repair e) Teachers have copies of syllabuses f) Teachers receive instructional supervision g) Each school has a functioning parent-teacher association h) Parents know how their children are progressing in their studies.

Source: Chapman (2002)

8. ANALYSIS OF EDUCATIONAL SUBSECTORS AND THEMES

In Chapter 4, we provided a holistic summary of the state of the education sector in Nepal. In this chapter, we delve into the specific challenges of each sub-sector. We also elaborate on cross-cutting themes such as links with higher education, Teacher management and capacity building, and information and communication technology. Given the complexity of the whole sector, it is important to highlight issues specific to each sub-sector to understand the whole system, and generate solutions that fit the realities of the system and the students it serves.

8.1 Early Childhood Education and Development

Background and context

One of the main strategies to achieve the EFA goals was to increase the number of early childhood development centers (ECDCs) to ensure access for the most vulnerable and marginalized children. A total of 35,121 early childhood education and development (ECED) centers are operating in Nepal (flash report 2014-15). Of these, 30,034 (85.5%) are running as community-based ECDCs and community school-based ECDCs/pre-primary classes (PPCs). The remaining 5,087 (14.5%) operate within institutional schools. Although there is an increasing number of ECD/PPCs (DoE 2015), equitable access is still a problem. Table 6.1 disaggregates the 3–5-year-olds population by gender and age.

Table 6.1: Composition of Nepal's 3–5-year-old population, 2011

3-5-year-old children in Nepal	% of total population	% male	% female	% aged 3	% aged 4	% aged 5
1,809,867	**6.8**	**51.5**	**48.5**	**30**	**33**	**37**

Source: CBC 2011a.

National ECD initiatives

Nepal's educational policy has been reviewed several times to develop high quality public schools with equity and accessibility (Bhatta 2009). The Ministry of Education (MoE), under its Basic and Primary Education Program (BPEP) in 1997 started to take initiatives to open PPCs to separate under age children from Grade 1 students, and improve the teaching and learning situation in primary grades. After the adoption of early childhood care and education as the first goal of EFA, the concept of PPCs also changed. The focus shifted to the holistic development of children at ECD programs (ECD Curriculum; ECD strategy; 2004, ELDS; Minimum Standard). Although the concepts and practices regarding early childhood development and pre-primary education emerged as important foundations for further education and developments, they were still not part of the formal education structure.

The EFA National Plan of Action and the EFA Core Document 2004-2009 programs in Nepal (NNC-UNESCO 2003 and MoES 2003) committed to expanding and improving ECD

opportunities throughout the country. Additionally, an ECD Strategic Plan was implemented in 2005 by the Ministry of Education and Sports to support primary grade learning. The ECD strategy paper (2004) and the SSRP (MoE 2009) set the target to provide ECD services to 80 percent of 3–5-year-old children by 2015. The ECD strategy also targeted to have 80 percent of new entrants at Grade 1 with ECD exposure by 2015. The government's Tenth Five-Year Plan (2002–2007) and the three-year interim plan (2007/08–2009/10) had ECD centers as a strategy for increasing school enrolment, retention and reducing repetition and dropout rates of students.

Analysis of the current situation of ECED (PPC) centers

Even though Nepal has an excellent ECD policy, it has not been sufficiently implemented to address the development needs of children aged five years and below. The implementation of ECED programs need to be speeded up in line with the national policy and strategic framework for the holistic development of Nepal's children. The following analysis is the result of consultations with stakeholders at district and grassroots levels.

1. *Access*: Although the number of ECED centers has increased the current distribution of ECED centers as quotas does not reach the vulnerable and disadvantaged groups. There is uneven distribution of ECED centers in the districts. Fair access has not been achieved because of too few service delivery points, unavailability of appropriate services, cultural barriers to using services, poor quality services, geographical barriers and limited capacity of service providers.
2. *Quality*: The quality of ECED provision needs to be addressed to fit the socio-cultural, economic, and geographic contexts of communities where it is implemented. The blanket approach in training and operation without proper support and monitoring has not worked well. Most ECD centers lack adequate facilities and service providers. The centers do not meet minimum standards and the early learning and development standards are not being followed. Access to all children is limited and the quality of services is questionable. Only an estimated 39.5% of children (Flash report, 2014/015) between 3 to 5 years of age attend ECED centers (DoE 2014; CBS 2011). The situation is worse for girls, children with special needs, orphans, children on the streets, and other vulnerable children. Most ECED centers lack adequate facilities (Unicef 2014). Many centers are characterized by poor ventilation, dusty rooms, poor lighting, temporary structures and the absence of child-friendly sanitary facilities. These issues need to be addressed if ECED is to have a positive impact on the education and socioeconomic development. Finally, there are no age appropriate government run facilities for children below three years of age at schools (PPCs and kindergartens) and no parenting awareness programs conducted to support these children at home. Also, ECED programs are not linked with Grade 1, creating a gap in teaching learning approach between ECED centers and Grade 1.
3. *ECED management*: The ECED operation guidelines mention the formation of management committees in school and community based centers. Almost all

community-based ECED centers have management committee but many school based pre-primary classes have not formed such committees. School management committees also take responsibilities for managing PPCs. However, most management committee members are unaware of their roles and responsibilities. The provision of mother schools has been made for monitoring and supporting community based ECED centers. However, the lack of clear guidelines for mother schools on the management of ECED centers means that the role of head teachers is usually limited to certifying facilitators' attendance with none or very little supervision and monitoring.

4. *Facilitators' (teachers) competency*: The ECD operation guidelines, 2061 give the qualification of ECED facilitators as a Grade 8 pass with pre-and in service trainings. Many teachers in the private schools are untrained. Even if facilitators/teachers are trained, most have only attended short courses which are not adequate for the development of productive competencies (NCE Nepal 2015) or for maintaining program quality. Also, there is a low level of motivation for facilitators as they receive low remuneration and their jobs are temporary and lack long term benefits. Finally, there is no proper and timely monitoring of facilitators' performance.
5. *Curriculum and curricular materials*: The ECED curriculum was introduced in 2004. However, the lack of proper infrastructure and learning materials prevents facilitators from applying proper pedagogical approaches and most ECED centers do not follow the curriculum (Unicef 2014). Early learning and development standards are not being used. Also, ECED programs are not linked with Grade 1, creating a gap in teaching learning approach. The conventional approach of teaching and learning is used in most ECED/PPCs and private schools.
6. *Resources and capability*: There are only limited human and financial resources for Nepal's ECED programs. The ECED minimum standards are not implemented and service providers are not properly coordinated or regulated. There is a lack of coordination for resource allocation and minimizing duplication. There have been ad hoc budget allocations from the ministry of local development via district development committees (DDCs), municipalities and village development committees (VDCs) to support ECED programs. The lack of resources means that the whole ECED system relies heavily on unqualified and under-qualified volunteers (NCE 2015, Unicef 2014, strategic framework for ECD) and quality is compromised.
7. *Institutional arrangements (leadership):* ECD is a multidisciplinary program that requires a multi-sectoral approach. The key ministries for ECED services are education, health and population, and local development. Other stakeholders include the private sector, international organizations (INGOs), NGOs, community based-organizations, non-state actors and local communities. MoE is the lead ministry for ECED even though it is not included in the education structure. DoE has the role of bringing all these concerned line agencies under one umbrella. The National Council for ECED has been formed under the National Planning Commission (NPC).

DEO's are responsible for bringing together concerned line agencies at the district level. However, DEOs are unable to fully carry out their leadership and coordination roles as they lack robust ECED sections and lack adequate staff and resources. District ECED boards, which are supposed to be responsible for networking and collaboration among ECED implementers, have neither the mandate nor the resources to steer ECED activities or to bring plans into operation. ECED coordination and networking structures are weak at community and district.

Several development partners have supported ECED programs. Their efforts and resources are not fully coordinated as DoE and DEOs do not control how partners allocate their resources. Thus, there is some duplication and some concentration of services, leaving other areas poorly served. The basket funding of ECED services and improved coordination would improve ECED quality and equity.

8. *Advocacy and awareness:* The lack of advocacy for ECED means that many stakeholders do not priorities the development of ECED while the lack of and awareness of the benefits of ECED means that many parents do not value it. Early stimulation and holistic development are abstract ideas for many parents. The limited dissemination of the ECED policy and guidelines, the lack of a budget line for ECED in DDC and VDC budgets, and the lack of district-level events on ECED results in low support for ECED. Urgent action is needed to develop a communication strategy that will improve public awareness about the importance of ECED at household, community, district, and national levels.
9. *Age groups:* The dual structure of ECED programs confuses the general public. The community-based ECED program is a two-year program that enrolls children of three years of age. The school based PPC program is a one year program that enrolls four-year-olds. However, under-age children (two years and below) enroll in ECED/PPCs and private school kindergarten. There is also the practice of making academically weak students who enroll in Grade 1 participate in ECED programs. There are no age appropriate facilities for these children at schools (PPCs and kindergartens) and no parenting awareness programs conducted to support these children at home.
10. *Monitoring and evaluation*: Constant monitoring and support is needed to improve ECED services from community to district levels. But M&E is only being carried out on some INGO supported programs. District ECED boards and DEOs have yet to develop M&E systems for ECED programs. Good M&E systems provide evidence for decision-making and designing demand driven ECED programs. And the few M&E tools that are developed and implemented must be linked with the EMIS to generate knowledge that could be used for improving ECED programming.

Recommendations on improving ECED

1. *Enhance access and quality of ECD services*:

- Increase access to ECED entails building structures in urban and rural areas to make it accessible to all children and especially for marginalized, deprived, disabled, and geographically distant students.
- Run both home-based and center-based programs.
- Include ECED centers within the school structure.
- Map ECED provision as the basis for possibly redistributing provision.

2. *Increase competency of facilitators, care givers and teachers (private schools)*:
   - Make an SLC pass the minimum qualification for ECED facilitators.
   - All facilitators, caregivers and teachers must receive pre- and in-service training.
   - Revise the training package to contain a blend of knowledge and skills.
   - Carry out periodic evaluations of facilitators, care givers and teachers
   - Provide refresher training for facilitators.
   - Start discussions about running motivational packages like exposure visits, meetings, supportive supervision, rewards and punishment, and additional remuneration.
3. *Allocate resources and enhance capability*:
   - The DoE, as the coordinating body at the national level, should re-form the national ECD network comprising of development partners, ECD experts and practitioners, academicians, and implementing I/NGOs representatives.
   - DEOs, as the coordinating bodies at district level with the responsibility for training ECD providers at district and community levels should, in coordination with MoFALD, mobilize DDCs to initiate budgets and create ECED funds in their districts. These funds should be used for advocacy, quality and support for infrastructures, learning and appropriate play materials.
4. *Raise advocacy and awareness*:
   - Develop an advocacy and communication strategy to raise awareness at all levels about the benefits of ECED. This can also be an important tool for advocacy for other concerned line ministries, line agencies (health staff, teachers, SMCs, health facility management and operation committees, VCPC), local authorities, corporate sectors and international organizations to invest in ECED.
   - Run special events and activities to advocate for and raise awareness about ECED.
5. *Strengthen collaboration*:
   - Strengthen leadership, partnership and coordination by establishing a forum for key stakeholders (including government, civil society and development partners).
   - Strengthen the capacity of the ECD council and district ECED board to play a lead role in policy development, coordination and collaboration.

- Start the sharing and joint planning of ECED programs in coordination with I/NGOs.
- The ECD council should take a leadership role for upgrading, updating and periodically revising of the policy, strategy and operational guidelines.

6. *Enhance monitoring and evaluation, and research for ECD*:
   - Establish a strong M&E system for ECED with clear targets and indicators
   - Conduct annual multi-sectoral planning and reviews of ECED provision.
   - Carry out research to improve ECD services
   - Carry out M&E and research to inform evidence-based decision-making and for designing demand driven ECD programs.
   - establish a national ECED research forum to set the research agenda and disseminate results.

8.2 Basic Education: Gains and Issues

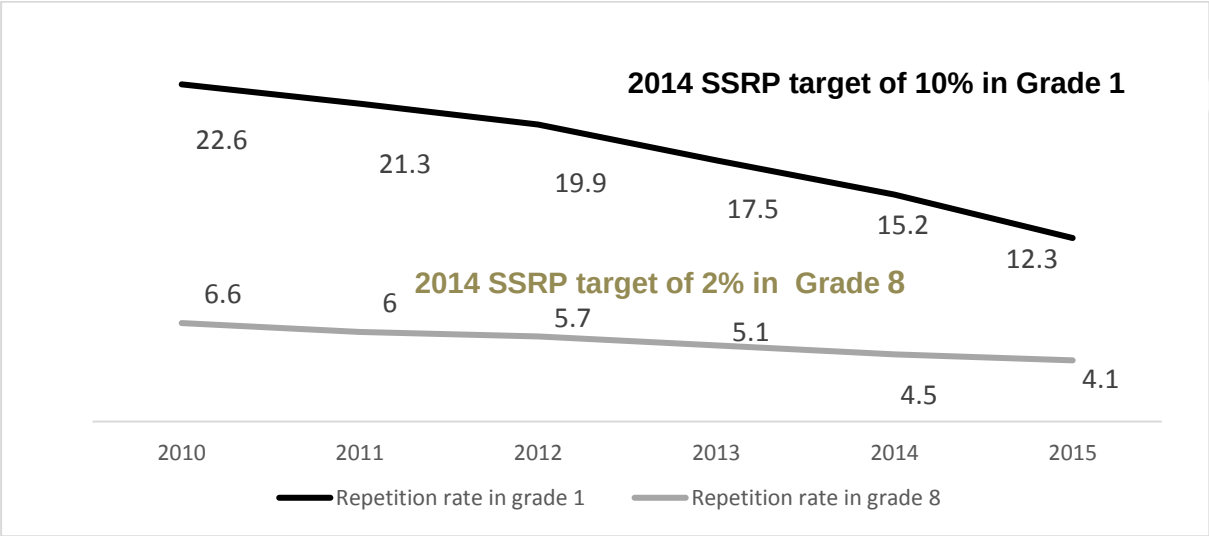
In Nepal, basic education refers to education provided from Grades 1 through 8. The prime objective of SSRP (2009–2016) is to ensure equitable access to and quality of basic education for all children ages 5 and 12 years old. In Chapter 4, we noted that significant progress has been attained in access. The targeted net enrolment rate of 88 percent was achieved by 2014. However, disaggregating the data by gender and socioeconomic status reveals persistent inequities.

According to Flash Report 2010–2014, by 2014 the net intake rate (NIR)[16] in Grade 1 reached 93 percent. This is four percentage points higher than it was in 2010. However, Nepal failed to achieve SSRP's 2014 target of 96 percent. The trend data demonstrates consistent inequities by gender and caste. The primary net enrolment rate has also increased, even if it failed to meet SSRP's 2014 target. Primary net enrolment continues to show gender and caste gaps, where girls, especially those from marginalized groups, have less opportunities enroll in primary education.

Regarding efficiency, the 2010-2014, Flash Report shows the encouraging gains of decreasing repetition rates and improving survival rate to Grades 5 and 8. The gains in efficiency, however, fell short of the SSRP targets for 2014. Figures 6.1 and 6.2 show the trends in repetition and survival rates from 2010 to 2015. As the country embarks on a new phase of education reform, it is crucial to emphasize that efficiency and quality are interrelated. In other words, a system with high survival rates and low repetition and dropout rates will be inefficient if students are not able to demonstrate the literacy, numeracy and life skills outcomes for which they went to school.

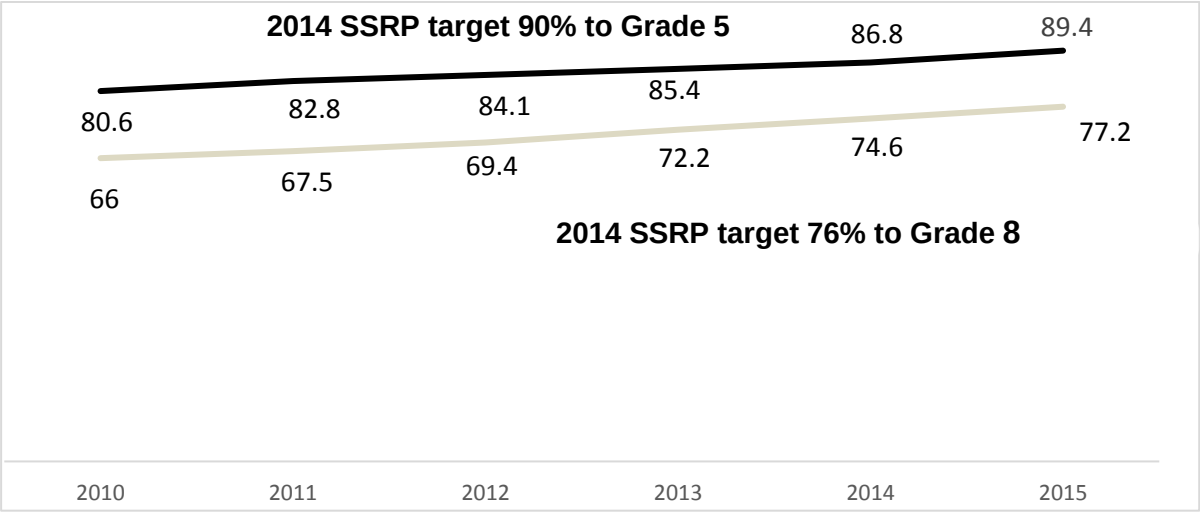
[16] Number of new entrants in the first grade of primary education who are of official primary school-entrance age, expressed as a percentage of the population of the same age.

Figure 6.1: Percentage growth in repetition rate (Grades 1 and 8, 2010 to 2015)



Source: Flash Report 2010-2014

Figure 6.2: Percentage gains in survival rate, 2010 to 2015



Source: Flash Report 2010-2014

As demonstrated in Chapter 3, quality and equity data show entrenched gaps pertaining to who benefits from education services and the lost learning opportunities for students enrolled in basic education. In Grade 5 for example, only 35.5 percent of students passed the National Assessment of Student Achievement (NASA) in mathematics. While this percentage improved to 53.3 percent in 2012, it fell again to 41 percent in 2013. In Grade 8, 49 percent passed NASA in Nepali in 2011 compared to 48 percent in 2013. Similarly, 43 percent passed NASA in mathematics in 2011, compared to 35 in 2013. The declining trend is itself alarming. However, the fact that more than 50 percent of Grade 8 students do not demonstrate the necessary competencies to pass the Grade 8 assessment in Nepali and mathematics poses a serious threat to the country's chances to graduate from LDC status and benefit from its demographic dividend. In starker terms, the country will not be able to produce the necessary human resources to fuel a high valued added knowledge

economy if more than 50 percent of its students are not literate and numerate. Table 6.2, shows that leakages in the quality pipeline are endemic in the education system, and worsen in higher grades.

Table 6.2: Percentage of students failing NASA in Grades 3, 5, and 8

	English	Mathematics	Science
Grade 3	48	49.5	47
Grade 5	50	49.9	51
Grade 8	51	54	51.6

Source: NASA 2013-2014 results

The differences between girls and boys in the NASA results presented in Table 6.2 is in the range of 0.5 to 4 percentage points, always in favor of boys. The eight dimensions of equity identified in the Consolidated Equity Strategy (DoE 2014c) recognizes that students' access to education, their participation, and their learning outcomes are influenced by gender, caste/ethnicity, socioeconomic status, health and nutrition status, geographical location, disabilities, language, and vulnerability status. Unfortunately, the available data is not at the level of granularity needed to track how students in sub-categories of the eight dimensions of equity perform. Therefore, one foundational step to begin to close equity gaps is to ensure that data is available to identify the students that are excluded to devise differentiated strategies that eliminate barriers to access.

One indicator of inequitable opportunities to learn is the student-teachers' ratio. Table 6.3 shows that Terai schools and lower secondary schools have the highest ratios.

Table 6.3: Disparity in student teacher ratio

Eco-belts	Primary	Lower secondary	Basic	Secondary
Mountain	27	**50**	31	35
Hill	26	**53**	31	34
Kathmandu Valley	18	**28**	21	21
Terai	**53**	**82**	**58**	**50**
Total	35	60	40	39

Source: DoE: December 2015

In summary, in Chapter 3 we compiled the evidence on inequity in access, participation, and learning outcomes, by gender, disability status, caste/ethnicity, vulnerability status (out-of-school children), socioeconomic status, and health and nutritional status. The data presented was intended to show the picture of equity in basic education. As noted earlier, and probably due to the dearth of systematic trend data that captures all the eight dimensions of equity, it was possible to see cross-sections of deprivation, but not a sense of progress in closing deprivation in basic education at least since the initiation of SSRP. As also noted earlier, collecting the eight dimensions of equity data more systematically

will help map where barriers are most concentrated to inform MoE and its partners where technical and financial support can make the most difference in closing the equity gap in access, participation, and learning outcomes in basic education.

The architects of SSDP put together an issues and recommendations matrix to organize their thoughts. Table 6.4 is a shortened version of this matrix.

Table 6.4: Basic education issues and recommendation matrix as of 2015

Theme	Issue	Recommendations
Data on out-of-school children (OOSC) and barriers they face	Lack of comprehensive data on OOSC and further mapping of barriers to education for OOSC needed (DoE 2014c)	• Data should be integrated from different sources (EMIS, CBS, studies) (Unicef 2014) • Micro planning and social mapping should be done at school catchment level to validate OOSC data and understand the barriers. • District plans should be developed based on micro planning and social mapping (Unicef 2014).
	Insufficient and inaccurate data on access to education for CwDs and the barriers to education they face (DoE 2014c).	• Use appropriate tools to assess children's disability (Unicef 2014) • Explore whether additional research on CwD and the barriers they face are needed and what the scope and methodology should be (HRW 2011).
Decreasing access to education of some OOSC	• Several OOSC have progressed beyond the point of being likely to be enrolled in formal education regardless of intervention (Unicef 2014). • High dropout numbers in early grades are responsible for the majority of OOSC (Unicef 2014).	• Strengthen alternative and flexible programs to targeted populations and in areas with high proportion of OOSC, ensuring relevance to local contexts (Unicef 2014) • Strengthen accountability at school level in terms of social mapping of OOSC in their catchment areas and including strategy in their SIPs to enroll them (DoE 2013b) • Expansion of ECED should be targeted, focusing on areas with low educational and life outcomes and high numbers of OOSC and basic education drop out/ retention rates.
Addressing economic barriers to education	Children from deprived Dalit groups remain out-of-school due to poverty and perceived loss of opportunity of income when sending children to school DoE 2014c.	• Need-based and targeted scholarships to counter economic barriers. • Provision of midday meals in food deficient areas (Chettiparambil-Rajan, 2007).

Theme	Issue	Recommendations
		• Alignment of scholarships • Link education with livelihood occupations (DoE 2013b). • Alignment and need based targeting of incentive schemes, including those of I/NGOs.
Girls' marginalization in marginalized communities	• Barriers for girls' access to education are greatest amongst Madhesi community and in the central Terai CBS (2011b). • Girls from poor backgrounds are more likely to drop out of school (DoE 2014c).	• Sufficient resource allocation to 'problem' districts and support to develop customized plans incorporated in district education plans and based on SIPs (DoE 2013b). • Strengthen parental awareness on right to and value of education for girls (DoE 2007).
Gender barriers to accessing education	Girls are disproportionally prevented from accessing education when facing economic barriers to access (DoE 2007).	• Target girl scholarships on a need basis (DoE 2007). • Strengthen parental awareness on the right to and value of education for girls (DoE 2007).
Minimum enabling learning environment and child-friendly schools (CFS)	• Lack of (primary) minimum enabling conditions (DoE 2013c). • Lack of child friendly learning environments (DoE 2014c).	• Map PMECs that are present and lacking in schools and allocate targeted support to schools with the least PMECs to accelerate the establishment of enabling learning environments • Enforce CFS frameworks in all schools through partnerships with other public and private institutions[17]
School participation and gender barriers to participation in education	• Low basic education survival and transition to secondary education for girls due to specific barriers such as early marriage (DoE 2014c). • Under-representation of female teachers to provide more girl friendly learning environments (DoE 2014c). • Lack of teachers who are sensitive to children's needs (DoE 2014c). • Lack in capacity to monitor student retention (DoE 2014c). • Lack of active engagement of community stakeholders to promote retention and outcomes (DoE 2014c)	• Strengthen parental awareness on right to and value of education for girls (DoE 2007). • Strengthen the gender focal point network (UNGEI) • Counselling at school level • Implement reserved quotas as per the Education Act (DoE 2007) • Prepare a 5-year strategy for increasing the numbers of teachers from marginalized groups and female teachers to the required level in line with regional best practice (Bangladesh) DoE 2013d

[17] Consultation with MoE February 2014

Theme	Issue	Recommendations
		• Redeploy teachers on a need base to targeted schools and areas • Strengthen roles and responsibilities of SMCs, resource persons and school supervisors (Unicef 2014). • Improve the data management system for marginalized groups. Use Consolidated Equity Strategy (DoE 2014c)
Inclusive education	Lack of inclusion of CwDs in regular education. Flash data shows decline in retention and completion of CwDs in basic education (DoE 2014c).	• Train and support parents of CwDs to exchange information and provide peer support (HRW 2011). • Develop appropriate curricula for children with intellectual or developmental disabilities and in sign language and braille (HRW 2011). • strengthen TPD on CwDs (HRW 2011).
Medium of instruction (MoI) and barriers to mother tongue education (MTE) and professional development	• 35% of schools do not use a MoI that most students understand. In most of these schools children belong to two or more language groups[18] • 45% of teachers believe that it is better to learn Nepali first and mother tongue as a second language (RTI and New ERA 2014). • 32% of teachers do not share the same language as the students in their classes (RTI and New ERA 2014). • Although curricula have been developed in 22 mother tongue languages, teacher professional development and pedagogy have not been developed and rolled out accordingly (CDC 2013)	• Undertake a study on language of MoI in education and the mother tongue language and effects on learning outcomes for children with a mother tongue other than Nepali.[19] • Ensure that the development of a comprehensive language policy is informed by the outcomes of the above MoI study, as well as findings from the EGRA and NASA report.
Barriers to learning outcomes	• Low performing students are concentrated in certain schools and districts. Children performing paid work score statistically lower than other children on learning outcomes (DoE 2014c).	• Further research is needed to identify barriers to learning outcomes • Involve child clubs and PTAs for assessing enabling learning environments.

[18] 57% of all schools had most students having not or little understanding of Nepali language at time of joining (RTI and New ERA 2014)

[19] SSRP Quality Thematic Working Group, 2014

Theme	Issue	Recommendations
	• Dalits have lower learning outcomes (DoE 2014c). • Madhesi students overall have low learning outcomes in Nepali (ERO 2015) • Lack of assessment methods and participatory approach in measuring learning outcomes for CwDs (DoE 2014c). • Parents' illiteracy (especially fathers) has direct link with children's learning achievements • Deeply rooted traditional mode of student assessment does not identify barriers and needs of students[20]	
Health and nutrition barriers to retention	Health and nutrition barriers prevent socio economically deprived children from staying in school (DoE 2014c).	• Scale up school health and nutrition (SHN) activities based on census data and strengthen the SHN network

8.3 Secondary Education: Gains and Issues

A goal of SSRP (2009-2016) was to create a unified secondary education structure that integrates Grades 9-10 (secondary) and 11- 12 (upper secondary) schooling. SSRP aimed to connect education providers including the Higher Secondary Education Board, Council for Technical Education and Vocational Training (CTEVT) and universities. As of 2016, the last year of SSRP implementation, the above goals have not been accomplished due to the needed amendments to the Education Act to make the unification and integration legally binding not being approved.

Nepal's 2015 constitution declared that every citizen had the right to free education up to the secondary level. The constitution also enshrines the right to instruction in the mother tongue up to secondary level. It is necessary to note in this regard, that secondary education is still referred to as Grades 9 through 10 (MoE 2015c). In other words, the scope of compulsory and free access to secondary education will depend on whether it continues to be defined as Grades 9-10 or if it also encompasses Grades 11 and 12. This obviously has significant human and financial resource implications. Discussions on how to honor Nepal Constitution regarding secondary education, the definition of secondary education, and the resources available to provide universal access to quality, free, and compulsory secondary education are important components of SSDP planning.

Facts and indicators of progress

Secondary education in this sector analysis is defined as Grades 9-12. The data presented reflects this definition whenever possible. The official data shows 9,120 secondary

[20] Consultation with MoE February 2014

schools in Nepal (DoE 2015). The highest concentration of these schools is in the Central Development Region (3,294) followed by the Western Region (2057). The lowest number is in the Far Western region (935). Sixty-six percent of secondary schools are community schools,

The number of students enrolling in secondary schools has steadily increased. Annual enrolment in secondary and higher secondary level increased by an average of 0.8% and 1.6% in the 2009–2014 period. Figure 6.3 shows that, as for 2015, the secondary education gross enrolment rate is still short of the 2014 SSRP target of 61 percent. The net enrolment rate increased from 23.9 percent in 2009 to 34.7 percent in 2014. The average overall student-teacher ratio secondary education is 39 students per teacher. As with basic education, the Terai schools have the highest ratio (50) and the Kathmandu Valley the lowest (21).

In 2015/16, fully trained secondary school teachers accounted for 95.3 percent of such teachers (94.2 percent female, 95.5 male). Compared to lower grades, Grades 9 and 10 have lower repetition rates (3.3 percent for girls, 3.2 percent for boys). In Grades 9-10, 5.1 percent of girls dropped out compared to 5.3 percent of boys. Figures 6.3, 6.4 and 6.5 show the efficiency gains in dropout, repetition and promotion rates since 2009. In Grade 10, dropout rates have decreased remarkably from 18 percent to 8 percent on average between 2009 and 2012. Since then, the rates have declined at a slower pace. It is important to observe that while the difference between boys and girls was small, girls dropped out at a lesser rate than boys prior to 2012 in Grades 9 and 10. After 2012, girls started dropping out at a higher rate.

Figure 6.3: Secondary and basic education gross enrolment rates, 2010–2015

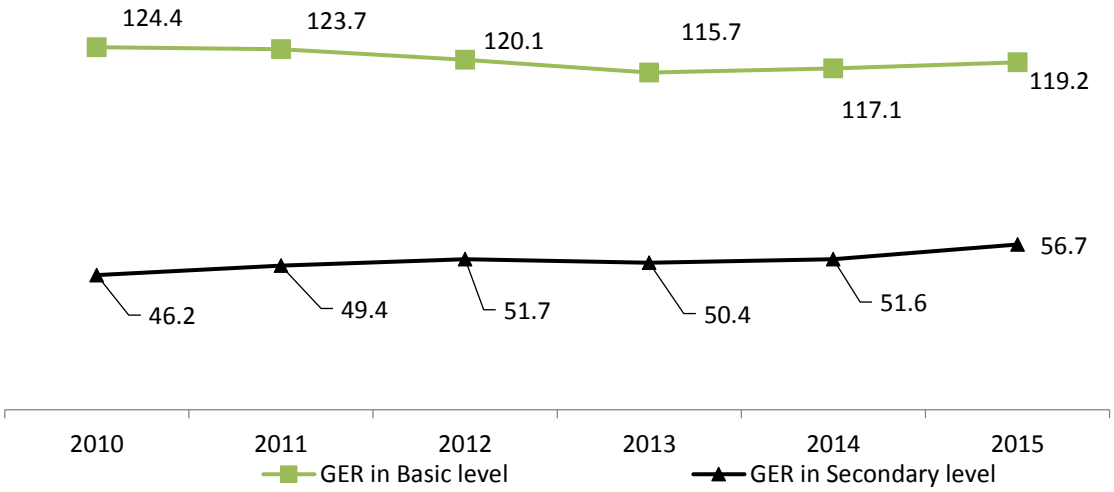
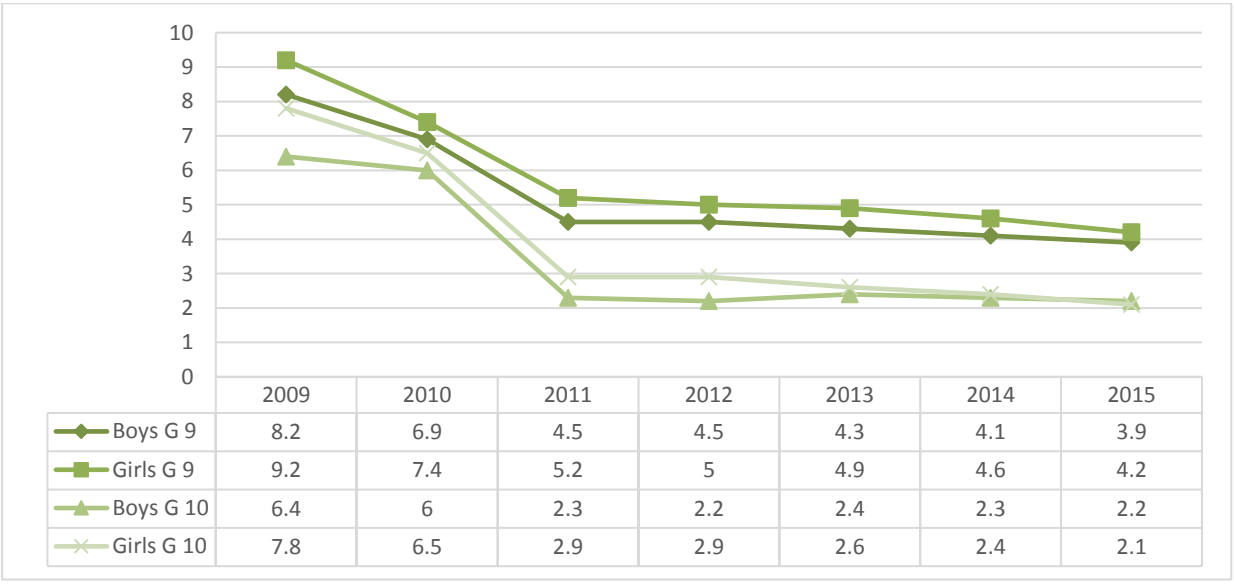


Figure 6.4: Decline in dropout rate in secondary schools, 2009–2015 (Grades 9–10)

	2009	2010	2011	2012	2013	2014	2015
Boys G 9	5.2	5.6	7	5.8	5.5	4.9	4.2
Girls G 9	4.9	4.9	6.2	5.9	5.6	5.1	4.7
Boys G 10	19.5	14	11.8	8	7.6	6.9	6.2
Girls G 10	17.7	11.9	10.4	8.1	7.7	7.1	6.6

There was a large decrease in the number of repetitions between 2009 and 2011 after which there was a slower decline (Figure 6.5). Repetition rates, however, show that inequities in participation and outcomes, while decreasing over the years, continue to disadvantage girls in Grades 9 and 10.

Figure 6.5: Improvement in repetition rate in Grades 9 and 10, 2009–2015

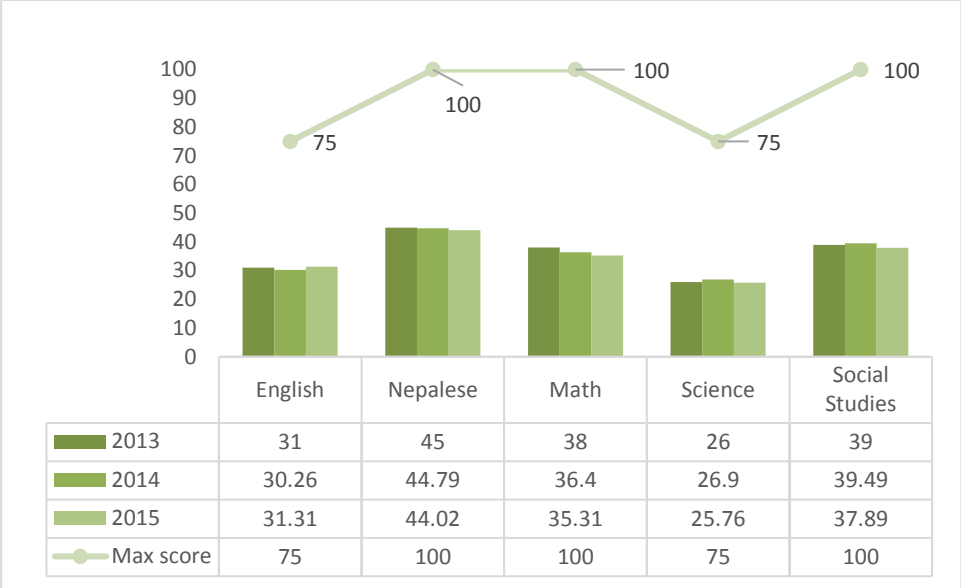


	2009	2010	2011	2012	2013	2014	2015
Boys G 9	8.2	6.9	4.5	4.5	4.3	4.1	3.9
Girls G 9	9.2	7.4	5.2	5	4.9	4.6	4.2
Boys G 10	6.4	6	2.3	2.2	2.4	2.3	2.2
Girls G 10	7.8	6.5	2.9	2.9	2.6	2.4	2.1

Promotion rates followed the same trend in the SSRP for repetition and dropout rates. However, as with basic education, a large proportion of students do not seem to be learning the skills and competencies necessary for higher education, vocational education, or skilled jobs. Figure 6.6 shows average scores in core subjects in 2013–2015

while Figure 6.7 shows the decreasing proportion of students passing the SLC with more girls than boys failing.

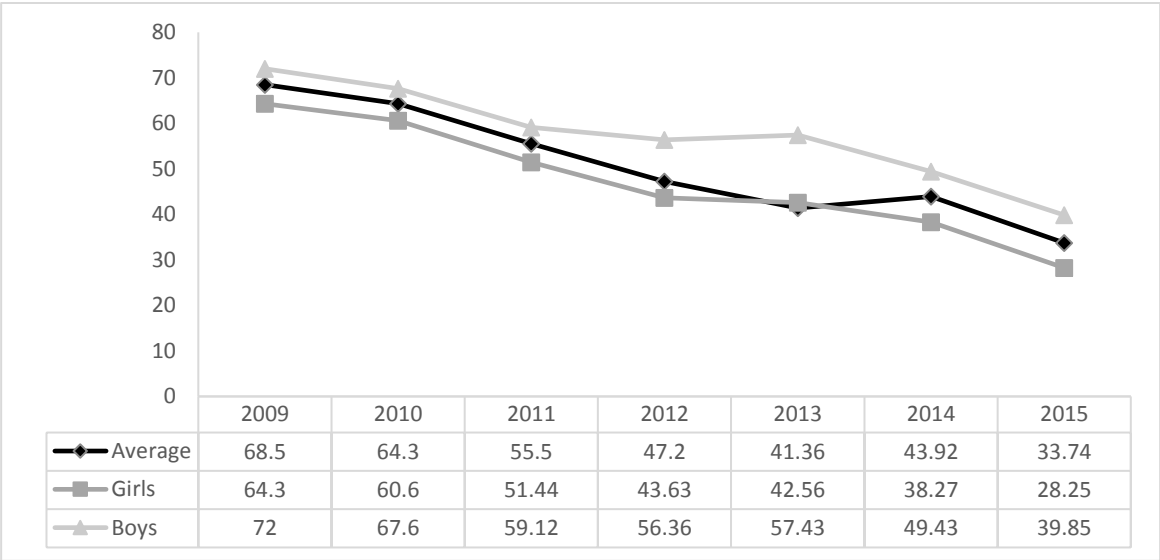
Figure 6.6: Average scores in core subjects, 2013–2015



	English	Nepalese	Math	Science	Social Studies
2013	31	45	38	26	39
2014	30.26	44.79	36.4	26.9	39.49
2015	31.31	44.02	35.31	25.76	37.89
Max score	75	100	100	75	100

Source: DoE flash Reports 2013-2015

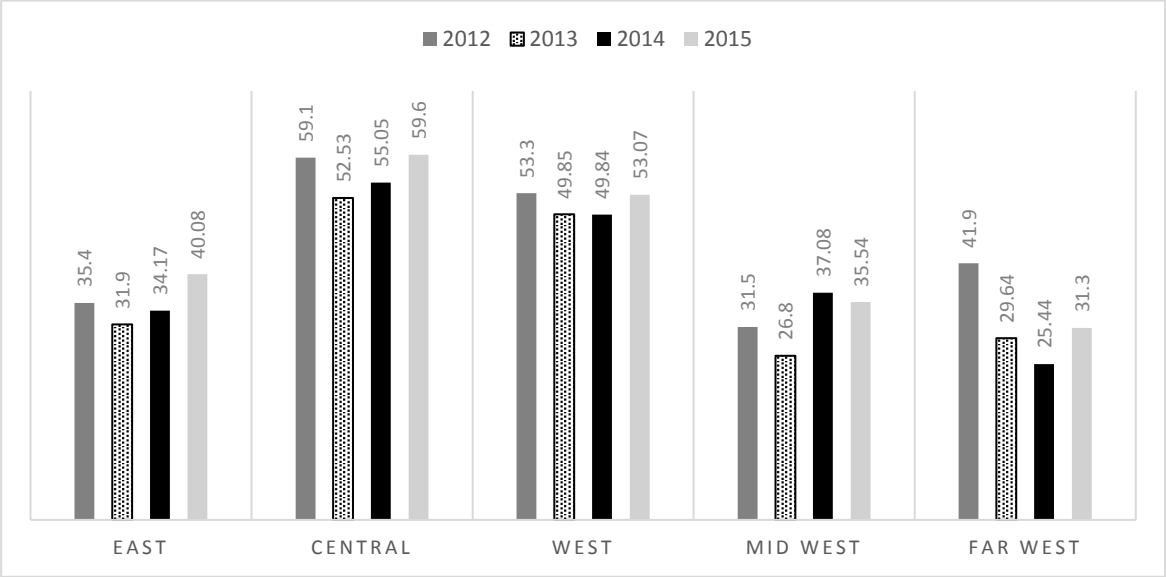
Figure 6.7: Percentage of students passing SLC, 2009–2015



	2009	2010	2011	2012	2013	2014	2015
Average	68.5	64.3	55.5	47.2	41.36	43.92	33.74
Girls	64.3	60.6	51.44	43.63	42.56	38.27	28.25
Boys	72	67.6	59.12	56.36	57.43	49.43	39.85

Except for the Central and Western regions, the percentage of students passing the SLC in 2012-2015 was less than 50 percent (Figure 6.8). And girls remain less likely than boys to pass the SLC (Figure 6.9). Disaggregating regional percentages by gender shows a wide gender gap between boys and girls.

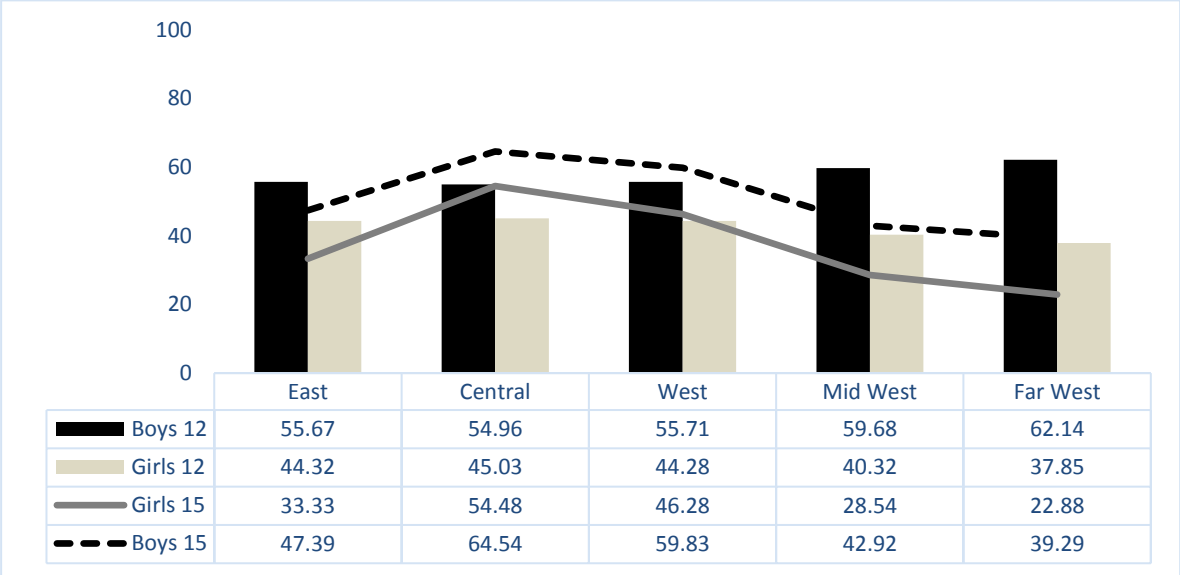
Figure 6.8: Students passing SLC by five development regions, 2012 to 2015



Source: Flash Reports 2012 - 2015

Figure 6.9 shows that the wide gender gap disadvantaging girls in the five regions. The gap is slightly narrower in the central region, but the gap has not decreased since 2012. The Mid-Western and Far Western Regions have the widest gender gap in passing the SLC.

Figure 6.9: Gender gap in passing SLC exams, 2012 and 2015



	East	Central	West	Mid West	Far West
Boys 12	55.67	54.96	55.71	59.68	62.14
Girls 12	44.32	45.03	44.28	40.32	37.85
Girls 15	33.33	54.48	46.28	28.54	22.88
Boys 15	47.39	64.54	59.83	42.92	39.29

Other issues related to secondary education

The following other issues were identified by the secondary education working group. Most of the problems identified have implications in terms of access to secondary education (including Grades 11 and 12), quality, efficiency, equity, and equity.

1. *Secondary schools are established based on demand — The equity vs. efficiency conundrum*. Populations in remote areas have limited access to secondary education services. Conversely, when secondary schools are established, there is low demand due to low student population.

2. *Curriculum issues*: There is no unified curriculum structure at secondary level; secondary schools may not offer subjects that students want; and subjects such as science and math are not delivered properly because schools lack the necessary infrastructure. The science and mathematics curricula need to be revisited to be accessible to the majority of students. This also applies to vocational subjects. Textbooks are lacking in vocational streams. Part of the curriculum redesign should include providing pathways that allow students in academic streams to take vocational classes and vice versa. 'Multiple pathways' have not been created at the higher secondary level.
3. *Implementing free secondary education*: There is a need for more effective management to focus scarce resources (scholarships) to achieve free secondary education to benefit those who need this support the most.
4. *Private schools and equity*: Private schools have expanded access to secondary education, but at the expense of community schools. More efforts are thus needed to promote social responsibility among private schools, and ensure that their expansion does not prevent children who cannot afford private school fees from accessing secondary education.
5. *Quality, relevance, and effectiveness*: Exam scores in Grades 9, 10, 11, and 12 demonstrate that gains in access have not been accompanied with gains in quality of learning. Problems with instructional quality are rooted in problems in access to skilled and dedicated teachers, the dearth of appropriate instructional infrastructure, ineffective school management, and a lack of student motivation. Secondary education is perceived as largely irrelevant to the country's social and economic development. It preparing many educated and unemployed youth.
6. *Teacher management*: Secondary education lacks a dedicated teacher commission for recruiting, preparing, and inducting secondary school teachers. Secondary schools operate without the needed expert subject teachers (in regular academic subjects and vocational steams). Teacher preparation programs need to equip head teachers with the skills to manage schools effectively. The provision of part-time expert teachers can help address the lack of expert subject teachers.
7. *Continuous professional development (CPD)*: CPD is an essential step in continuously updating teachers' knowledge and skills. In addition to helping them teach better, CPD enhances their professionalism and encourages more dedication.
8. *Infrastructure*: Compulsory infrastructure such as classrooms, libraries, computers, science labs and playgrounds are not available in many schools. This makes it difficult, if not impossible, to deliver instruction that requires experimentation and hands-on practice, as in the vocational stream. Students who do not benefit from rich learning experiences lack the practical skills that qualify them for jobs.
9. *Financing secondary education*: Secondary education has been declared free and compulsory, but the government's resources are insufficient to pay for universal

secondary education. Local contributions to supporting education are either weak or non-existent. Generating more funds optimizing existing infrastructure and grouping students in sparsely populated areas in bigger schools are some of the proposed solutions to address the funding shortage. Given that for many students, secondary education (including higher secondary) is a terminal degree, employers need to be involved in partnerships that incentivize them to contribute to support special streams, and hence, contribute to financing secondary education. Finally, notwithstanding all the efforts to promote partnerships, cost-sharing, and cost-saving in financing secondary education, the government remains the ultimate agent for funding its transformation to an efficient system that promotes students' socioeconomic well-being and provides the necessary supply of qualified graduates to help the economy grow. Part of the case for more financial support for secondary education is to win political champions who will push for more and diverse funding, and will work with MoE to ensure that secondary education staff are well trained, well supported, and held accountable for improving student educational outcomes.

8.4 Non-formal Education and Lifelong Learning

The distinction between formal and non-formal education is often based on where learning takes place. Formal education primarily occurs in training establishments and often leads to recognized outcomes and qualifications. Non-formal education has intended learning outcomes, but the learning often happens in places where teaching is not the primary business. In the face of a situation in Nepal of high school dropout rates, high numbers of out-of-school children, and a high percentage of low skilled workers, and the low fit between tertiary education and labor market needs, non-formal education and lifelong learning are increasingly important in Nepal. The ability of Nepalese to adapt their knowledge and skills to the needs of the modern labor market at home and abroad will significantly determine the extent to which they can secure gainful jobs and break the cycle of economic vulnerability.

Most non-formal education happens through labor market programs, on-the-job training, professional associations, work experience and volunteer organizations. Informal education comprises learning that comes because of participations in clubs, libraries, museums, family activities, playground activities, volunteering and other arenas.

In Nepal, it seems that technical education and vocational training (TVET) is conflated with non-formal education and lifelong learning. While, the overlap is justified in the cases of non-formal settings, it is important to underscore that when TVET is delivered as part of vocational streams in formal learning institutions, it is really a part of formal education.

The main challenges facing TVET in Nepal are the need for more funding, more up-to-date curricula, better teacher training, more vocational stream choices that are relevant to the job market have. There is, however, little information on the potential of leveraging existing non-formal and informal channels to supplement formal education efforts in

providing courses in literacy, numeracy, and social skills that equip Nepalese of all ages with the life skills to function independently at the personal and professional levels.

An overall priority for the educational sector has been to reduce illiteracy. To achieve this, there has been a focus on increasing the rate of enrolment at all levels of formal education. The focus on students graduating to the next levels of formal education has led to much less attention on supporting students who fall out of the formal system. This has left leaves few resources for targeting drop-out students by providing basic skills training at the secondary level where drop-out is significant. The consequence is that students who have dropped out enter the labor market as unskilled or low-skilled labor as they only possess 'school knowledge' that is not easily transformed into skills that are directly usable for employers. The large group of unskilled labor has resulted in the falling productivity of the economy and low quality of services. It also makes it difficult for the individuals within the group to raise their income level and qualify for higher-level jobs.

8.5 Links with Higher Education

The ageing trend of the Nepalese population represents the ticking clock of Nepal's demographic dividend opportunity that must be fully seized if the country is to graduate from the least developed category status. We have already noted that the key to cashing on the demographic dividend is to maximize the productivity of the available human resources. One of the means to this end is educating students to prepare them for college and a career. The reform vision of the DoE is to produce citizens who are committed to democracy, human rights, lifelong learning, a positive disposition toward labor and self-employment, community participation, and active participation in solving local and national challenges in the twenty-first century.

Higher education is often the place where these skills and dispositions are tested and honed. However, there was no reference to links of school education with higher education in the vision or the goals of the SSRP (MoE 2009). Thus, of the 14.5 percent of secondary graduates who enrolled in higher education, we know very little about the extent to which they have the dispositions necessary to succeed in higher education. According to Conley (2003), these skills include critical and analytical thinking, problem solving, inquisitiveness, the initiative to take advantage of university resources, openness to trying new things and being willing to fail at tasks the first time, and the ability to accept critical feedback and adjust accordingly. These skills are critical to achieving the DoE vision. However, without deliberate policies and programs that link education reform to the broader goal of preparing children who are ready for college and employment, it will be difficult to translate DoE's vision into an implementable and realistic strategy.

8.6 Technical and Vocational Education and Training

Another area where the connection between DoE's vision and existing programs needs to be strengthened is TVET. The relevant part of DoE's vision here is citizens who have a positive perception of labor, are oriented towards employment, and have the agency to

be active citizens. To achieve this vision, the common view of TVET as a path of second choice needs to change. Parajuli (2013) notes that only two percent of secondary and higher secondary students choose TVET, and that this sub-sector receives little more than two percent of the national education budget. From a management perspective, TVET programs need to be integrated under one structure instead of being fragmented into multiple programs under various ministries and offices. The country has yet to have a vocational qualifications framework even if recognition of the importance of such a framework began as early as the 1980s. Last, but not least, there is an urgent need to strengthen the TVET information management system.

TVET in Nepal needs strengthening in the following ways:

- Attach more importance to the knowledge heritage by documenting traditional methods of skill and knowledge transfer and promoting an apprenticeship system where localized knowledge, skills, and craft are passed to younger generations;
- Connect the various actors in TVET to create pathways for further development of TVET participants; and
- Align the TVET curriculum with the demands and needs of the labor market. The curricula are about 15 years old. They need to be modernized and connected with modern technology, there needs to be a robust monitoring and evaluation system that enforces uniform quality standards, and there need to be stronger links with potential employers to ensure that the curricula and the training fit the labor market needs.
- Institute a national vocational qualification framework that has clear and urgent needs, demonstrates compelling benefits, and accounts for Nepal's financial constraints and capacities.

The taking forward of these approaches require:

- political and bureaucratic support;
- a clear line of command with an ultimate agency responsible for implementation;
- an appreciation of the multiplicity of the necessary interventions; and
- building coordination and flexible pathways that connect formal and non-formal systems of TVET, reducing barriers to access to TVET,
- an integrated system of credit, planning, management, marketing, logistical, support, technical support, and
- networking with TVET private and public stakeholders that will make TVET relevant and responsive to market demands.

All these changes are contingent on a functional TVET information management system that helps identify needs, disaggregates services and beneficiaries, better tracks the use

of resources, and hence strengthen the governance of TVET, and thus its attractiveness to private investors.

8.7 ICT in Education

The vision of the Information and Communication Technology (ICT) in Education Master Plan (2013 – 2017) (MoE 2013) is the extensive use of ICT in the education sector and using ICT as a means of access to and enhancing the quality of education. The mission is to narrow down the digital divide through the development of ICT infrastructure, human resources, digital content and education system enhancement. According to UNESCO's Institute of Statistics (2012), only 6 percent of primary schools and 24 percent of secondary schools are connected to the electricity grid. One percent of primary school and 6 percent of secondary schools have internet connections. And only 0.5 percent of primary schools and 4 percent of secondary schools use computer-assisted instruction. These data indicate that the digital divide is rather daunting to solve in a short time.

ICT needs to be integrated within the National Information Communication Technology policy to speed up the penetration of ICT in education. Given the large amount of funding needed to increase the penetration of ICT in Nepal's schools, efforts are needed to mobilize the private sector, telecommunication operators, and civil society to contribute to support the closing of the digital divide in schools. This should include adopting local solutions to the generation of electricity and partnerships with local entrepreneurs (cyber café owners) to improve access to the internet. MoE-led solutions should also include strategies aimed at funding the ICT infrastructure in pilot schools (with support for electricity and internet connections, computers, trained staff and digital media), modelling the use of technology in instruction, training teachers in the use of technology and demonstrating how ICT can be used to reduce teachers' workload and improve students focus, retention, and learning. Last, but not least, efforts to support ICT in education should benefit from efforts to expand the TVET infrastructure as ICT in schools will help fulfil the goal of improving access to quality education while planting the seeds for interest in one area of TVET early in children's lives.

8.8 Teacher Management and Capacity Development

At the national level, the Teacher Service Commission (TSC) is ultimately responsible for licensing and selecting permanent teachers. However, the district level is primarily responsible for teacher management with DEOs playing a crucial role in recruiting, deploying and redeploying teachers. SMCs are responsible for the recruitment of temporary teachers in their respective schools.

The National Centre for Educational Development (NCED) manages in-service training for both lower secondary and secondary teachers. Trainings are offered in educational training centers under the overall supervision of NCED. The standard teacher training program lasts ten months through separate packages: the first package is for 2.5 months, the second for five months, and the third for 2.5 months. Participation in training courses

is taken into consideration in teachers' career development. DEOs consult with SMCs regarding in-service teacher training. There are no institutionalized in-service teacher training opportunities for higher secondary teachers.

Applicants must have twelve years of education to be eligible to teach at lower secondary level. Candidates whose major subject was not education have to take the ten-month teacher training program. These programs are offered by training institutions at the higher secondary level, with NCED being overall responsible for these courses.

Secondary school teachers need a bachelor's degree (equivalent to fifteen years of education) and must complete the ten-month teacher training course if their major subject was not education. In addition, all applicants need to pass a teacher licensing examination (administered annually by TSC) to be eligible for recruitment. These licenses are permanently valid. Applicants are also required to complete practicum training for one to one-and-a-half months for both lower secondary and secondary level teaching. There is no teacher licensing system for higher secondary teachers.

In general, teacher training in Nepal's universities has not produced skilled teachers. MoE operates in-service teacher training mainly to achieve quantitative targets. However, many evaluators of the training programs see no significant difference between the teaching of trained teachers and untrained teachers.

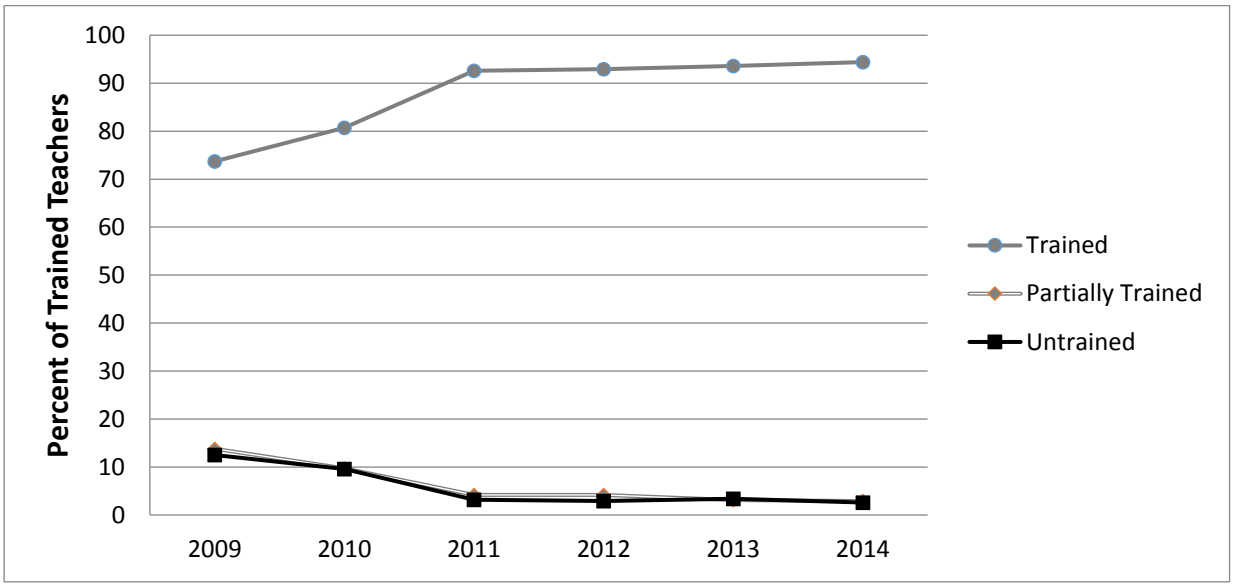
In 2008, the teaching behavior of trained teachers indicated that the existing pre-service and in-service training system needed thoroughly reforming. NCED is the apex body to advise the government on all aspects of teacher development. However, it has not been equipped with the caliber of professionals needed to carry out such an important task. NCED does not have a mechanism to use professional institutions and individuals to develop plans and programs on teacher development. In 2008, secondary teacher training in Nepal was in a chaotic state. The 2008 emergence of a few new universities and the unplanned expansion of teacher training campuses of Tribhuvan University changed the scenario of secondary teacher training. The government established NCED as the entity to coordinate teacher training. However, the new entity was not equipped with adequate professional staff and it has been overwhelmed with implementing the in-service training of primary and secondary teachers. It is recommended that studies are carried out to identify the status of secondary teacher training as a basis for policy and plan formulation and to assess the teaching behaviors of trained teachers.

In 2010, MoE introduced the Teacher Development Policy Guideline (NCED 2010) as an implementation tool for policies envisioned under SSRP's teacher development component. The plan had already laid down indicative policies on teacher development concerning i) selection and recruitment; ii) qualification requirement; iii) teachers' preparation; iv) in-service teachers' development; v) career path and promotion; vi) specialized teaching cadres; vii) teacher performance monitoring; and viii) head teacher selection and training requirement.

The third policy, teachers' preparation and professional development, is designed to create a framework and modalities for in-service teacher training programs. Besides, policy action devoted to create multiple opportunities for teachers having different terms of tenure are the main content in this section. It is ensured by policy that teachers designated for different assignments can access appropriate specialized training courses rather than just attending the conventional, one-fits-all-package. Under this policy, every teacher working in government aided schools will be provided access to a one-month teacher professional development (TPD) course by 2015. Furthermore, multiple avenues of teacher development will be introduced for the continuous professional development of the teachers. Orientation courses (of up to two weeks) will also be made available through the NCED system for those teachers who are assigned for additional teaching responsibilities such as teaching in open schools, non-formal classes, alternative and flexible classes. Lastly, teachers designated for teaching through ICT methodologies will be provided with 1-3 months of intensive capacity building training under education training centers. In regards to "inclusive teachers", separate training provision will be made for the requirement of teaching multilingual students, special needs' students, and multi-grade classes. For example, permanent arrangements will be created under NCED system to provide 1-3 months' capacity building training for the identified teaching cadres.

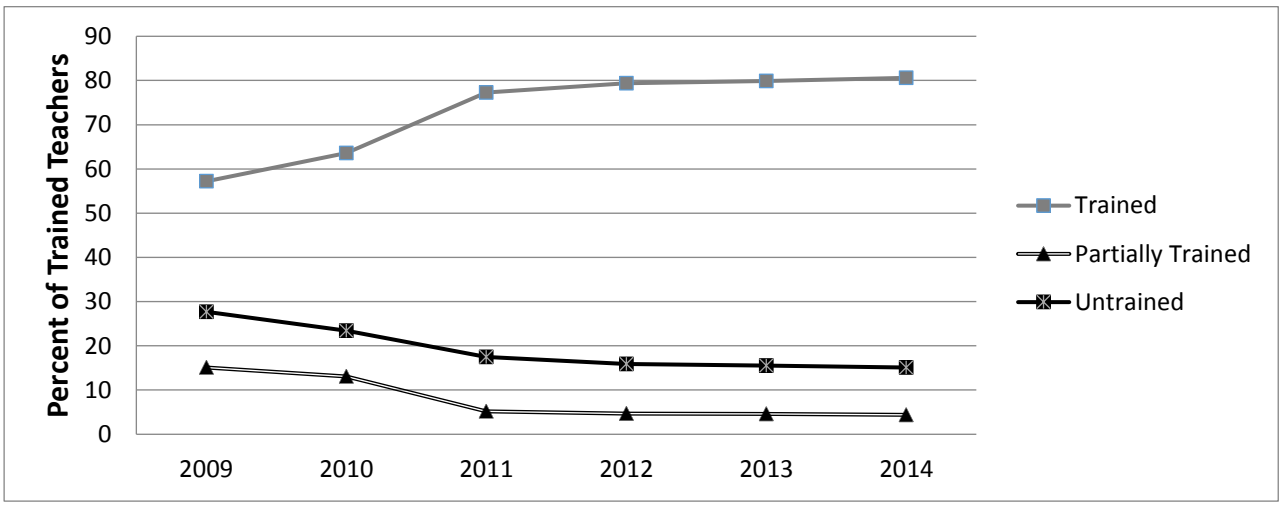
There has been a noticeable improvement in teacher capacity and development between 2008 and 2015. In 2009, only 73% of primary teachers had been trained with a further 14 percent partially trained and 13 percent untrained. The greatest improvement happened between 2009 and 2011 probably due to the introduction of the Teacher Development Policy Guidelines. These guidelines introduced reforms to improve the capacity, training, and development of teachers. There was a marked improvement in the proportion of trained teachers in 2011 — by about 20 percentage points (Figure 6.10). Since then the proportion of trained teachers has steadily improved with a concomitant fewer untrained and partially trained teachers.

Figure 6.10: Teacher training status in primary schools (2009-2014)



The emergence of new educational establishments and the unplanned expansion of teacher training campuses under Tribhuvan University in 2008 may have been responsible for the low percentage of secondary teachers trained teachers in 2009 (57 percent) (Figure 6.11). From 2009 to 2010 and 2010 to 2011, the percentage of trained teachers improved by 7% and 14% respectively with the associated declines in the proportion of partially trained and untrained teachers. There has been a slow and steady increase since then in the proportion of trained teachers.

Figure 6.11: Percentage of trained teachers employed in secondary schools (2009-2014)

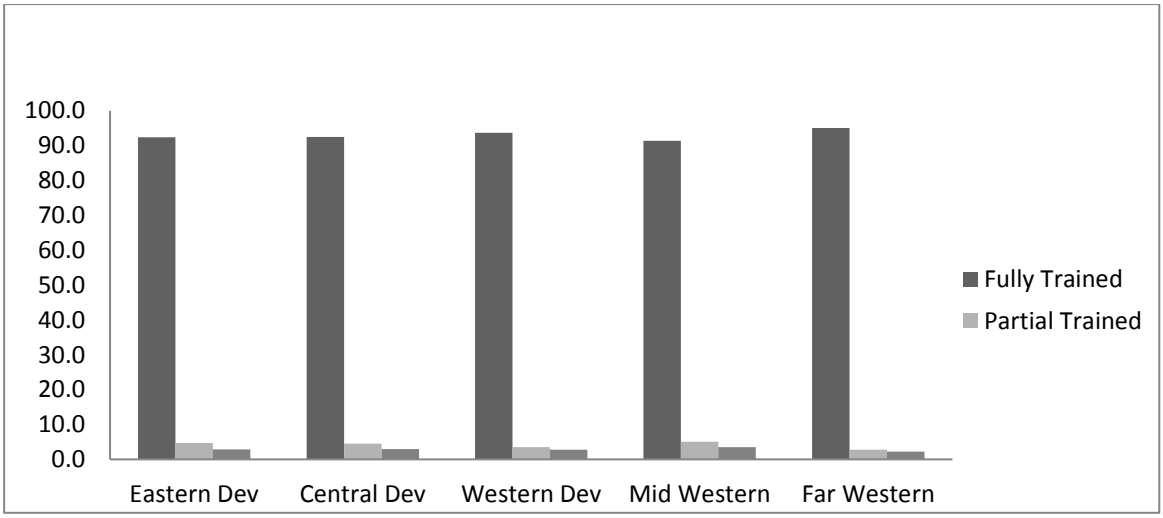


Staffing levels have increased dramatically over the past 10 years; the overall student–teacher ratio has fallen from 42:1 in 2004 to 25:1 in 2014. However, there are still huge regional disparities with ratios ranging from 49:1 in the central Terai and 39:1 in the Far Western Terai to 5:1 in the Western Mountains. These disparities are linked in part to varying service conditions, salaries and benefits under which teachers are hired. As MoE has shifted the responsibility for hiring teachers to SMCs, over a half of teachers have been

hired under temporary status contracts, which provide lower salaries, fewer benefits and fewer opportunities for training. At the same time, it is acknowledged that there are widespread problems in the transparency and quality of local hires under SMCs.

At least 90% of all teachers had been fully trained as of 2012 (Figure 6.12) across all five development regions. This indicates that training capacity is fairly distributed across the country. The proportion of partially trained and untrained teachers is also similar across the country indicating that all the regions share common challenges in the training teachers.

Figure 6.12: Primary school teachers' training at development region, (%) 2012



Despite the large advances, there is still a lack of effective performance management or clear career paths and incentives for teachers. In 2013, a Teacher Management Study was undertaken, covering recruitment, transfer and deployment, equity and quotas, a Teacher Management Information System (TMIS), job descriptions and performance management. Based on its findings, a teacher competency framework is being developed to re-establish the critical link between teacher management and classroom learning, and to rekindle a sense of professionalism.

8.9 Capacity Development

The Human Resource Development Plan (2002–2006) considered capacity development program as a very important target towards providing education for all by 2015. The SSRP contained several programs for improving the efficiency of service distribution and set targets for building capacity in the sector through a work plan. SSRP's mid-term evaluation (Cumming et al. 2012) found that many capacity development activities had been carried out including:

- national work structure prepared for capacity development by MoE;
- SMCs and guardians trained;
- teacher training conducted to build up their professionalism;

- short term training conducted for several levels of staffs by educational human resource development centers.

However, these activities have been insufficient to build up the level of capacity envisaged in the SSRP.

Human resource development occurs at the individual, organizational and system levels. Key SSRP provisions have not been fully implemented because of capacity development weaknesses at the individual, organizational and system levels. The SSDP working group has proposed a 50-point capacity building scenario for Nepal's education sector under these three levels:

- Individual level — improve technical skills to execute tasks, use the curriculum, plan, monitor, supervise and document using ICT.
- Organizational level — create appropriate environments for executing tasks through better work conditions, more cooperation and team work, action learning, and promoting higher exchange and coordination between branches and authorities within the school sector.
- Systems levels — improve staff selection, assign tasks, prepare rules and regulations, develop work details, conduct evaluations and institute transparent systems of promotion.

9. IMPACT ANALYSIS OF THE EVENTS IN 2015/16 ON NEPAL'S SCHOOL SECTOR

9.1 Background and Context

Background to Nepal's School Education Subsector

The government of Nepal has initiated a series of large scale reforms in the school education sub-sector beginning in the early 1990s. These include the Basic and Primary Education Programs (BPEP I and II; 1992-2004), the Education for All Program (EFA; 2004-2009), and the School Sector Reform Plan (SSRP; 2009-2016). The School Sector Reform Plan (SSRP) was completed in July 2016, and preparations for the successor program (School Sector Development Plan or SSDP) were initiated from 2015. The SSDP is being implemented over a seven-year period beginning from July 2016. As a result of reforms undertaken during the implementation of previous education sector plans, Nepal has made impressive gains particularly in expanding access and improving participation at all levels of the school education, including early childhood education and development, and to a limited extent in enhancing quality and relevance and learning outcomes21.

The SSDP is based on a Theory of Change that was informed by the education sector analysis (MoE 2016). This analysis considered the rich qualitative and quantitative data accumulated within the Nepal education sector over the past decade, supported by supplementary thematic studies to address knowledge gaps identified through the consultations within SSDP's thematic working groups (TWGs) and with stakeholders and experts. Based on the analyses of context, progress, remaining challenges and constraints, imperatives and key result areas were identified as components of the Plan's Theory of Change (ToC) to bring about transformative change and the envisioned results and outcomes of the SSDP as stated in Chapter 2. Improvements in each focus area need to be sustained through various strategies, interventions and activities from ECED/PPE through to the secondary education phase. It is essential that progress is made in all focus areas across the various phases and on all plan components. The cumulative effect of success in each strategic priority area will fulfill the SSDP's purpose to improve equity, quality, efficiency, governance and management, and resilience of the education sector.

Context for Impact Analysis

The year 2015-16 was historic in both positive and negative terms. In addition to the earthquake and the economic blockade, there were developments at the political level that are expected to have an impact on the trend and projections of education outcomes in Nepal. Nepal promulgated a new Constitution in September 2015, with federalism and state restructuring at its core. The same year, the government initiated the formulation of the SSDP for the next seven years. More recently the long awaited eighth amendment of

[21]Poyck, Maria Catharina, BidhyanathKoirala, Prem Narayan Aryal and Nanda Kishore Sharma. 2016. *Joint Evaluation of Nepal's School Sector Reform Program 2009-2016*. Final Report.

the Education Act was approved in June 2016, paving the way for some of the most critical reforms envisaged by the SSRP and the SSDP, including the legal restructuring of the school system into basic (covering ECED-grade 8) and secondary (grades 9-12) education. As such, 2015-16 has presented a unique set of challenges and events that have significantly impacted the education sector context and its outcomes. Therefore, the impact of these events on the education sector, especially on the key performance targets, and strategic and programmatic priorities of the SSDP, require further analysis and projection for the medium and long term, as recommended in the 2015 Post Disaster Needs Assessment (PDNA). It is in such a context that this impact analysis has been undertaken.

The ESA has been undertaken to ensure a strong evidence base on which the SSDP is being developed. However, the trend analysis and projections that were done to inform the development of the SSDP Program and Result Framework were largely done when the events in 2015, described above occurred. This created the need to scrutinize those findings and ensure that our assumptions and projections were still valid. Especially as the equity strategy shows that defined groups suffer from multi-dimensional barriers that affect them disproportionally in terms of access, participation and learning outcomes. The events will have had stronger impact on certain dimensions than others and as such affected certain groups and children stronger than others. The goal therefore is to scrutinize the work done to establish an evidence base for the development of the SSDP by taking the immediate short term effect and the assumed medium and long term effect of the events into consideration against the pre-existing resilience and vulnerabilities of groups that were affected by the disaster through undertaking a mixed method analysis of available secondary data.

9.2 Objectives of the Impact Analysis

The specific objectives of this task are as follows:

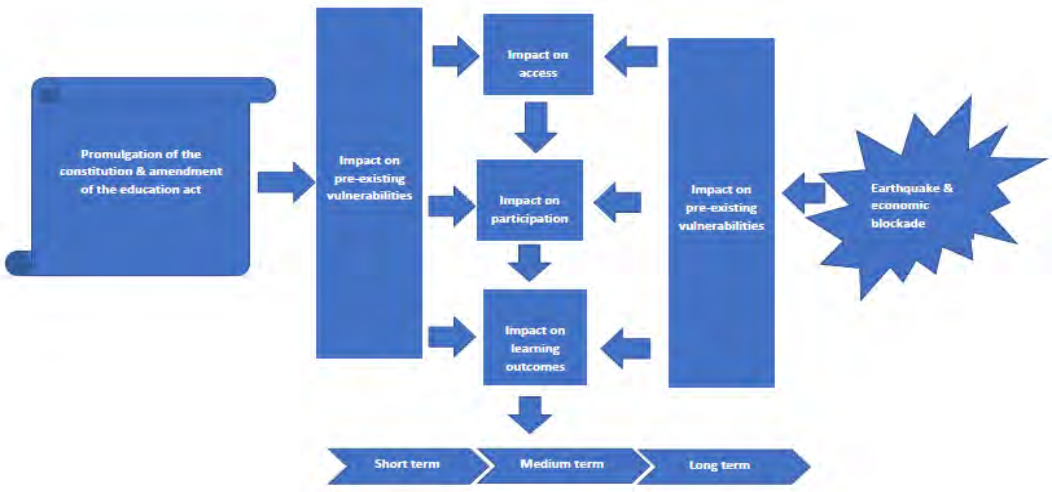
- Validate the preliminary calculations and analyses on impact of the (i) 2015 earthquake, (ii) 2015-16 economic constraints and political agitation, (iii) 2015 adoption of Nepal's constitution, and, (iv) 2016 amendment of the education act, against the SSDP Key Performance Indicators and outcomes
- Project the medium (3 year) and long term (7 year) impact and implications of the events on the SSDP KPIs, with desegregation of these for specific groups identified against the dimensions of the Consolidated equity strategy for the school education sector in Nepal.
- Produce a report of the analyses.
- Produce a shorter brief of analyses and policy recommendations based on the full report properly laid out with the concerned tables and figures for general population.

9.3 Methodology

As the purpose of this impact diagnosis is to ensure the credibility of the assumptions and data based on which the education sector pan was developed, within the context of the data that would be needed to allow a full-fledged impact analysis yet to become available, the methodological framework developed for this impact diagnosis attempts to allow for comparing the events that took place in 2015 in terms of the impact they had on the education outcomes and will have on the short (2 years) and medium (5 years) time to enable to scrutinize the outcomes and recommendations made as a result of the undertaken education sector analysis and the baseline that was stashed at the end of the SSRP as these form the foundation on which the SSDP results framework, targets and strategies have been developed. In addition, the impact of the 2015 events is to be seen against pre-existing vulnerabilities.

To establish a theoretical framework, international literature on impact of disruption of education and on pre-existing vulnerabilities was reviewed, as well as additional literature and data on the impact of the events in Nepal. Based on this, two groups were assembled with the first one constituting events that disrupted education either directly or indirectly (the earthquake and the blockade) and the second group being events that impacted education indirectly (the promulgation of the constitution and the amendment of the education act), as has been displayed below in Figure 1.

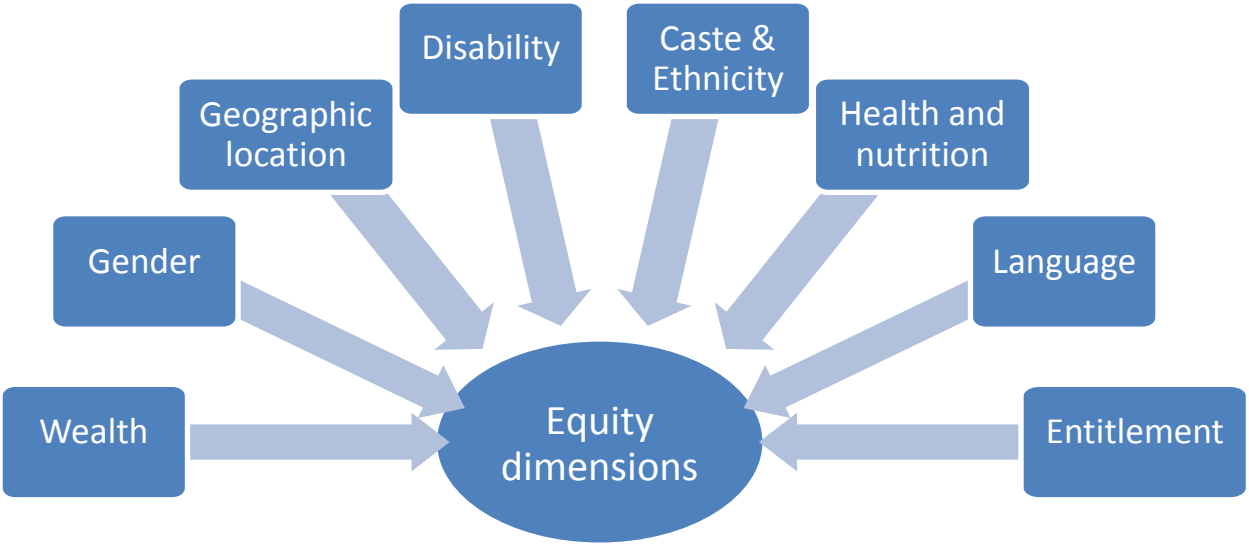
Figure 1: Impact on Education Outcomes Model



To measure the impact against pre-existing vulnerabilities, the theoretical framework of the Consolidated Equity Strategy for the School education sector in Nepal (Equity Strategy) was used (Figure 2). The framework is based on the work by Sen, Nussbaum and others on the capability approach, and therefore builds on the concept of identification and removal of constraints and barriers to people's capability sets (or freedoms as Sen brands these). Furthermore, the Equity Strategy's framework considers disparities at all times be of a multi-dimensional nature. This means that children are not unable to access school just because they are a girl, from an ethnic minority, living in a

remote area, from a poor household, etc. but are disproportionally affected by qualifying for several of these drivers of disparity/equity dimension features (see figure 2 below). Also, certain drivers of disparities are expected to exponentially increase disparity when combined. For this purpose, the Equity Index has been developed but unfortunately full-fledged analysis about causal relations between the different drivers of disparities linked to the measured impact on education outcomes is still ongoing. Finally, education is taken both as a means in terms of education enabling children to develop capabilities to achieve quality life outcomes and overall well-being, as well as an end in terms of producing people that have been educated through meaningful access, participation and learning outcomes, who will be equipped with skills to engage in a cohesive and inclusive society. Education as such is the main enabler in providing children with sufficient agency for developing these capabilities and the school should function as a mini society.

Figure 2: Equity Dimensions and Drivers of Disparity



Based on this framework, a composite Equity Index has been developed, and this index measures the disparities in access, participation and learning outcomes between and within districts, using both school based EMIS and household based census data that allows for a number of the drivers of disparities displayed above in Figure 2 to be taken into account. As a result, the following existing vulnerabilities have been identified district wise across Nepal (see figures 3-6 below). Brighter the shades, better the district performance in terms of access, participation and learning.

Figure 3: Equity in Access across 75 districts of Nepal

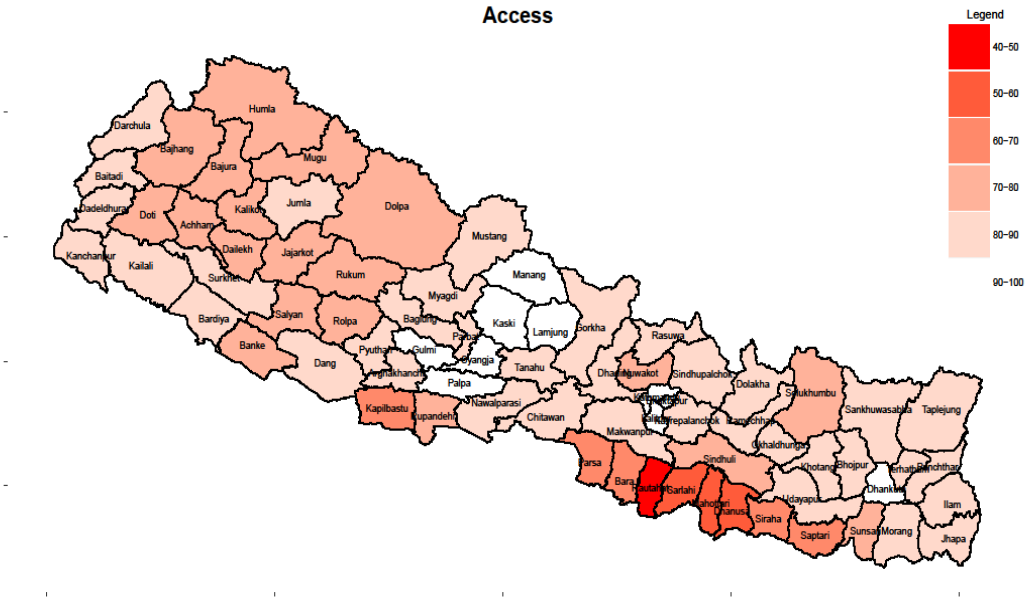


Figure 4: Equity in Participation across 75 districts of Nepal

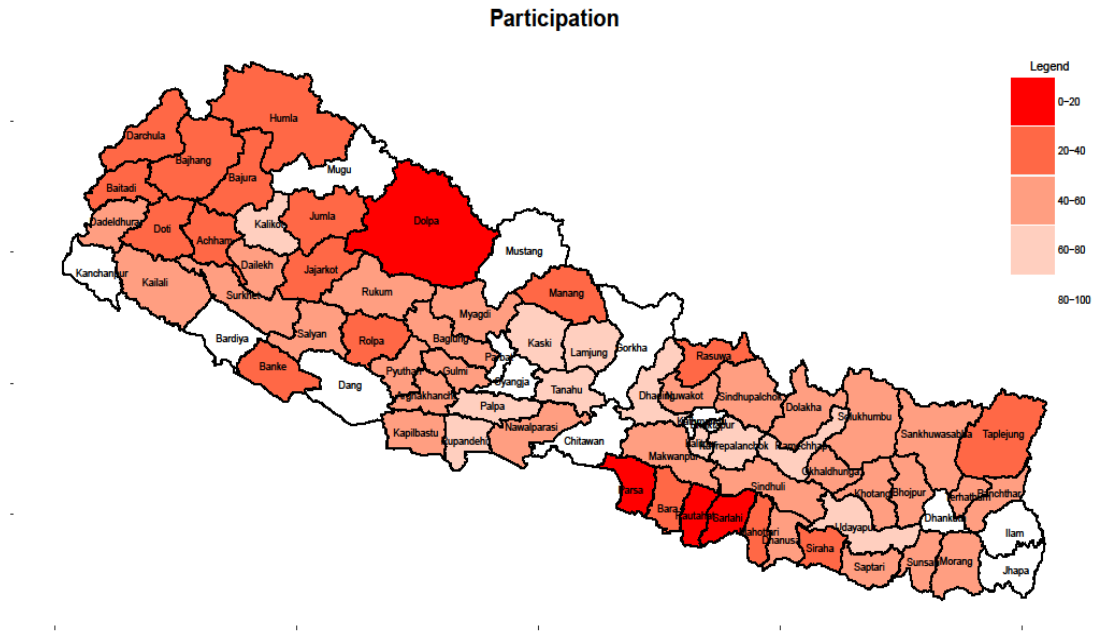


Figure 5: Equity in Learning across 75 districts of Nepal

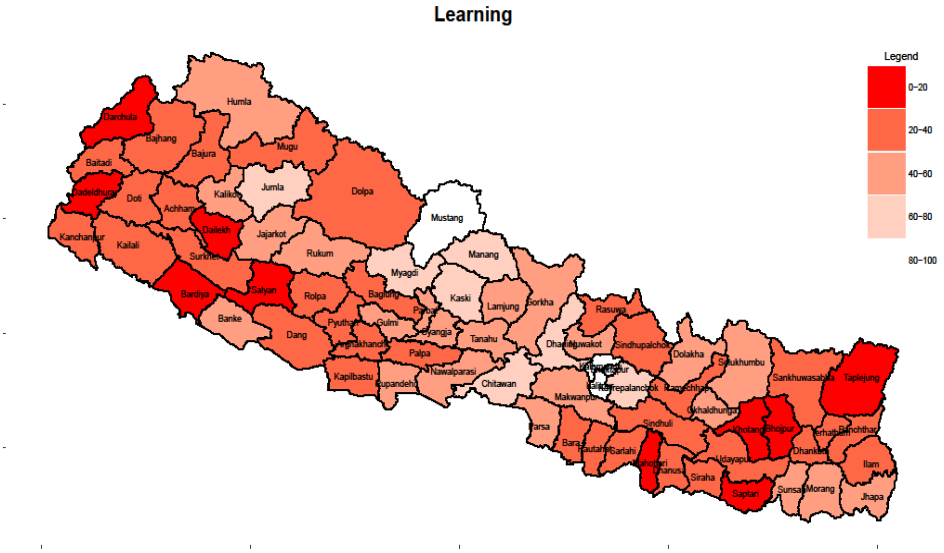
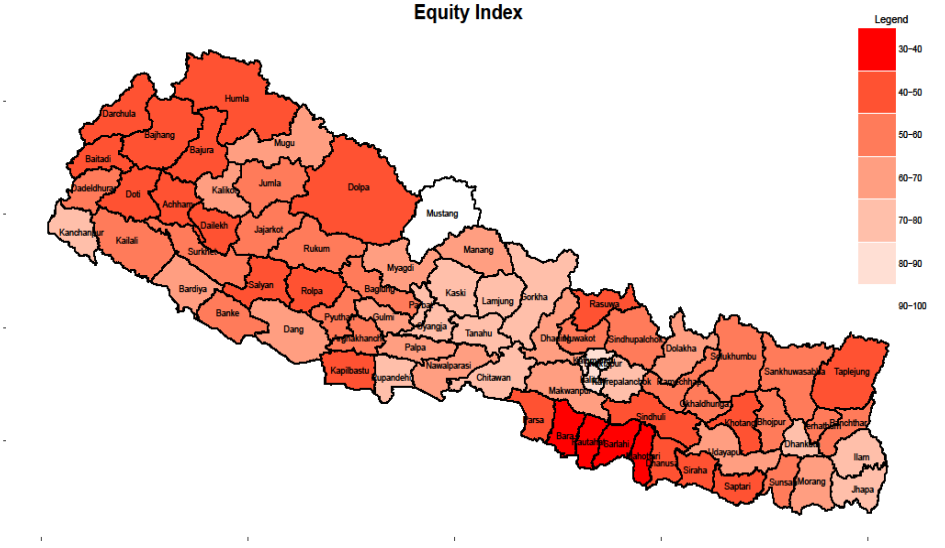


Figure 6: Equity Index across 75 districts of Nepal



Source: *Equity Index, Department of Education 2017.*

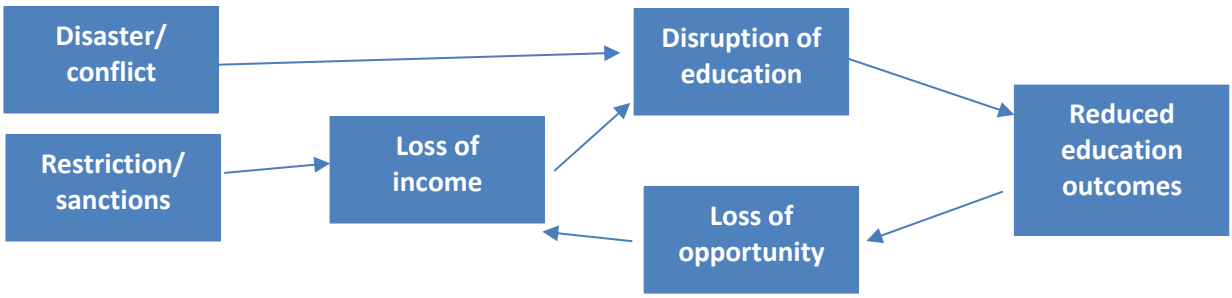
The figures show that the districts in the mid and eastern Terai and the western hilly region score lowest in the country In terms of access and participation (Figures 3-4). This is also an indicator of the vulnerability of these districts against the disasters like earthquakes and economic shocks like economic blockades. Overall inequity is highest in central Terai and far western hilly districts as indicated by the composite equity index (Figure 6).

Model for Measuring Impact of Disruption of Education

Available literature suggests that disasters may affect the education of children in at least four ways. These include: (i) psychological impacts, including post-traumatic stress disorders, (ii) increased incidence of child labour, (iii) constrained accessibility as a result of damages to education infrastructure, and, (iv) increased incidence of poverty (CCD et al, 2016). Likewise, literature on how conflicts affect education shows that: (i) Relatively minor shocks to educational access can lead to significant and long-lasting detrimental effects on individual human capital formation in terms of educational attainment, health outcomes and labour market opportunities; (ii) Destruction of infrastructure, the absence of teachers and reductions in schooling capacity affect secondary schooling disproportionately; and, (iii) Exposure of households to violence results in significant gender differentials in individual educational outcomes (Justino 2010). Further, such literature also suggests that the most vulnerable group after any natural disaster are children aged 15-18, in particular girls, and those who are poorest and are at the bottom of the social class or caste category (Baez 2009).

In terms of impact due to disruption of the education sector as a result of the earthquake and the economic blockade in 2015, the literature review included models used to converge disruptions of education into impact. For this, literature on both the impact of political crisis and conflict on education was reviewed, taking models developed for Kenya, Syria (UNICEF 2015), and Iraq (Andrew J. & Farjo B.A., 2011), as well as literature that modelled the impact of the economic sanctions on education (Mujahid M., 2014 et al.). The main cross cutting method applied was to measure the impact of disruptions and sanctions of education in terms of economic loss (both in terms of loss of income and in terms of loss of opportunity), identifying loss of income both as a cause and an effect of reduced education outcomes in terms of immediate loss of income (for example through imposed economic sanctions) leading to reduced access, participation and learning outcomes, disproportionally affected certain groups, as well as disruption of education leading to loss of opportunity and income on the longer term due to lower education outcomes translating into less opportunities in the labour market (see Figure 7).

Figure 7: Impact of Crisis, Disaster and Sanctions



Based on this understanding, the available literature was reviewed related to impact of the Nepal 2015 earthquake and economic blockade, taking the analysis presented in the 2015 Post Disaster Needs Assessment (PDNA) as a starting point. With regard to emerging vulnerabilities, the PDNA observed that disasters affect different segments of society in disproportional ways. Nepal is a highly diverse country in terms of geography, demography, language and socio-economic status, and certain areas and groups tend to be more vulnerable to disasters than others. The vulnerabilities are likely to be exacerbated due to internal displacement and increased risks of flooding and landslides in the rainy season.

The PDNA used pre-disaster indicators to predict education-related vulnerabilities (out-of-school, dropout, repletion and non-completion) in the most affected, affected and minor affected districts. It shows that there is relatively lower risk at the primary level and higher risk at the basic level in the most affected districts, whereas there is a reversed pattern in the minor affected districts (Table 1). Likewise, analysis of vulnerabilities in the affected districts shows that they have a high number of children with disabilities in ECED, requiring a special focus on this group and their transition to the primary level. However, regarding basic and secondary level, a higher level of vulnerability is observed in the minor affected areas, emphasizing the need for a balanced focus that accommodates historic vulnerabilities with emerged needs. Given that the internal efficiency of the most affected districts is higher at primary level than the secondary one, it can be concluded that special attention needs to be paid to girls and minority groups dropout and learning outcomes at the secondary level.

Table 1: Prediction of Internal Efficiency in the Earthquake Affected Districts

Dropout predictors												
	Grade 1						Grade 8					
	Dropout		Promotion		Repetition		Dropout		Promotion		Repetition	
	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
National	6.5		78.4		15.2		6.0		89.5		4.5	
Most Affected Districts	5.7	Low	79.4	High	14.9	Low	6.9	High	87.9	Low	5.2	High
Major Affected Districts	7.2	High	76.8	Low	30.4	High	5.8	Low	89.3	Low	5.0	High
Minor Affected Districts	7.1	High	78.8	Low	14.1	Low	5.8	Low	88.1	Low	6.2	High

Table 2: Educational Vulnerabilities in the Earthquake Affected Districts

Drop-out predictors						
Equity dimension	Sub group	Indicator type		Most affected districts	Major affected districts	Minor affected districts
Children with disabilities	ECD	Percentage	7.8	9.9	6.6	6.9
		Ranking		High	Low	Low

	Primary	Percentage	1.5	1.0	1.1	2.0
		Ranking		Low	Low	High
	Secondary	Percentage	1.1	0.9	0.9	1.5
		Ranking		Low	Low	High
	Total	Percentage	0.013	1.0	1.1	1.8
		Raking		Low	Low	High
Total age wise Janajatis Total not attending in the schools	5-9 Year	Percentage	11.5	14.2	10.7	18.0
		Ranking		High	Low	High
	10-12 Year	Percentage	7.1	5.3	4.7	6.8
		Ranking		Low	Low	Low
	13-14 Year	Percentage	9.8	8.7	7.2	8.7
		Ranking		Low	Low	Low
	15-16 Year	Percentage	19.5	19.1	17.9	20.7
		Ranking		Low	Low	High
Total age wise Dalits Total not attending in the schools	5-9 Year	Percentage	20.2	13.1	13.4	23.3
		Ranking		Low	Low	High
	10-12 Year	Percentage	15.4	5.3	6.7	11.1
		Ranking		Low	Low	Low
	13-14 Year	Percentage	18.2	10.7	11.9	15.2
		Ranking		Low	Low	Low
	15-16 Year	Percentage	32.8	23.8	25.3	29.8
		Ranking		Low	Low	Low
Total age wise Janajatis Total currently attending in the schools	5-9 Year	Percentage	88.5	85.8	89.3	82.0
		Ranking		Low	High	Low
	10-12 Year	Percentage	92.9	94.7	95.3	93.2
		Ranking		High	High	High
	13-14 Year	Percentage	90.2	91.3	92.8	91.3
		Ranking		High	High	High
	15-16 Year	Percentage	80.5	80.9	82.1	79.3
		Ranking		High	High	Low
Total age wise Dalits Total currently attending in the schools	5-9 Year	Percentage	79.8	86.9	86.6	76.7
		Ranking		High	High	Low
	10-12 Year	Percentage	84.6	94.7	93.3	88.9
		Ranking		High	High	High

	13-14 Year	Percentage	81.8	89.3	88.1	84.8
		Ranking		High	High	High
	15-16 Year	Percentage	67.2	76.2	74.7	70.2
		Ranking		High	High	High
Female age school population	Primary	Percentage	49.0	49.2	49.3	49.1
		Rank		High	High	High
	Secondary	Percentage	49.2	49.6	49.8	49.4
		Rank		High	High	High
	Tertiary	Percentage	50.8	51.9	52.2	51.0
		Rank		High	High	High
Female population out-of school	Primary	Percentage	53.7	54.7	50.5	48.5
		Rank		High	Low	Low
	Secondary	Percentage	49.6	47.7	46.8	49.0
		Rank		Low	Low	Low
	Tertiary	Percentage	51.4	50.2	50.2	52.5
		Rank		Low	Low	High

Model for Measuring Impact of Disruption of Education and of Legal Provisions and Frameworks

With regard to the second group of events (the promulgation of the constitution and the amendment of the education act), the impact of these events has been reviewed in terms of opportunities these events provision. In this regard, the SSDP states the following (p.19):

> The Constitution of Nepal (2015) demands a thorough reorientation of the education system through structural and functional reforms including the policy and regulatory frameworks. The constitution guarantees the fundamental right to education and lays down the directive principles of the federal state, provinces and local bodies on education and the right to education. The Eighth Amendment of the 1971 Education Act (GoN 2016) ensures compatibility between and among educational institutions and paves the way for reforms in line with the new constitutional mandate.

More specifically, the SSDP states (p.34) that the Eight Amendment of the Education Act includes the following provisions:

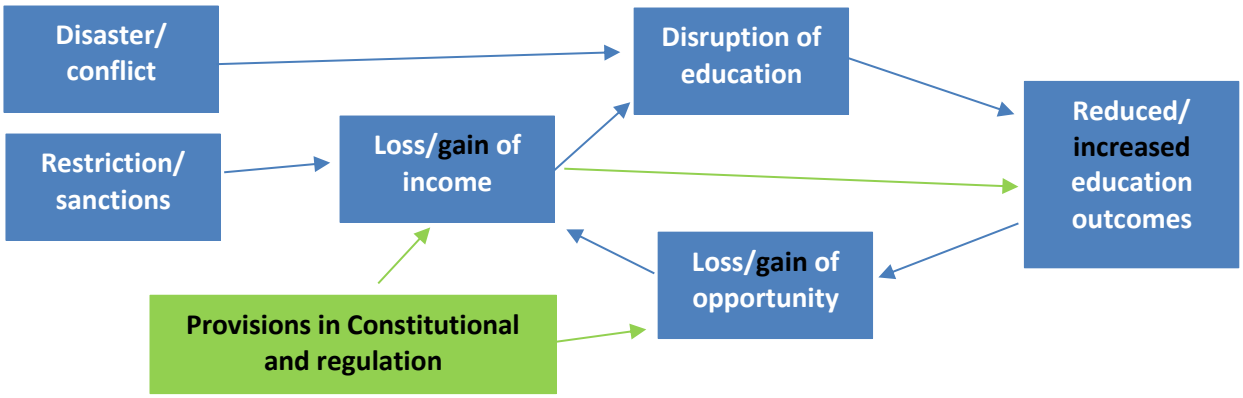
> The eighth amendment of the Education Act (GoN 2016) has strengthened the enabling environment for school education by providing the basis for structural and functional reforms. It has also realigned the school structure into basic (ECED/PPE to grade 8) and secondary (grade 9 to 12) levels of education. Other key amendments are (i) the establishment of a National Education Council (NEC), led by the minister for education with the mandate to review education policies and make recommendations to the Government of Nepal, (ii) examination reform through the establishment of a National Examination Board (NEB) and the

standardization of exams at national, provincial and district levels, (iii) the institutionalization of the Education Review Office (ERO), (iv) the reformation of SMCs, as the appointment of roles/positions within the SMC will now be undertaken by its members, and (v), the strengthening of teacher management through the rationalization of teacher positions and types.

The Education Act gives SMCs major responsibilities for governing and managing schools. However, the extended roles bestowed on local bodies (VDCs and municipalities) by the new constitution make it necessary to realign SMCs' roles and responsibilities. Their roles also need realigning by reactivating and strengthening village education committees (VECs). While SMCs need to focus more on school level planning, head teachers will have an increased focus on instructional leadership including reviewing teacher performance, monitoring teachers' time on task and building the teacher capacity. SMCs and PTAs are responsible for the internal management and day-to-day functioning of schools while VDCs and municipalities and mostly responsible for 'external' administrative and logistical functions, including financing and accountability to provide access to quality education.

Based on these, the model on impact of education outcomes can be elaborated as below in Figure 8. This model also takes stock of the imperatives that were identified during the education sector analysis and builds on international research in how disruption of education and impact on livelihoods impacts education outcomes differently for different groups within the society. In support of the latter, the dimensions that have been identified in the theoretical framework of the equity strategy have been adopted to allow for this to be adequately reflected. This means that the theoretical framework that guides this impact diagnosis is based on a number of key convictions. The first is that although the events that occurred in 2015, although very different in nature, can be translated into how they have affected and will affect education outcomes, in a way that allows these impacts to be compared and consolidated. Secondly, events do not impact people in equal manners, and therefore should be always seen together with pre-existing vulnerabilities.

Figure 8: Impact of Crisis, Disaster and Sanctions and new Legislative Provisions



Methods for Quantitative and Qualitative Analysis

This Impact Analysis uses a mixed method approach consisting of quantitative and qualitative analyses. In carrying out the quantitative analysis of the impact of the 2015

events on the key performance indicators for the SSDP, we looked at the major indicators related to access and participation only, namely net enrolment rates (NERs), promotion and dropout rates because it was difficult to ascertain the impacts on learning achievements given the paucity of data as well as the fact that it takes some time to see the impact on learning outcomes. To assess the impact of the events of the year 2015, a significant dip in the trend of KPIs and related variables are searched for. By significant, it is meant that the dip is higher than the dips in historical data prior to the events of 2015. This kind of dip is assumed to be the necessary condition (not sufficient though) for the events of 2015 to have any effect on these KPIs. The NER projection exercise is done by using the univariate time series data from 2003 to 2015 using beta regression model. Unlike generally used linear trend model based on Normality assumption, the beta distribution is chosen so as to take into account the fact that NER is always between 0 and 100%. Model specification is done so that all the residuals of the model are adequately random. The estimation is done using betareg command in R and the forecasting is produced recursively.

The qualitative analysis is based on a review of literature mainly related to how disasters and political conflicts affect education participation and outcomes, especially for children attending school education. It has looked at available global literature on how disasters and political conflicts affect the participation and learning, and used them to predict and extrapolate possible effects on Nepal's school education based on whatever empirical evidence is available till date. These include published and unpublished reports of the Government, Development Partners, I/NGOs, media houses and other actors. However, the qualitative analysis did not conduct any first hand fieldwork on how the earthquake and the economic blockade impacted upon individuals in the most affected areas of Nepal.

9.4 Limitations

This impact analysis is undertaken to validate the outcomes of the education sector analysis against the impact of the events that took place in 2015, at a time when the full extent and effects of these events is yet to be seen. As such, this analysis should be regarded as a preliminary impact diagnosis of the SSDP program and results framework that will need to be closely monitored during its implementation. As this preliminary diagnosis was undertaken as an additional exercise at a moment when the education sector analysis was completed and the SSDP was finalized, the authors are aware that the implications will need to inform future reviews of the program and the annual implementation plans rather than a substantive revision to the SSDP document itself. With regard to the data and literature used to inform the impact analysis, it should be noted that this exercise did not include any empirical research on how the earthquake and the economic blockade impacted upon individuals in the most affected areas of Nepal and that it is too early to extrapolate the effects of these events on the overall school system. Nonetheless, this analysis is expected to provide guidance to, as well as opening

the door to conducting a full-fledged impact analysis in the future when more data and information becomes available, such as during the mid-term review of the program.

9.5 Analysis of Impacts on Access, Participation and Outcomes in Education

This section focuses on describing and analysing the impact of the events in 2015 (earthquake and the Terai unrest and economic blockade, and promulgation of the new constitution that also led to the Terai unrest) on the education outcomes of Nepali children. However, before analysing the impacts on education outcomes, it is useful to review the major macro-economic impacts of these events that were forecasted both in the context of the earthquake and the unrest and blockade. According to the PDNA report for the Nepal earthquake, the total value of disaster effects (damages and losses) caused by the earthquakes was NPR 706 billion (equivalent to US$ 7 billion). Likewise, an additional 700,000 people (between 2.5%-3.5% of the total population) were pushed into poverty as a result of the earthquake. Analysis of the impact of the Earthquake suggests that there was a net loss of nearly 25% of the GDP, and the annual economic growth rate declined from 4.6% to 3.0%.22 Likewise, according to the white paper issued by the Ministry of Finance in November 2015 in response to the Terai unrest and the economic blockade, the protests and blockade that started from September 2015 resulted in economic losses to the tune of NPR 200 billion and pushed the economic, social and education, among other sectors. Annual economic growth rate was estimated to fall to 2%, and inflation expected to increase to more than 8%.23 The PDNA stated that the earthquake disproportionately affected the poorer, rural locations relative to the urban and less poor areas, thus further exacerbating their already existing vulnerabilities. Likewise, the whitepaper stated that as a result of the Tarai unrest "daily lives of women, physically challenged people, Dalits, poor and marginal community are getting increasingly difficult and riskier".24 In other words, the poorest and the most marginalized households and communities were also the most vulnerable to these events and likely underwent the most severe impact.

9.5.1 Impact on Access and Participation

According to the PDNA education sector report, the extent of damages and losses was the highest in school education, with the subsector accounting for 88.8% of the total damages and losses faced by the entire education sector. More specifically, 8,242 community (public) schools were affected by the earthquake: 25,134 classrooms were fully destroyed and another 22,097 were partially damaged. In addition, 4,416 toilets, and water, sanitation and hygiene (WASH) facilities, and 1,791 compound walls were damaged. The damage to ECED centres, furniture, libraries and laboratories, computers and other

[22] National Planning Commission. 2015. *Post Disaster Needs Assessment: Volume A: Key Findings.* Kathmandu: National Planning Commission, Government of Nepal.

[23] Ministry of Finance. 2015. White Paper on the Current Economic Situation and Immediate way Forward.

[24] Ibid.

equipment was proportional to the damage faced by the schools. In all, the school education subsector faced total damages and losses amounting to NPR 27.8 billion. However, no major damage to the teachers and MOE's service delivery infrastructure was reported, making it easier for the quick resumption of education services.25 No damage to education infrastructure was reported due to the events unleashed by the Tarai unrest and the subsequent economic blockade (although there were reports of damages to private school buses in three districts).

However, the unrest led to prolonged closure of schools particularly in the most affected districts, and the economic blockade caused severe shortages of supplies and led to significant delays in the rehabilitation and reconstruction efforts, including of schools damaged by the earthquake. While the exact statistics may be difficult to verify, the earthquake and the Terai unrest had a huge impact on a large number of children. According to a report by Save the Children (which in turn was based on information from the Nepal Education Cluster), "an estimated 3.2 million children were directly affected both physically and mentally by the earthquake. Of these, around 870,000 children were left without permanent classrooms and an additional half a million required support to return to learning".26 Schools in the districts that were highly affected by the earthquake were completely closed for 35 days, and when they reopened subsequently, the majority of schools opened only for few hours in the absence of the requisite infrastructure to accommodate all children. Similarly, according to the whitepaper issued by the Ministry of Finance, education was obstructed in all 20 districts of the Terai (especially in Bara, Parsa, Rautahat, Siraha, Saptari, Mahottari, Dhanusha and Sarlahi districts), where nearly 3.5 million children were badly affected.27 The extent of the impact of the blockade is also best seen in the UNICEF press release which warned that “more than three million children under the age of five at risk of death or disease during the harsh winter months due to a severe shortage of fuel, food, medicines and vaccines".28 According to some reports, more than 14,000 schools across the Terai belt were directly affected by the unrest, leading to loss of teaching days for more than four months, affecting students of all grades. But the highest number of children affected by the Terai unrest and the economic blockade were from the primary grades (1-5) because they constituted the biggest share of the total student size in the Terai region.29 The Terai unrest and economic blockade had far greater impact on the country than the earthquake because its reach was more national than the earthquake, and its timing was the harsh winter months.

[25] National Planning Commission. 2015. *Post Disaster Needs Assessment: Volume B: Sector Reports.* Kathmandu: National Planning Commission, Government of Nepal.

[26] Save the Children. 2016. *Education Disrupted. Disaster impacts on education in the Asia-Pacific region 2015*.

[27] Ministry of Finance. 2015. White Paper on the Current Economic Situation and Immediate way Forward.

[28] Available at: http://www.unicef.org/infobycountry/media_86394.html

[29] For further details, see http://www.madhesiyouth.com/analysis/impact-of-tarai-unrest-in-southern-nepal/

It was widely expected that the earthquake and the Terai unrest and the economic blockade would result in significant losses in education participation and outcomes as a result of the severe disruptions in education services. According to the PDNA Report, the effects on enrolment, attendance and internal efficiency could lead to an increase in the number of out-of-school children. The report stated that:

> There could also be an increase in the number of children with disabilities or significant injuries for whom the temporary or transitional learning centres (TLCs) could be less than accessible. With the demand for additional labour both at home and in the market, it is reasonable to assume that some children, particularly in the higher grades, might be less regular or drop out eventually, and there might also be a decrease in their motivation to learn..... It is, however, impossible at the moment to gauge the effects of the quake on these parameters and quantify the resulting efficiency losses.[30]

Likewise, monitoring report of the National Human Rights Commission related to the Terai unrest stated that the students of the agitated districts were being deprived from education due to a lack of regular functioning of the schools, and that the students of these areas would fall behind in all kinds of competitions in the future compared to students from other districts of the nation.31

In order to ascertain the quantitative effects of these events on education access, participation and outcomes, we looked at the major indicators related to access and participation, namely net enrolment rates (NERs), promotion and dropout rates. However, given the paucity of data as well as the fact that it takes some time to see the impact on learning outcomes, we could not do statistical analysis in order to ascertain the impacts on learning outcomes. In hindsight, it can be stated that the full impacts of these events were not fully reflected in the MOE's EMIS, mainly because the EMIS was not geared to capturing such information.

Net Enrolment Rates: The quantitative analysis of the FLASH I data (2015/16) on the impact of the events of 2015 showed that no evidence for the effect can be detected in NER for Nepal as a whole, for the 14 most affected districts by the earthquake and for the Terai region affected by the unrest and the economic blockade. Figure 9 shows that the NER for both boys and girls does not fall in 2015 for both primary and secondary level. The pre-existing upward trend is maintained even after the events of 2015. As can be seen in the Figure 10, no dip in the NER for secondary level can be observed in year 2015 despite the fact that some of the massive dips have been observed for Kathmandu and Bhaktapur in 2006, Eastern Terai in 2008 and Central Terai in 2004. Heavily affected by the earthquake, Gorkha, Dolakha and Sindhupalchowk have maintained the pre-existing

[30] National Planning Commission. 2015. *Post Disaster Needs Assessment: Volume B: Sector Reports.* Kathmandu: National Planning Commission, Government of Nepal.

[31] National Human Rights Commission Nepal. 2015. Human Rights Situation during the Agitation before and after Promulgation of the Constitution of Nepal: Monitoring Report.

upward trend in NER amidst the events of 2015.32 So the KPI projections for SSDP would remain unchanged because of those events.

Figure 9: NER of Nepal for Boys and Girls

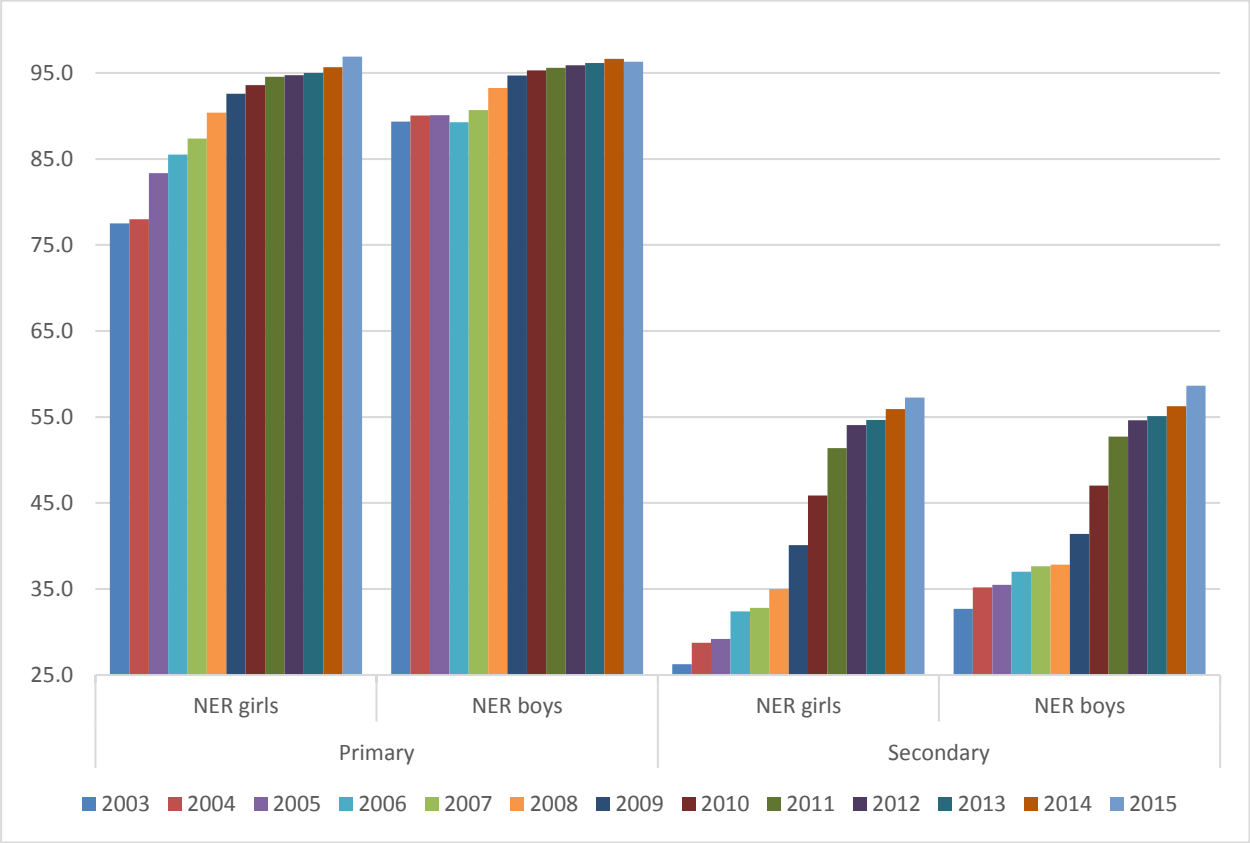
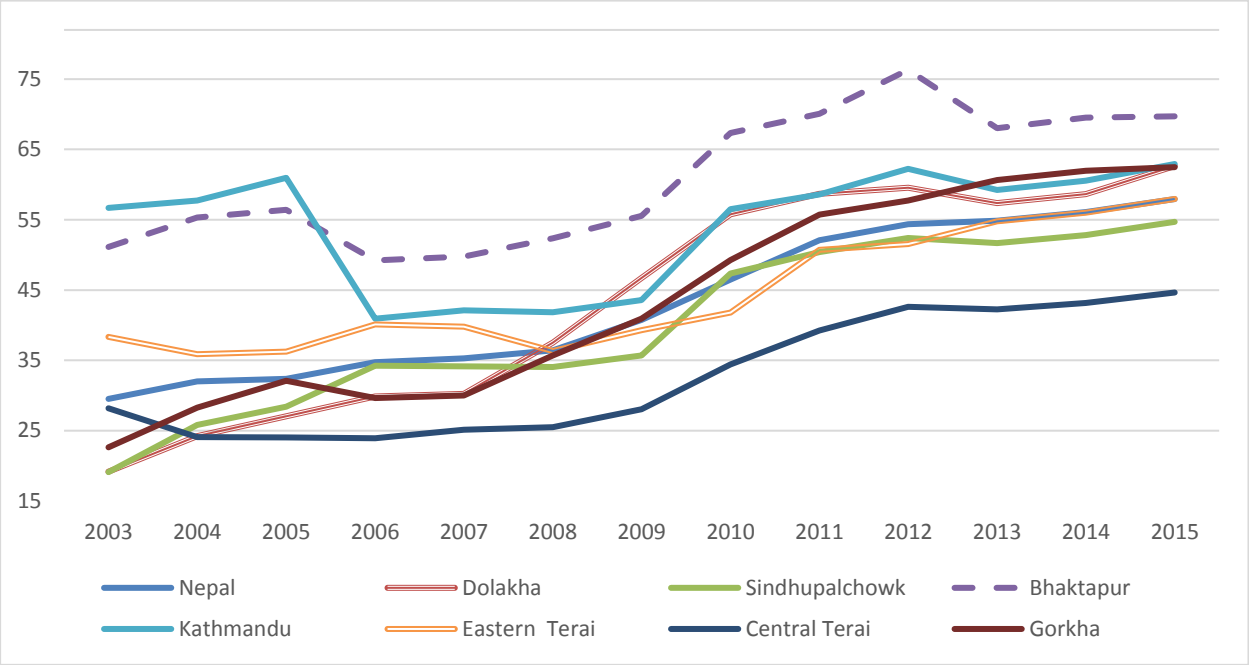


Figure 10: NER of districts affected by earthquake and the Terai agitation

[32] A field research done in Gorkha, Rasuwa, Sindhupalchowk, Dolakha and Kavrepalanchowk districts also suggests that the majority of children respondents were back in school, with only 0.78 per cent of those attending school before the earthquake not attending school any more. For further details, see: Fievet, Virgil, Kanta Singh and Anthony Davis, with Maxence Delchambre. 2016. *Children's Voices, Children's Rights: One Year after the Nepal Earthquake.* April 2016, Kathmandu, Plan International, Save the Children, Terre des hommes, UNICEF and World Vision International.



Dropout Rate: Further, the quantitative analysis looked at the changes in the dropout rates for the whole country and the affected districts for primary, lower secondary and secondary levels (Figure 11). The analysis shows that, apart from some really minor (and statistically insignificant) effects in some districts (Bhaktapur, Gorkha, Solukhumbu, etc), there does not seem to be any statistically significant effect on dropout rate as well. It could be highly possible that the effects were felt in some pocket areas of some districts. However, at the district level and in the country as a whole there is no effect. Again the pre-existing trend remains intact. The story of Eastern and Central Terai does not look much different in terms of impact of the events of 2015. Significant rise in dropout rate is observed only in Rautahat and Jhapa districts for Grade 6-8 (See Figure 12). However, even in these districts, such rise in dropout rate has been recorded in 2010 and 2011 as well so it is difficult to state whether the change was due to the events in 2015.

Figure 11: Dropout rates for Nepal and districts affected by earthquake

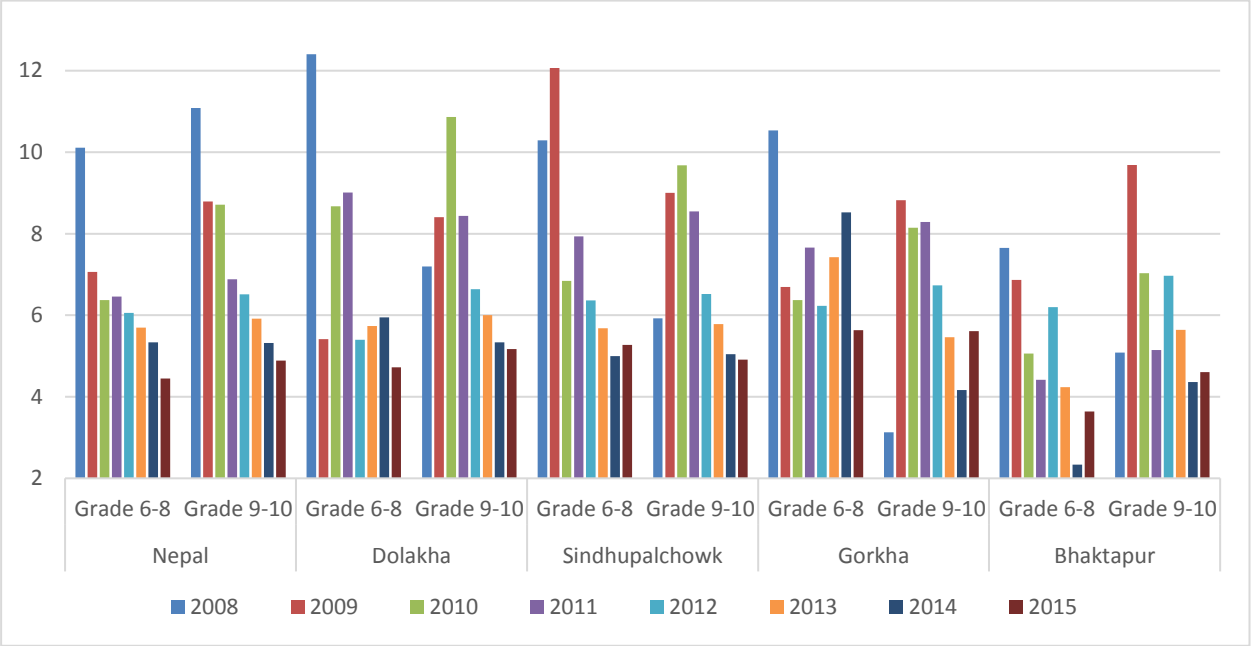
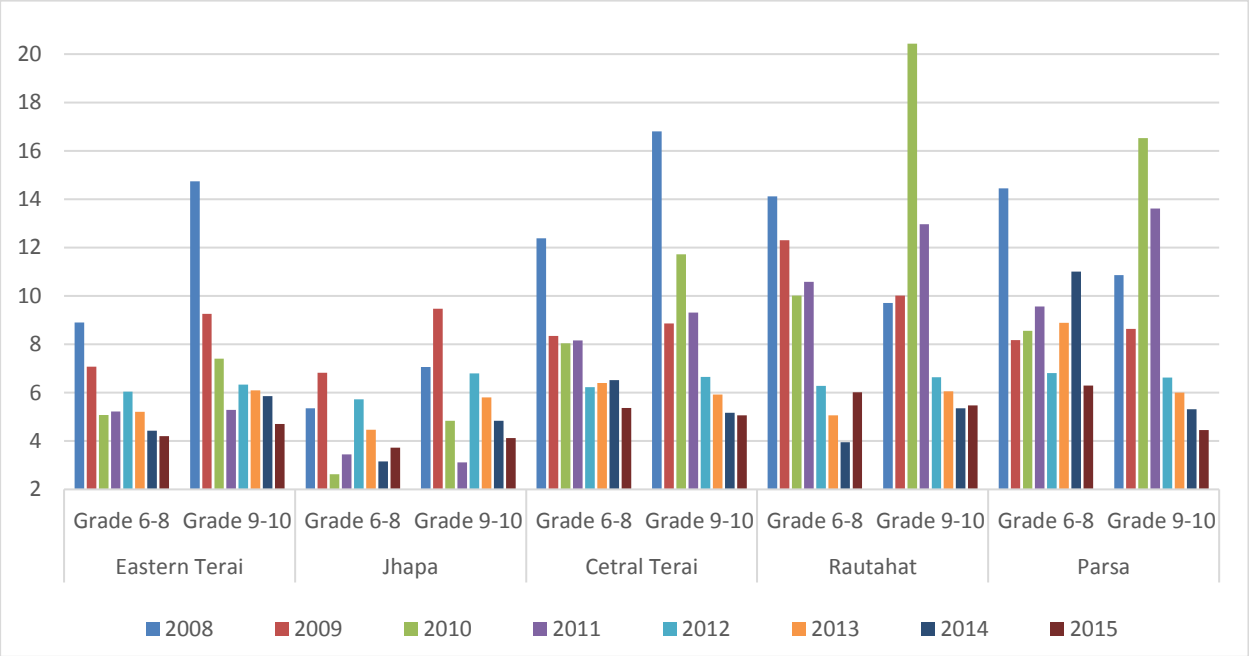
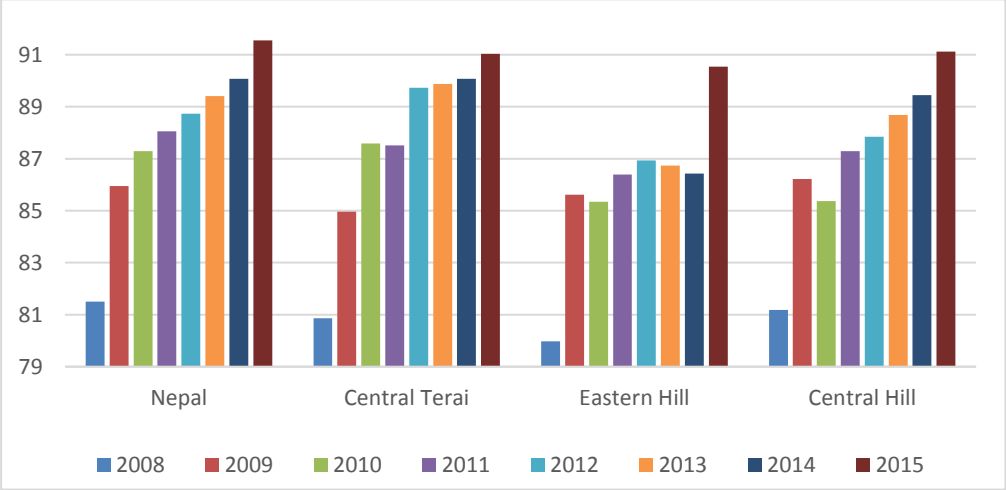


Figure 12: Dropout rates for Terai districts affected by strikes



Promotion Rate: The proposition of no impact on some of the KPIs related to access and participation is supported by the trend of promotion rate as well (see Figure 13). The promotion rate for lower secondary level continues to have upward trend in Nepal as a whole as well as Central Terai, Eastern Hill and Central Hill districts with no significant change in the rate of increase. This indicates little or no impact on internal efficiency of the schools. This can be due to liberal grading measures adopted during times of emergency to ensure the promotion of students despite significant dip in attendance during affected period. Further analyses of FLASH II data that were recently shared by the MOE are ongoing to ascertain further impacts on the efficiency related indicators at the end of the school year in 2015/16.[33]

Figure 13: Promotion rate of lower secondary in selected regions of the country



[33] According to the EMIS of the MOE, there is a slight dip in the grade 8 completion rate in 2016/17 compared to 2015/16 (decline from 69.4% to 68.4%). However, it is too preliminary to suggest that this was due to the events of 2015.

Updated NER Projections: As discussed above, there have been no significant effects by gender on the SSDP KPIs related to access and participation. Therefore, the SSDP projections related to NERs continue to remain valid. The three, five and seven year projections with the confidence interval are shown in Table 3 below.

Table 3: Projection of NER using beta regression model

Projection	3 years	5 years	7 years
NER (Primary Level: Nepal)	97.4%	97.6%	97.8%
NER (Secondary Level: Nepal)	69.1%	70.6%	72.3%
NER (Secondary Level: Central Terai)	59.1%	61.3%	63.8%

9.5.2 Impact on Learning

Both of the events were expected to negatively affect student learning outcomes in the concerned years. However, due to the lack of data on student learning outcomes captured through EMIS, we were not able to do a quantitative analysis of the effects of these events on student learning outcomes in the affected districts. The indicators related to internal efficiency (which often act as proxy for quality) do suggest that there was no major aggregate impact on promotion rates, indicating that children continued to meet the grade-specific learning standards. A widely used indicator of the quality of education in Nepal is the annual School Leaving Certificate (SLC) results. The SLC results of 2016 show that there was no apparent change in the overall pattern of the results compared to the previous years, both in terms of the average pass rates and the subject-wise performance of the students.34 The lack of changes noted in efficiency related indicators (especially the dropout and promotion rates) suggests that the local interpretations of existing policies related to continuous assessment system and liberal promotion policies, coupled with the difficult educational context unleashed by the earthquake and the blockade, may have prompted schools to promote all students by relaxing the student assessment and evaluation procedures that they would employ during normal times.

However, prolonged closure of schools in the affected districts led to decline in student attendance and delays in distribution of textbooks. The FLASH II data for academic year 2015/16 shows some decline in the attendance for children at all grades compared to the previous year (Table 4).35 This was expected given that schools remained closed for a

[34] Bhatta, Pramod. 2016. Use of Letter Grading in the SLC: Quality will not Improve Automatically (in Nepali). *Shikshak* 9(102): 30–33.

[35] Empirical research in some of the districts most affected by the earthquake shows that there was a statistically significant decline in students' attendance after the earthquake, which was higher for the boys compared to girls. For further details, see: Fievet, Virgil, Kanta Singh and Anthony Davis, with Maxence Delchambre. 2016. *Children's Voices, Children's Rights: One Year after the Nepal Earthquake.* April 2016, Kathmandu, Plan International, Save the Children, Terre des hommes, UNICEF and World Vision International.

significant period of time in the aftermath of the earthquake and during the Terai unrest and economic blockade. At the same time, timely availability of textbooks was affected by the earthquake, leading to significant delays compared to the previous years (Table 5).

Table 4: Average Attendance of Students, Grades 1–10

Level	2014/15	2015/16
Basic (Grades 1-5)	184	178
Basic (Grades 6-8)	193	185
Secondary (grades 9-10)	199	186
Total (Grades 1–10)	**190**	**182**

Source: EMIS, DOE.

Table 5: Timely Availability of Textbooks, 2011–2015

Level	2011	2012	2013	2014	2015
Basic (grades 1-5)	69.4	72.1	73.1	81.1	76.1
Basic (grades 6-8)	68.5	73	77.6	80.6	77.7
Secondary(grades 9-10)	59.9	74.2	76.5	79.4	73.2
Total (Grades 1–10)	**68.1**	**72.5**	**74.6**	**80.8**	**76.1**

Source: EMIS, DOE.

Some empirical research done in the earthquake affected districts suggests that everyday teaching-learning was severely disrupted, leading to possible decline in student learning outcomes. Slower than expected recovery and reconstruction of education services has meant that everyday teaching-learning in the earthquake affected districts continues to happen in unsafe classrooms or temporary learning centers,36 that has in turn led to reduced confidence, particularly amongst grade 8-10 students in passing the annual examinations. 37 Therefore, even if no immediate direct evidence of reduced learning outcomes can be seen, it is plausible to assume that student learning will continue to be affected and that such effects on student learning need to be monitored more closely during the SSDP.

9.5.3 Impact on Equity

From the quantitative analysis of the MOE's EMIS data, it is evident that there were no aggregate impacts (at both national and district levels) on some of the SSDP key performance indicators such as those related to access, enrolments and participation.

[36] Ibid; See also the Nepal Education Cluster updates. The number of TLCs that were established in the affected districts remained at 77% of the targets by April 2016., and that students in the affected areas continued to suffer from lack of proper classrooms, WASH facilities and other aspects of an enabling environment for effective teaching-learning.

[37] Ibid.

This was largely expected given that the enrolment rates are simply a reflection of entering the name of the child in the school register, not de facto attendance per se[38], and that the majority of school-age children were already enrolled in the schools prior to the earthquake and the Terai unrest. Further, it is highly likely that student assessment and evaluation procedures were relaxed given the extraordinary circumstances, which could have masked the effects of these events at the grassroots.

However, as shown in Figure 6 above, the districts that were severely affected by the Terai unrest and the economic blockade already had high disparities in access, participation and learning outcomes and are ranked very low in the Equity Index as well as the Human Development Index (HDI).[39] Further, according to the CBS data, even if the average income poverty in the Terai is lower compared to the hills and mountains, the extent and severity of human poverty is higher in the Terai, with the region containing large population deprived from education and health.[40] Against such a backdrop, it is highly likely that severe educational effects were felt in the districts of Central Terai (Rautahat, Mahottari, Siraha, Sarlahi, Dhanusha, Saptari, Bara and Parsa) that already accounted for the majority of out-of school children, lower mean years of schooling and higher educational disparities by gender and caste/ethnicity even before the political unrest.[41] Further, within these districts, it is highly likely that specific caste/ethnic groups, especially the Terai Dalits and Muslims, and to a lesser extent the Terai middle castes were more affected by the unrest than others.

The districts most affected by the earthquake (districts in the Central Hills) had relatively better HDI than the Terai and also had relatively higher ranking in the Equity Index. In other words, the earthquake affected districts had lower proportions of out of school children, higher enrolment and completion rates and higher mean years of schooling.[42] Nonetheless, the earthquake affected districts also accounted for the majority of marginalized and highly marginalized[43] ethnic groups (such as Tamang in Sindhupalchowk and Rasuwa, and Jirel, Sunuwar and Thami in Dolakha) that are underrepresented in education. However, some of these districts had also made

[38] When we compare the Flash I and Flash II data on enrolments and attendance for any given academic year, we find that the attendance is always lower than enrolments, which is also evident in the Nepal Living Standard Survey (NLSS) data.

[39] National Planning Commission and UNDP. 2014. *Nepal Human Development Report 2014: Beyond Geography: Unlocking Human Potential.* Kathmandu, Government of Nepal, National Planning Commission and UNDP Nepal.

[40] Pokharel, Trilochan. 2015. Poverty n Nepal: Characteristics and Challenges. *Journal of Poverty, Investment and Development* 11: 44–55.

[41] MOE, UNICEF and UNESCO. 2016. *Global Initiative on Out-of-School Children: Nepal Country Study.* July 2016, UNICEF, Kathmandu, Nepal.

[42] Earthquake affected districts such as Rasuwa also had made dramatic improvements in HDO due to increase in education-related indicators. Please refer to UNDP. 2014. Nepal Human Development Report 2014.

[43] Bhatta,Pramod et al. 2008. Structures of Denial: Student Representation in Nepal's Higher Education. *Studies in Nepali History and Society* 13(2): 235-263.

significant gains in HDI in recent years (mainly because of the gains made in mean years of schooling), which, unfortunately, are likely to be stalled due to the earthquake.

Media also reported increased incidence of child trafficking from some of the highly-affected districts such as Sindhupalchowk, Rasuwa and Dhading, which already used to have high rates of trafficking of girls and children even before the earthquake.44 Concerns over increased incidence of child labour and other forms of exploitation, increased incidence of child marriage, as well as increase in the number of street children in urban areas have also been expressed. Further, there were also reports of children involved in cross-border smuggling and selling of fuel and other supplies. According to MICS 2014, there is a high incidence of child labour and engagement of children in economic activities in Nepal, especially for the poorest income and consumption quintile, in which nearly 61% of children are involved in labour and economic activities.45 However, more empirical research is needed to ascertain the incidence of such events following the earthquake and the Terai unrest before anything more conclusive can be stated. In other words, such potential impacts need to be monitored more closely in the future and appropriate remedies be charted out to minimize the negative consequences on the education sector.

[44]Please see: https://www.theguardian.com/global-development/2015/oct/25/nepal-earthquake-six-month-anniversary-children-orphans-people-traffickers; See also: http://www.spotlightnepal.com/News/Article/POST-QUAKE-CONCERN-Taming-Trafficking

[45] MOE, UNICEF and UNESCO. 2016. *Global Initiative on Out-of-School Children: Nepal Country Study.* July 2016, UNICEF, Kathmandu, Nepal.

10. CONCLUSIONS

To untangle the education system from the state capability trap (Moriani et al. 2013), SSDP architects and national decision makers (NPC, MoF, other ministries and development partners) must have a shared vision of the national development goals, the role of education in achieving those goals, and the budget parameters that determine what can be achieved with current and projected resources. This can only happen if education reform has political champions inside and outside MoE. Their support can be won by presenting them with compelling cases of Nepal's educational problems, what happens if these problems are not solved, what needs be done to solve them and the responsibilities of stakeholders in contributing to solutions. Follow-up mechanisms need to be in place to ensure that stakeholders follow through on commitments they make.

Finding and supporting champions who support reform is also a political and a managerial challenge. Politically, proposed reforms often depend on the public mood, pressure group agendas, election results, and ideological positions of stakeholders (Kingdon, 2003). Champions will be more likely to support reforms if SSDP's architects can demonstrate that proposed reforms are supported by pressure groups that advocate for SSDP and maintain the pressure to ensure that it is supported and implemented as intended by MoE. A 2011 survey reported by Nepal Monitor (2011) found that 58% of Nepalese chose education as the most important issue in their personal lives. This is a powerful indicator that the public mood yearns for quality education. The onus is on decision makers to support reform that reflects public aspirations.

This sector analysis report has taken the pulse of Nepal's education system. Breakthroughs in enrolment indicate a national commitment to expanding equitable access to education. However, student results show that a large proportion of children are still not learning. At the current juncture where the country has been under an economic blockade and is struggling to bounce back from a destructive earthquake, investing in improving school quality is more urgent than ever. It is the key to raising a generation of resilient citizens who will break the cycle of poverty, reduce civil and political conflict and lead the nation to tap the fullest potential of its demographic dividend.

So how did natural disasters and political conflicts in 2015 affect the education outcomes of children in Nepal? It is difficult to predict long term impacts of these events on the overall economy and other socio-political arrangements, which may be better explained by the long-pertaining socio-structural arrangements rather than disasters and conflicts per se.[46] Evidence from quantitative analysis of the EMIS data suggests that no statistically significant changes were noted in enrolment, dropout and completion rates for the districts that were affected by the events, meaning that the impact on key education indicators such as those related to access and participation were minimal or insignificant. In this regard, Nepal's education sector is often described as resilient.

[46] Poudyal, Niraj. Not dated. Myths of Economic Consequences of Maoists Civil War in Nepal. Unpublished article.

Despite the decade-long Maoist conflict (that systematically targeted government schools, curricula and textbooks, and teachers) and the ongoing political transition since 2006, the growth in education sector has been robust, as shown by steady growth in the number of education facilities, enrolments, and improvements in the education indicators related to internal efficiency of the system. It is our understanding that this strong resilience of the sector emanates from the deep-rooted belief and faith in the power of formal education.

However, does this mean that the events had no impact on the education outcomes of children residing in the affected districts? Even if no visible impact on access and participation was seen at the aggregate district and national levels, it can be said with certainty that the pre-existing vulnerabilities that were exacerbated by the earthquake and the Terai unrest have had very localized effects, ascertaining which was beyond the scope of this analysis. National and district level disaggregation masked local impacts; however, such lack of evidence at the national and district levels does not mean that there was no impact. In the case of the earthquake, these effects were felt in the districts that were severely affected (such as Sindhupalchowk, Dolakha, Rasuwa and Gorkha (which are largely inhabited by ethnic groups with low HDIs). Likewise, the severe effects of the Terai unrest and the economic blockade were felt by the districts in the Central Terai (which already have poor education outcomes as measured by the Equity Index, and which have a strong concentration of Madhesi Dalits and Muslims, and huge disparities between high and low castes). Research evidence from Nepal also suggests that the quality of public service delivery (including schools) decreases with inaccessibility and that the accessibility to public services presents various forms of disparities—both across space and across socioeconomic groups.47 In other words, inaccessible areas are also the most marginalized, be they in the Terai or the hills and mountains. Therefore, in the aftermath of the earthquake and the Terai unrest, it is likely that the quality of such service delivery further deteriorated, particularly for those who used to be served by poor quality services in the past as well. Therefore, there is a need to do further empirical research and analysis at the local level, amongst families and households that bore the brunt of the impact.

Given that disasters and conflicts are likely to increase the incidence of poverty in vulnerable groups and communities, which in turn lead to increased incidence of education discontinuity, it is essential that further steps be taken to monitor and follow-up the changes in existing incidences and levels of poverty in these districts with regard to identifying the most vulnerable groups and setting up the specific support mechanisms therein. This would include identifying specific children (and families) that were pushed into poverty and perhaps out of school either through the loss of family members and assets or through the induction of injuries that rendered them disabled and therefore to the loss of income opportunities, and providing subsidies to such children and their families. This provides a good opportunity to use the Equity Index to identify intra-district

[47] KC, Shyam. 2009. Socio-Economic Distribution of Geographical Accessibility in Nepal. *Studies in Nepali History and Society* 14(1): 3-34. See also, Tiwari, Shailesh. 2016. *Moving Up the Ladder: Poverty Reduction and Social Mobility in Nepal.* Kathmandu, World Bank and UK Aid.

inequities and vulnerabilities, and the use of equity strategy implementation plans to overcome inequities and disparities in educational access, participation and learning outcomes.

There is also a need to further strengthen the DRR initiatives in the SSDP. Current DRR-related programs in SSDP focus mainly on three pillars: (i) safe infrastructure, (ii) strengthened disaster risk management and (iii) strengthening resilience in communities.48 While these pillars are intended to strengthen school safety from a supply perspectives, the SSDP does not envision any specific programs for the educational recovery of children who will continue to affected by disasters and conflicts, such as safety cushions during emergencies for both teachers and students to continue their educational engagement in the aftermath of the disaster. At the same time, this would require continued focus on protecting schools from political conflicts, and calls for continued advocacy for the implementation of the 'schools as zones of peace' initiative that had already gained wide momentum during the Maoist insurgency. This is also in line with the recommendation made by Save the Children which stresses the importance of a thorough analysis of known and expected hazards and risks, action to reduce these, and planning for educational continuity to safeguard education.49

Finally, the impacts of the promulgation of the new Constitution and the amendments to the Education Act are yet to seen as new legislative provisions envisaged therein remain to be fully implemented in the absence of the establishment of local governments and the formulation of new education regulations, respectively. In principle, the new legislative provisions are expected to enhance participation in education by guaranteeing the right to free and compulsory basic education, including ECED. As per the new constitution, the provision and management of school education is the sole jurisdiction of local governments. However, how such provision will affect equity in education is unclear, because in most parts of the world, equity in education (and in other sectors as well) is promoted through a strong involvement and engagement of the central government.

This chapter gives an overview of Nepal's macroeconomic situation in relation to funding for the public education sector. This includes information about the country's GDP, government expenditure and sources of revenue, government education expenditure and sources of funding, and a detailed description of SSRP expenditures and sources of financing. The chapter also sheds light on efficiency indicators of the education system, its absorptive capacity, and equity in financing. In the second part, we described SSRP budget allocation by program line items and thematic components, and discussed SSRP financial sustainability. Lessons from SSRP are included in a separate section on implications for SSDP. The final part consisted of a discussion of fiduciary management for SSDP.

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[48] Ministry of Education, Government of Nepal. 2016. *School Sector Development Plan (FY 2016/17–2022/23).* Kathmandu: Ministry of Education.

[49] Save the Children. 2016. *Education Disrupted. Disaster impacts on education in the Asia-Pacific region 2015*.

The overarching takeaways from this chapter are the following:

1. Available funds were insufficient to cover the costs of SSRP.
2. National GDP is anticipated to further shrink because of the on-going fuel and commodity shortages.
3. Without taking measures to improve efficiency and generate more revenue, education decision makers must determine what to prioritize to ensure that SSDP is financially viable.
4. The state of fiduciary management reinforces the observation that the trouble with the educational financial picture in Nepal is not just shortage of funds, but is also the need to strengthen safeguards to ensure that resources are spent efficiently. Installing the necessary safeguards described in this chapter is an essential measure that will also require funding.

In a nutshell, there are multi-layered demands on Nepal's education system. At the center of these demands are to provide safe schools for students whose schools were damaged or destroyed by the 2015 earthquakes, and places for the many marginalized children who either do not have access to school, or have low survival rates. Student results in basic and secondary education indicate that a sizable proportion of students are not achieving their learning outcomes. On the supply side, teachers and educational leaders need training and adequate quantities and quality of textbooks and teaching aids to provide learning opportunities to students. The fiduciary analysis highlights that without safeguards to ensure that resources are well distributed and well accounted for, there is a high risk of the inefficient use of the already scarce resources. While drafting the SSDP, education sector decision makers need to determine the non-negotiables in terms of what is absolutely needed, how they will pay for these non-negotiables, and how to ensure and assure stakeholders that the resources raised will be used wisely as intended.

At the beginning of this chapter it was noted that the country's GDP growth was projected to shrink to 2 percent because of the on-going shortages. It is important to caution that growth may be even lower because, as of February 2016, there are still serious fuel shortages. The Nepal Rastra Bank (NRB 2015) predicted that economic growth could contract to minus 0.9 percent in the current fiscal year (2015/16) if the blockade continued until January (which it has). The macroeconomic implications of the resulting revenue losses will have direct implications on the budget available to expand the performance capacity of SSDP in, at least, the short term. To capture the effects of the earthquake and the on-going blockade on the education sector, this chapter should be supplemented with an impact analysis to measure the true scope of the economic and political shocks to further focus the SSDP prioritization process.

Earlier in this chapter we presented the building blocks of world class education (Figure 5.1), which fit under the following three overarching drivers:

- *Standards and accountability* create a common language around shared goals, and determine who is ultimately responsible for achieving them.
- *Human capital* acknowledges that the quality of the whole education system is contingent on the quality of its teachers (Mckinsey and Company 2007).
- *Structure and organization* provide the institutional framework and leadership necessary to recruit and train the right teachers, set standards and demand accountability, and ensure the smooth flow of information, resources, and decisions making that allow the educational system to demonstrate the indicators of quality shown in Table 5.4.

Our analysis indicates that all three drivers need considerable strengthening under the proposed SSDP.

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Appendix A: Population density by region and district

Area	Households*	Population			Area in sq. mm.	Average HH size	Sex ratio	Pop. density
		Total	Male	Female				
Nepal	5,427,302	26,494,504	12,849,041	13,645,463	147,181	4.88	94.2	180
Urban/rural								
Urban	1,047,297	4,523,820	2,306,049	2,217,771	3,276.28	4.32	104.0	1,381
Rural	4,380,005	21,970,684	10,542,992	11,427,692	143,904.72	5.02	92.3	153
Ecological belts								
Mountain	364,120	1,781,792	862,592	919,200	51,817	4.89	93.8	34
Hill	2,534,430	11,394,007	5,440,067	5,953,940	61,345	4.50	91.4	186
Terai	2,528,752	13,318,705	6,546,382	6,772,323	34,019	5.27	96.7	392
Development regions								
Eastern	1,231,505	5,811,555	2,790,483	3,021,072	28,456	4.72	92.4	204
Central	1,964,045	9,656,985	4,841,624	4,815,361	27,410	4.92	100.5	352
Western	1,066,362	4,926,765	2,292,597	2,634,168	29,398	4.62	87.0	168
Mid-West	695,419	3,546,682	1,706,450	1,840,232	42,378	5.10	92.7	84
Far-Western	469,971	2,552,517	1,217,887	1,334,630	19,539	5.43	91.3	131
Eco-development regions								
Eastern Mountain	84,918	392,089	186,977	205,112	10,438	4.62	91.2	38
Eastern Hill	346,571	1,601,347	756,522	844,825	10,749	4.62	89.5	149
Eastern Terai	800,016	3,818,119	1,846,984	1,971,135	7,269	4.77	93.7	525
Central Mountain	122,154	517,655	246,829	270,826	6,277	4.24	91.1	82
Central Hill	1,016,181	4,431,813	2,221,717	2,210,096	11,805	4.36	100.5	375
Central Terai	825,710	4,707,517	2,373,078	2,334,439	9,328	5.70	101.7	505
Western Mountain	4,834	19,990	10,754	9,236	5,819	4.14	116.4	3
Western Hill	677,498	2,811,135	1,260,376	1,550,759	18,319	4.15	81.3	153
Western Terai	384,030	2,095,640	1,021,467	1,074,173	5,260	5.46	95.1	398
Mid-West Mountain	68,902	388,713	195,827	192,886	21,351	5.64	101.5	18
Mid-Western Hill	332,153	1,687,497	800,229	887,268	13,710	5.08	90.2	123
Mid-Western Terai	294,364	1,470,472	710,394	760,078	7,317	5.00	93.5	201
Far-West Mountain	83,312	463,345	222,205	241,140	7,932	5.56	92.1	58
Far-Western Hill	162,027	862,215	401,223	460,992	6,762	5.32	87.0	128
Far-Western Terai	224,632	1,226,957	594,459	632,498	4,845	5.46	94.0	253
District populations								
Taplejung	26,509	127,461	60,552	66,909	3,646	4.81	90.5	35
Panchthar	41,196	191,817	90,186	101,631	1,241	4.66	88.7	155
Ilam	64,502	290,254	141,126	149,128	1,703	4.50	94.6	170
Jhapa	184,552	812,650	385,096	427,554	1,606	4.40	90.1	506

Area	Households*	Population			Area in sq. mm.	Average HH size	Sex ratio	Pop. density
		Total	Male	Female				
Morang	213,997	965,370	466,712	498,658	1,855	4.51	93.6	520
Sunsari	162,407	763,487	371,229	392,258	1,257	4.70	94.6	607
Dhankuta	37,637	163,412	76,515	86,897	891	4.34	88.1	183
Terhathum	22,094	101,577	47,151	54,426	679	4.60	86.6	150
Sankhuwasabha	34,624	158,742	75,225	83,517	3,480	4.58	90.1	46
Bhojpur	39,419	182,459	86,053	96,406	1,507	4.63	89.3	121
Solukhumbu	23,785	105,886	51,200	54,686	3,312	4.45	93.6	32
Okhaldhunga	32,502	147,984	68,687	79,297	1,074	4.55	86.6	138
Khotang	42,664	206,312	97,092	109,220	1,591	4.84	88.9	130
Udayapur	66,557	317,532	149,712	167,820	2,063	4.77	89.2	154
Saptari	121,098	639,284	313,846	325,438	1,363	5.28	96.4	469
Siraha	117,962	637,328	310,101	327,227	1,188	5.40	94.8	536
Dhanusa	138,249	754,777	378,538	376,239	1,180	5.46	100.6	640
Mahottari	111,316	627,580	311,016	316,564	1,002	5.64	98.2	626
Sarlahi	132,844	769,729	389,756	379,973	1,259	5.79	102.6	611
Sindhuli	57,581	296,192	142,123	154,069	2,491	5.14	92.2	119
Ramechhap	43,910	202,646	93,386	109,260	1,546	4.62	85.5	131
Dolakha	45,688	186,557	87,003	99,554	2,191	4.08	87.4	85
Sindhupalchok	66,688	287,798	138,351	149,447	2,542	4.32	92.6	113
Kavrepalanchok	80,720	381,937	182,936	199,001	1,396	4.73	91.9	274
Lalitpur	109,797	468,132	238,082	230,050	385	4.26	103.5	1,216
Bhaktapur	68,636	304,651	154,884	149,767	119	4.44	103.4	2,560
Kathmandu	436,344	1,744,240	913,001	831,239	395	4.00	109.8	4,416
Nuwakot	59,215	277,471	132,787	144,684	1,121	4.69	91.8	248
Rasuwa	9,778	43,300	21,475	21,825	1,544	4.43	98.4	28
Dhading	73,851	336,067	157,834	178,233	1,926	4.55	88.6	174
Makwanpur	86,127	420,477	206,684	213,793	2,426	4.88	96.7	173
Rautahat	106,668	686,722	351,079	335,643	1,126	6.44	104.6	610
Bara	108,635	687,708	351,244	336,464	1,190	6.33	104.4	578
Parsa	95,536	601,017	312,358	288,659	1,353	6.29	108.2	444
Chitawan	132,462	579,984	279,087	300,897	2,218	4.38	92.8	261
Gorkha	66,506	271,061	121,041	150,020	3,610	4.08	80.7	75
Lamjung	42,079	167,724	75,913	91,811	1,692	3.99	82.7	99
Tanahu	78,309	323,288	143,410	179,878	1,546	4.13	79.7	209
Syangja	68,881	289,148	125,833	163,315	1,164	4.20	77.0	248
Kaski	125,673	492,098	236,385	255,713	2,017	3.92	92.4	244
Manang	1,480	6,538	3,661	2,877	2,246	4.42	127.3	3
Mustang	3,354	13,452	7,093	6,359	3,573	4.01	111.5	4
Myagdi	27,762	113,641	51,395	62,246	2,297	4.09	82.6	49

Area	Households*	Population			Area in sq. mm.	Average HH size	Sex ratio	Pop. density
		Total	Male	Female				
Parbat	35,719	146,590	65,301	81,289	494	4.10	80.3	297
Baglung	61,522	268,613	117,997	150,616	1,784	4.37	78.3	151
Gulmi	64,921	280,160	120,995	159,165	1,149	4.32	76.0	244
Palpa	59,291	261,180	115,840	145,340	1,373	4.41	79.7	190
Nawalparasi	128,793	643,508	303,675	339,833	2,162	5.00	89.4	298
Rupandehi	163,916	880,196	432,193	448,003	1,360	5.37	96.5	647
Kapilbastu	91,321	571,936	285,599	286,337	1,738	6.26	99.7	329
Arghakhanchi	46,835	197,632	86,266	111,366	1,193	4.22	77.5	166
Pyuthan	47,730	228,102	100,053	128,049	1,309	4.78	78.1	174
Rolpa	43,757	224,506	103,100	121,406	1,879	5.13	84.9	119
Rukum	41,856	208,567	99,159	109,408	2,877	4.98	90.6	72
Salyan	46,556	242,444	115,969	126,475	1,462	5.21	91.7	166
Dang	116,415	552,583	261,059	291,524	2,955	4.75	89.5	187
Banke	94,773	491,313	244,255	247,058	2,337	5.18	98.9	210
Bardiya	83,176	426,576	205,080	221,496	2,025	5.13	92.6	211
Surkhet	72,863	350,804	169,421	181,383	2,451	4.81	93.4	143
Dailekh	48,919	261,770	126,990	134,780	1,502	5.35	94.2	174
Jajarkot	30,472	171,304	85,537	85,767	2,230	5.62	99.7	77
Dolpa	7,488	36,700	18,238	18,462	7,889	4.90	98.8	5
Jumla	19,303	108,921	54,898	54,023	2,531	5.64	101.6	43
Kalikot	23,013	136,948	68,833	68,115	1,741	5.95	101.1	79
Mugu	9,619	55,286	28,025	27,261	3,535	5.75	102.8	16
Humla	9,479	50,858	25,833	25,025	5,655	5.37	103.2	9
Bajura	24,908	134,912	65,806	69,106	2,188	5.42	95.2	62
Bajhang	33,786	195,159	92,794	102,365	3,422	5.78	90.7	57
Achham	48,351	257,477	120,008	137,469	1,680	5.33	87.3	153
Doti	41,440	211,746	97,252	114,494	2,025	5.11	84.9	105
Kailali	142,480	775,709	378,417	397,292	3,235	5.44	95.2	240
Kanchanpur	82,152	451,248	216,042	235,206	1,610	5.49	91.9	280
Dadeldhura	27,045	142,094	66,556	75,538	1,538	5.25	88.1	92
Baitadi	45,191	250,898	117,407	133,491	1,519	5.55	88.0	165
Darchula	24,618	133,274	63,605	69,669	2,322	5.41	91.3	57
Note: * *Includes institutional households*								

Appendix B: Standards of USA Education Departments for Teacher and Administrator Competencies

Appendix B1: Oregon DoE's Educational Leadership and Administrator Standards

Source: Oregon DoE (n.d.)

Oregon's educational leadership/administrator standards embed cultural competency and equitable practice in each standard. These standards guide administrative preparation, licensure and job performance. Oregon's educational leadership/administrator standards align with the Interstate School Leaders Licensure Consortium (ISLLC) and the Educational Leadership Constituents Council (ELCC) 2009 standards for Educational Leadership.

Oregon was very explicit and intentional about highlighting the importance of cultural competency and equitable practices in the administrator standards. See link below for accessing Performance Standards and Indicators for Education Leaders (ISLLC-Based Models): http://www.ccsso.org/Documents/2008/Peformance_Indicators_2008.pdf

Standard #1: Visionary Leadership — An educational leader integrates principles of cultural competency and equitable practice and promotes the success of every student by facilitating the development, articulation, implementation, and stewardship of a vision of learning that is shared and supported by stakeholders.

Educational Leaders:

a) Collaboratively develop and implement a shared vision and mission;

b) Collect and use data to identify goals, assess organizational effectiveness, and promote organizational learning;

c) Create and implement plans to achieve goals;

d) Promote continuous and sustainable improvement; and

e) Monitor and evaluate progress and revise plans.

Standard #2: Instructional Improvement — An educational leader integrates principles of cultural competency and equitable practice and promotes the success of every student by sustaining a positive school culture and instructional program conducive to student learning and staff professional growth. Educational Leaders:

a) Nurture and sustain a culture of collaboration, trust, learning and high expectations;

b) Create a comprehensive, rigorous and coherent curricular program;

c) Create a personalized and motivating learning environment for students;

d) Supervise and support instruction;

e) Develop assessment and accountability systems to monitor student progress;

f) Develop the instructional and leadership capacity of staff;

g) Maximize time spent on quality instruction;

h) Promote the use of the most effective and appropriate technologies to support teaching and learning; and

i) Monitor and evaluate the impact of instruction.

Standard #3: Effective Management — An educational leader integrates principles of cultural competency and equitable practice and promotes the success of every student by ensuring management of the organization, operation, and resources for a safe, efficient, and effective learning environment.

Educational Leaders:

a) Monitor and evaluate the management and operational systems;
b) Obtain, allocate, align and efficiently use human, fiscal and technological resources;
c) Promote and protect the welfare and safety of students and staff;
d) Develop the capacity for adaptive leadership; and
e) Ensure teacher and organizational time is focused to support quality instruction and student learning.

Standard #4: Inclusive Practice — An educational leader integrates principles of cultural competency and equitable practice and promotes the success of every student by collaborating with faculty and community members, responding to diverse community interests and needs, and mobilizing community resources in order to demonstrate and promote ethical standards of democracy, equity, diversity, and excellence, and to promote communication among diverse groups.

Educational Leaders:

a) Collect and analyses data pertinent to equitable outcomes;
b) Understand and integrate the community's diverse cultural, social and intellectual resources;
c) Build and sustain positive relationships with families and caregivers; and
d) Build and sustain productive relationships with community partners.

Standard #5: Ethical Leadership — An educational leader integrates principles of cultural competency and equitable practice and promotes the success of every student by acting with integrity, fairness, and in an ethical manner.

Educational Leaders:

a) Ensure a system of accountability for every student's academic and social success;
b) Model principles of self-awareness, reflective practice, transparency and ethical behavior;
c) Safeguard the values of democracy, equity and diversity;
d) Evaluate the potential ethical and legal consequences of decision-making; and
e) Promote social justice and ensure that individual student needs inform all aspects of schooling.

Standard #6: Socio-Political Context — An educational leader integrates principles of cultural competency and equitable practice and promotes the success of every student by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context.

Educational Leaders:

a) Advocate for children, families and caregivers;
b) Act to influence local, district, state and national decisions affecting student learning; and
c) Assess, analyses and anticipate emerging trends and initiatives in order to adapt leadership strategies.

Appendix B2: Massachusetts *DoESE* Standards and Indicators of Effective Teaching Practice

Source: Massachusetts DoESE (2016) — Massachusetts Department of Elementary and Secondary Education

1. Curriculum, Planning, and Assessment standard: Promotes the learning and growth of all students by providing high quality and coherent instruction, designing and administering authentic and meaningful student assessments, analyzing student performance and growth data, using this data to improve instruction, providing students with constructive feedback on an on-going basis, and continuously refining learning objectives.

    a. *Curriculum and Planning indicator:* Knows the subject matter well, has a good grasp of child development and how students learn, and designs effective and rigorous standards-based units of instruction consisting of well-structured lessons with measurable outcomes.
    b. *Assessment indicator*: Uses a variety of informal and formal methods of assessment to measure student learning, growth, and understanding, develop differentiated and enhanced learning experiences, and improve future instruction.
    c. *Analysis indicator:* Analyses data from assessments, draws conclusions, and shares them appropriately.

2. Teaching All Students standard: Promotes the learning and growth of all students through instructional practices that establish high expectations, create a safe and effective classroom environment, and demonstrate cultural proficiency.

    a. Instruction indicator: Uses instructional practices that reflect high expectations regarding content and quality of effort and work, engage all students, and are personalized to accommodate diverse learning styles, needs, interests, and levels of readiness.
    b. Learning Environment indicator: Creates and maintains a safe and collaborative learning environment that values diversity and motivates students to take academic risks, challenge themselves, and claim ownership of their learning.
    c. Cultural Proficiency indicator: Actively creates and maintains an environment in which students' diverse backgrounds, identities, strengths, and challenges are respected.
    d. Expectations indicator: Plans and implements lessons that set clear and high expectations and make knowledge accessible for all students.

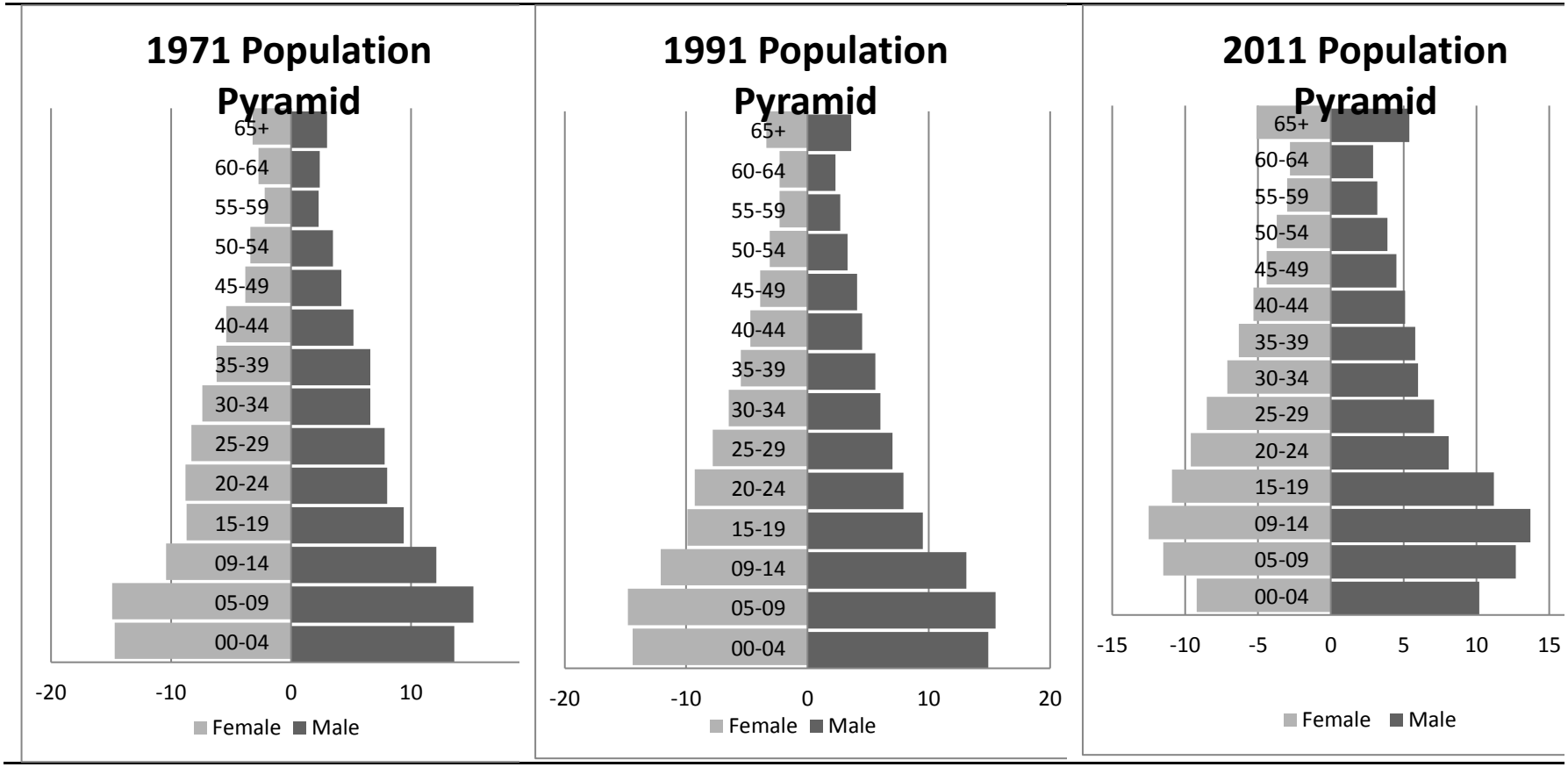
3. Family and Community Engagement standard: Promotes the learning and growth of all students through effective partnerships with families, caregivers, community members, and organizations.

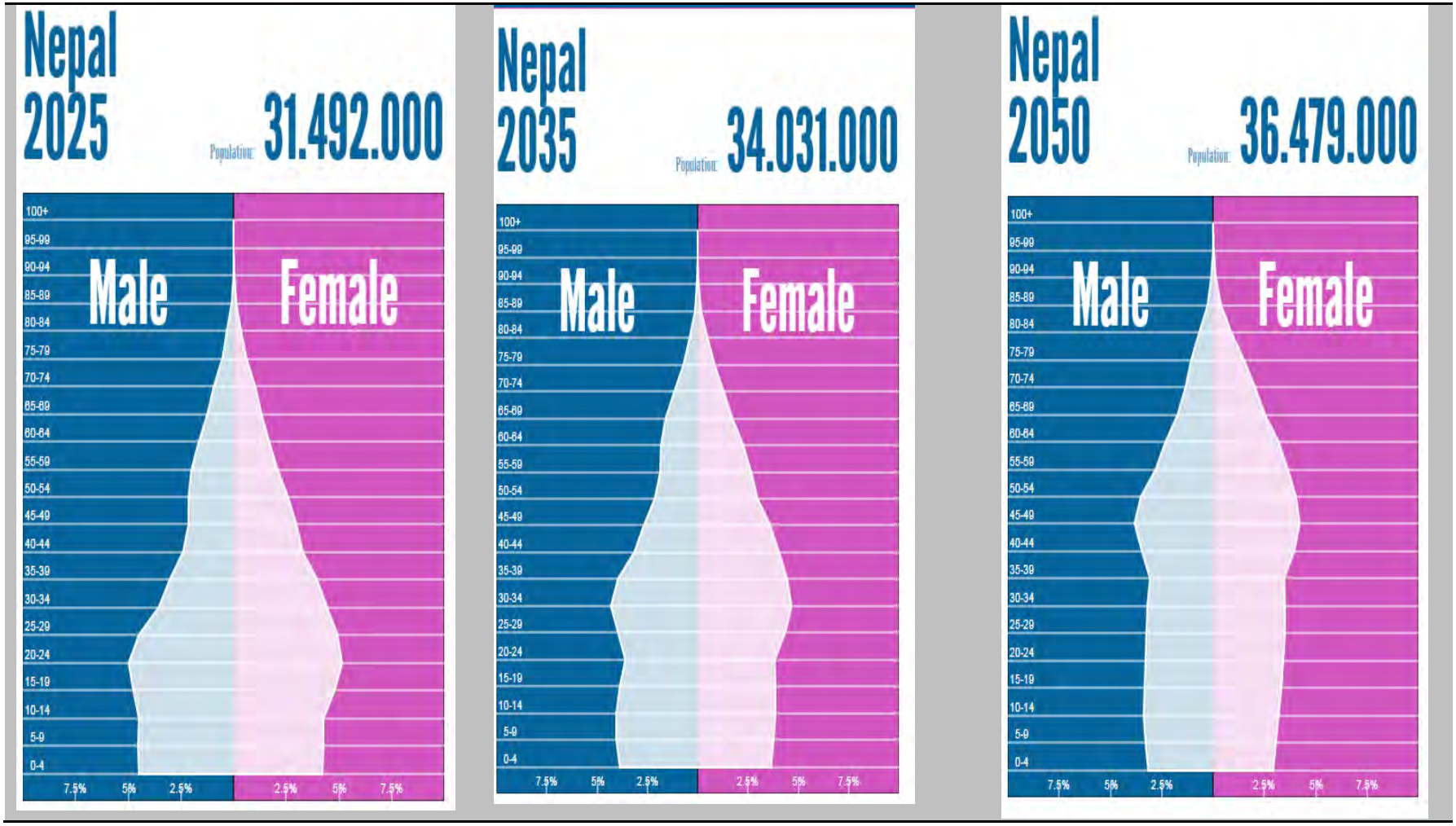
    a. Engagement indicator: Welcomes and encourages every family to become active participants in the classroom and school community.
    b. Collaboration indicator: Collaborates with families to create and implement strategies for supporting student learning and development both at home and at school.
    c. Communication indicator: Engages in regular, two-way, and culturally proficient communication with families about student learning and performance.

4. Professional Culture standard: Promotes the learning and growth of all students through ethical, culturally proficient, skilled, and collaborative practice.

a. Reflection indicator: Demonstrates the capacity to reflect on and improve the educator's own practice, using informal means as well as meetings with teams and work groups to gather information, analyses data, examine issues, set meaningful goals, and develop new approaches in order to improve teaching and learning.
b. Professional Growth indicator: Actively pursues professional development and learning opportunities to improve quality of practice or build the expertise and experience to assume different instructional and leadership roles.
c. Collaboration indicator: Collaborates effectively with colleagues on a wide range of tasks.
d. Decision-making indicator: Becomes involved in school-wide decision-making, and takes an active role in school improvement planning.
e. Shared Responsibility indicator: Shares responsibility for the performance of all students within the school.
f. Professional Responsibilities indicator: Is ethical and reliable, and meets routine responsibilities consistently.

Appendix C: Evolution of the Demographic Dividend Window of Opportunity in Nepal




Nepal
2025
Population: 31.492.000
Male
Female
Nepal
2035
Population: 34.031.000
Male
Female
Nepal
2050
Population: 36.479.000
Male
Female
100+
95-99
90-94
85-89
80-84
75-79
70-74
65-69
60-64
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
15-19
10-14
5-9
0-4
7.5%
5%
2.5%

Appendix D: Strategic Roadmap for Early Childhood Development

Strategic outcomes	Strategic outputs	Activities
1. Enhance access and quality of ECD services	1.1. Increase access to ECED centers	1.1.1 Determine the requirement of ECD centers (baseline)
		1.1.2 Deliver training on child development and learning, parents' roles, and inclusive practices to FCHVs, parents, child clubs
		1.1.3. Establish new ECED centers Implement home-based ECCD program
	1.2 Improve physical infrastructure	1.2.1 Support exterior infrastructure improvements (upgrade and build) for ECED centers to minimum standards
		1.2.2 Support interior infrastructure improvements (sitting arrangements, learning areas) to minimum standards
		1.2.3 Support access to safe drinking water at ECED centers
	1.3. Enhance quality of ECED centers	1.3.1. Upgrade current 35,121 ECD/PPC centers according to minimum standards
		1.3.2. Build an ECD resource center in each district and encourage to develop model centers (in each VDC and in municipality)
		1.3.3 Implement Early Learning and Development Standards and ECD curriculum in ECD centers and PPCs (private and public)
		1.3.4 Provide multipurpose materials (kit box) according to minimum standard
		1.3.5. Coordinate with MoH and mobilize district health offices, health posts and sub health posts to ensure basic health services (deworming, immunization, growth monitoring, etc.)
	1.4. Improve ECED management capacity	1.4.1. Redefine the composition of management committees and form and reform ECED committees accordingly
		1.4.2. Train ECED management committee members on leadership and management skills and orientate them on their roles and responsibilities.
		1.4.3. Encourage ECED management committees to perform regular monitoring of ECED centers
	1.5.Improve understanding of importance of ECED among parents and community members	1.5.1 Implement parenting education program

Strategic outcomes	Strategic outputs	Activities
		1.5.2 Implement home-based ECD programs as per the DoE modules.
	1.6. Enhance monitoring and documentation	1.6.1 Involve mother schools for monitoring
		1.6.2 Initiate a resource center-wise monitoring mechanism
		1.6.3 Mobilize community learning centers for local support and monitoring linking with resource centers
		1.6.4 Develop a reporting system and encourage mother schools, management committees and facilitators to document the activities in ECED centers
	1.7. Strengthen sections responsible for ECD in DEOs	1.7.1 Provide full time staff for ECD program (separate ECD section in DEOs)
		1.7.2 Mobilize resource persons and school supervisors for information collection
		1.7.3 Prepare database of ECED programs
	1.8 Upgrade and revise ECD standards	1.8.1. Revise ECD curricula
		1.8.2 Review and upgrade facilitators' training package
		1.8.3 Introduce ECD curriculum in training institutions (colleges)
		1.8.4 Develop capacity of tertiary institutions to offer ECD curriculum development and training
		1.8.5 Coordinate with universities for students to link their ECD projects in the government and private sectors
		1.8.6 Review and revise ECD operational guidelines and develop an accreditation system
		1.8.7 Disseminate operational guidelines and accreditation system
2. Increase Competency of facilitators, care givers and teachers (private)	2.1. Enhance capacity of ECED facilitators/teachers	2.1.1. Institute minimum standards at entry level for ECD facilitators/teachers and other practitioners
		2.1.2 Conduct ECED training needs assessment
		2.1.3 Train fulltime ECED teachers (90 hrs, basic)
		2.1.4 Offer in-service ECD training to service-providers (caregivers, pre/primary school teachers and other extension workers)
		2.1.5 Orient facilitators in the proper use of learning materials (kit box)
		2.1.6 Continue and expand monthly mobile meetings among ECED facilitators

Strategic outcomes	Strategic outputs	Activities
		2.1.7 Provide opportunities to increase the minimum qualification of already appointed facilitators through open school system.
		2.1.8 Attach at least a supervisor and a lead facilitator to ECED centers within resource centers/VDC
		2.1.9 Create a cadre of ECD trainers in each district
		2.1.10 Develop a holistic one-year diploma in ECD
3. Allocate resources and enhance capability	3.1 Mobilize local, internal and external sources of revenue	3.1.1 Form technical working groups for advocacy and resource mobilization at national and district levels
		3.1.2 Hold a national workshop and roundtable discussion with multi-donor/stakeholder resource mobilization
		3.1.3 Organize national and district level workshops for multi sector investment in ECD programming
		3.1.4 Coordinate MoFALD to encourage DDCs, VDCs and municipalities to allocate at least 5% budget for ECD
		3.1.5 Encourage businesses to contribute to ECD as per their corporate social responsibility
	3.2 Build human capacity to design develop and implement ECD program	3.2.1 Carry out district level ECD training needs assessments
		3.1.2 Conduct ECD ToT trainings (basic, refresher, consultation workshop, learning sharing field visit)
		3.2.3 Develop master level ECD trainer (ECD specialists) and create and train ECD supervisors
		3.2.4 Encourage secondary schools to include ECD subjects in Grade 9 and 10
		3.2.5 Encourage universities to initiate academic (graduate level) course on ECD
4. Raise advocacy and awareness	4.1 Develop an advocacy and communication strategy for ECD	4.1.1 Commission a multisectoral task force to develop the communication strategy
		4.1.2 Hold a workshop to draft ECED communication strategy and develop messages
		4.1.3 Consult stakeholders about the communication strategy
	4.2 Conduct advocacy campaign on ECD	4.2.1 Sensitize the general public, teachers (private and public), policy makers and technocrats on the importance of ECD
		4.2.2 Encourage MoF, MoFALD, donors and corporate sectors to invest in ECD
		4.2.3 Activate the National Council for ECD
		4.2.4 Develop and disseminate IEC materials on ECD

Strategic outcomes	Strategic outputs	Activities
	4.3 Develop and implement communication tools for ECD	4.3.1 Create an interactive (website) forum for ECD
		4.3.2 Set up a panel of ECD experts to guide the development and implementation of ECD services
		4.3.3 Devise and disseminate ECD messages through billboards, newspapers, TV and radio (drama, jingles, etc.)
		4.3.4 Organize annual national and international ECD conferences
5. Strengthen collaboration	5.1 Mainstream ECD activities in other relevant sectors	5.1.1 Mainstream and harmonize ECD curriculum with those of MoE, MoH, MoFALD and MWCSW at all levels
		5.1.2 Cluster ECD centers and link with mother schools (to feed primary schools)
		5.1.3 Mainstream ECED in private sector (Schools)
		5.1.4 Incorporate ECED curricula into the training of primary school teachers
		5.1.5 Review the ECD curriculum periodically to ensure relevance
		5.1.6 Coordinate with MoH to mobilize DHOs, health posts and sub-health posts to ensure the coverage of basic health services (immunization, de-worming, vitamin supplement, growth monitoring)
	5.2 Consolidate sector policy, leadership, coordination and implementation	5.2.1 Hold National ECD steering committee meetings
		5.2.2 Hold National ECD council meetings
		5.2.3 Hold National ECD network committee meetings
		5.2.4 Revise or reform district ECD boards and conduct meetings
		5.2.5 Undertake local and national/international exchange visits
	5.3 Establish civil society machinery with interest in ECD to coordinate organizations implementing ECD	5.3.1 Map all ECCD providers
		5.3.2 Review and re-form ECD network
		5.3.3 Create an umbrella civil society organization
		5.3.3 Implement an inclusion policy (special needs, gender, HIV, street children, children in difficult circumstances

Strategic outcomes	Strategic outputs	Activities
	5.4 Build the capacity of key institutions to design, develop and implement ECD programs	5.4.1.Assess the institutional and technical capacity of organizations that implement ECD
		5.4.2 Draw up a capacity development plan
		5.4.3 Monitor implementation of capacity development plan
6. Enhance Monitoring and evaluation and research for ECD	6.1 Establish an M&E system	6.1.1 Review existing M&E tools on ECD
		6.1.2 Develop a comprehensive M&E system
		6.1.3 Train officers and stakeholders on new system
		6.1.4 Develop an ECED database
	6.2 Hold regular planning and review meetings	6.2.1 Regularize (annual/ biannual) national stakeholder meetings
		6.2.2 Regularize district stakeholder meetings
		6.2.3 Compile and disseminate ECD implementation reports
	6.3 Strengthen research and development capacity for ECD	6.3.1 Develop research agenda and initiate (action) research for ECD
		6.3.2 Commission research including action research
		6.3.3 Create a forum to regularly disseminate ECD research findings