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Nepal
Priorities and Strategies for Education Reform

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Abbreviations and Acronyms

BPEP II	Basic Primary and Education Project II
CERID	The Research Center for Educational Innovation and Development
DEO	District Education Officer
DDCs	District Development Committees
DOE	Department of Education
ECD	Early Childhood Development
GER	Gross Enrolment Ratio
GDP	Gross Domestic Product
HSEB	Higher Secondary Education Board
ICIMOD	International Centre for Mountain Development
MOES	Ministry of Education and Sports
NER	Net Enrolment Ratio
NGOs	Non-Governmental Organizations
NLFS	National Labor Force Survey
NLSS	Nepal Living Standard Survey
NRs.	Nepal Rupees
OLR	Overall Literacy Rate
PCL	Proficiency Certificate Level
SLC	School Leaving Certificate
SMCs	School Management Committees
UNICEF	United Nations Children's Fund
VDCs	Village Development Committees

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EXECUTIVE SUMMARY

Introduction

1. Over the past five decades, the educational system in Nepal has successfully concentrated on increasing the access to primary schools to 65 percent of the children in the relevant age group, and on developing the foundations of secondary and tertiary education. Literacy has increased from five percent to over forty percent of the population. These achievements constitute the first phase in the educational development of the country. As the pressures to further expand the system intensify, so do concerns over its equity and the quality of the education which is provided. The responses to these pressures and concerns, many of which will need to be made over the next few years, will determine the future structure and strength of the system. The objective of this report and, equally important, of the processes which underlie it, is to help the Government in this task. The report identifies a number of key constraints which currently are hindering the development of the system and, building on recent Government policy initiatives, suggests priorities and strategies for organizing and managing the required changes.

2. The process underlying the development of this report has been in three parts. First, several analytical reviews of the separate educational levels and of cross cutting key issues were undertaken by an integrated team of national consultants. These were then combined into four separate free standing papers on management, quality, financing and tertiary/technical/vocational education. The papers provide an exhaustive account of the education system in Nepal only a small part of which is incorporated in this report. Second, within the team a vision of the educational system in Nepal in twenty years time emerged and was subjected to a comprehensive enrolments and financial projections model and the financial feasibility of various scenarios assessed. Again, only a short summary of the results is incorporated in this report. Third, reactions to the analyses and to the emerging issues and alternative strategies for reform were sought through several focus group discussions with key stakeholders including teachers, principals, district education officers, program coordinators, policy makers, politicians and members of student unions. This report is just one result of these activities which have been undertaken to broaden and deepen the debate on education reform in Nepal. It is not the final activity. The intention is that its dissemination, in a variety of forms and gatherings, will provide a useful basis for further debate.

The Importance of Education

3. Educational development is potentially a key factor in reducing the incidence of poverty, raising overall levels of labor productivity and economic growth and improving the quality of life through empowering the population to take informed decisions across a wide range of activities. In each of these areas, Nepal is lagging. With a per capita income of only US$220 per annum the country is the ninth poorest in the world. Slow economic growth and high population growth have combined to reduce the rate of per capita income growth to the lowest in the region and nearly half of the population remains below the poverty line. Health indicators are very poor, even for the region. In Nepal, as elsewhere, there is a strong correspondence between educational attainment and individual and household earnings and between mothers' education and fertility rates, child nutritional status and morbidity. An effective development strategy needs to give high priority to programs and policies which both raise the productivity of the labor force and improve the quality of life of the whole population, and especially that of women. Education programs and policies have a central role in achieving these objectives.

The Performance of the Educational System

4. The modern education system in Nepal is one of the youngest in the world and operates within a political democracy that was established only in 1991. Not surprisingly, while parts of the system have been well designed and are implemented effectively, others remain in an embryonic stage and are only partly effective. Over the past five decades, there have been considerable quantitative achievements. From the situation in 1951 when there were only 321 primary schools, 11 secondary schools and 250 university graduates currently there are over 3.4 million children enrolled in 23,000 primary schools, 360,000 students in about 3,300 secondary schools and over 80,000 students enrolled at the tertiary level. The literacy rate has increased from less than five percent (less than one percent for females) to over 40 percent. From a period of extremely limited access enjoyed exclusively by the most privileged social groups, the education system has opened up to a larger population particularly at the primary level. In addition, increased attention has been given by Government to developing new curriculum, distributing free textbooks and providing teacher training as well as attempting to reach out to communities which are particularly educationally disadvantaged. In spite of these successes, however, there is a general acceptance that access to primary education is still far from universal, that post primary education requires structural reforms and that the quality of education received by the majority of students at all levels is unacceptably low. Both the low rates of primary school completion and the dramatic increase in enrolments in the private educational institutions over the past decade indicate that the outcomes of the public education system need to improve significantly. The purpose of the report is an attempt to document, explain and provide some suggestions for overcoming the shortcomings of the system.

5. Analyses of the various levels of the education system, and of its management and financing, provide an assessment of the current status. Six aspects of this are highlighted.

6. *Levels of literacy and educational attainment remain low.* Of the population aged fifteen years and over in 1995, 81 percent of females and 46 percent of males were illiterate. Only one in every three adults is literate. Literacy rates vary substantially by geographical/ecological area and income levels. In the mountains, less than one in four persons is literate, including less than one in ten women. Of the poorest two thirds of the population, only 43 percent of males and less than 11 percent of females are literate.

7. *While access to all levels of the education system has increased considerably, participation remains unequal across income and social groups and the benefits of public subsidies are inequitably distributed.* There are large differences in gross enrolment rates across geographic/ecological areas and income levels. The rates in primary schooling range between 64 percent in the Eastern Terai to 104 percent in the Eastern hills/mountains, and from 68 percent for the poorest quarter of all households to 118 percent for the wealthiest quarter. Most of the 30 percent or so of children not enrolled in primary school are members of socially disadvantaged groups and a majority are girls. Less than two percent of students at the tertiary level are from the 40 percent of households with the lowest incomes. Only 23,000 of the 129,000 tertiary level graduates are women. The benefits of public spending on education accrue unequally to students at the higher levels of education and to wealthier households. The richest 20 percent of the population receive about 40 percent of total public subsidy while the poorest 20 percent receives less than 12 percent.

8. *The quality of education is low.* In recent national assessments of achievement, pupils in primary grades III and V pupils on average scored less than 50 percent in mathematics, Nepali and social studies. Less than half of the secondary students pass the School Leaving Certificate

(SLC) examination held at the end of grade 10 with only around 12 percent achieving the highest classification. Pass rates in higher secondary and at the University are similarly low.

9. *High repetition and dropout rates throughout the system are wasting valuable resources.* High levels of grade repetition and drop out lead to low rates of cycle completion and high levels of cycle cost across the sector. Less than half of all children complete the primary cycle and only 10 percent of those entering grade 1 reach grade 10, and often after repeating several times. About 25 percent of the students enrolled at Tribhuvan University do not attend classes and less than 25 percent of students in the arts and humanities complete a degree level without failing once.

10. *The system does not serve the labor market well.* The wage labor force is still under-educated with an average of only 3.9 years of schooling, and 62 percent have no schooling at all. Estimates of social returns (based only on monetary benefits) are below 10 percent for secondary and higher education graduates in employment, and are lower for the self employed. For primary school graduates, they are around 15 per though this is likely to be a significant overestimate for recent graduates. Compared to the social rates of return of several other low income countries, those for Nepal are probably low. To what extent this is due to low rates of economic growth and/or to the nature of the education received is difficult to judge. The relatively low rates of return do not provide an argument to restrict the expansion of the education system. The benefits, to both the individual and to society go beyond the monetary ones. The question the set of social returns does raise, however, when compared to the private ones is the appropriate amount of public subsidy for each level.

Diagnosing the Problems

11. In an initial attempt to understand some of the reasons for the shortcomings described above, opinions were sought from various groups of stakeholders in the educational system in Nepal. Of the six most common and significant viewpoints which emerged, *four directly address issues of school management, while the other two are related to the underfunding of the public system.*

- *The teaching force is highly politicized.* This development is commonly perceived as a major cause of the decline in the quality of public education and the low level of accountability across the system.

- *District Education Officers are frequently transferred and changes in education rules and regulations are frequently made.* Both of these factors are related to constant political changes and have weakened school management by creating instability and avoidance of risk-taking. District Education Officers on average spend less than one year in a district and are susceptible to transfers resulting from swings in local politics.

- *Former community schools, nationalized after 1971, are now largely viewed as Government 'owned' schools over which communities have little control.* Although community participation in school management is recognized as a key ingredient for school improvement, many education managers express concern at the erosion in community support for public schools.

- *The education system is lacking in professionalism and education leadership.* The role of management in the education system is largely perceived as administering and maintaining

control of schools with very little leadership being offered on issues relating to learning, innovation and professional development. Career paths and incentives are poorly defined and there are few rewards for innovation at the school level or in education management.

- *The educational system is encouraging social disparities*. The education system that is supposed to increase equity is, in practice, resulting in large disparities between children in poor and better-off families as reflected in differences between what public and private schools can offer, and in the distribution of public subsidies.

- *Free education policies have been partly counter-productive*. Due to the inadequacy of public funding for schools, free education policies have inadvertently led to a decline in the quality of the education which low income children receive.

12. In addition to the views voiced in the focus group discussions, analyses were made of the specific causes of the inequities, inefficiencies and low levels of learning achievement across the education system. A wide range of constraints was identified from poverty and discrimination through to inadequate teacher preparation and time on task and a lack of materials in the classroom. Underlying several of the constraints over which the Education authorities have some control, there appeared to be significant gaps between policy and implementation, pointing to the existence of systemic problems in the way the education system is managed and financed. Some of the most important of these were:

13. *Management of the education system is highly centralized and lacks professional vision and leadership at most levels*. The system lacks a holistic vision and strategies for developing accountable institutions and for developing an effective base of administrators and teachers who are critical in ensuring the efficient and equitable delivery of a quality education. While school management committees played an effective role prior to the introduction of the National Education System Plan in 1971 when all schools were brought under the control of the Government, they are no longer formed democratically and do not always represent the most immediate stakeholders.

14. *Poor teacher management is a major cause of poor quality education.* The often low quality of education is associated with the weak preparation of teachers, and the lack of support to them. Most teachers are untrained due to the absence of any provision for pre-service training and very limited in-service training, and are poorly motivated due to an inadequate set of incentives and a lack of options for career growth. As a consequence of existing recruitment practices, serious politicization of the profession and the exertion of political influences on transfers, teachers are becoming increasingly unaccountable.

15. *Weak implementation of policies has created confusion and gaps in the system.* For instance, the Higher Secondary Education Board which is key to the rationalization of secondary and tertiary education has been hampered by inadequate funding and a less than adequate commitment to the transition plan; the introduction of the multi-university concept has been distorted resulting in no appreciable impact on efficiency and quality; the free secondary education policy has not in practice benefited the most needy groups; and while a nationwide policy of free primary education and a policy of compulsory primary education in five districts have been announced, they do not reflect the reality on the ground

16. *Public resources for education are constrained and inappropriately distributed.* Government resources for education increased from less than 10 percent of the budget in the mid-1980s to around 13 percent in 1992 but have remained around that level since. In addition, the

several inefficiencies in the system and the distribution of subsidies result in the allocations being less effective in both educational outcomes and in poverty reduction than they could be. Current expenditures on higher secondary and tertiary education have a retrogressive effect on income distribution. Nearly all of the students in higher education are from the wealthiest 20 percent of households and are enjoying the highest subsidies, while 30 percent of the school-age children, mostly from lower economic quintile and disadvantaged communities, are still out of school. Although public expenditure on education as a share of household expenditure is higher for the poor than for the better off, in absolute terms it is lower.

17. *The system of financial allocations does not encourage efficiency or the generation of additional resources.* Not only are expenditures inequitably distributed, there are examples of inefficiency in the system of financing and in the composition of expenditures. Grants-in-aid to schools have become an entitlement for which no justification is required. Many secondary schools that receive grants have pass rates of close to zero. Very few of the available resources are used to finance quality improvement inputs and almost all are required for salaries. In the absence of inadequate public expenditure, the free secondary education policy has constrained the ability of schools to raise additional funds from the community.

Areas for Intervention

18. In the Ninth Plan 1997–2002, the report of the National Education Commission, 1998 and in other recent policy statements, a number of major changes to the education system have been proposed and there are indications that the Government is on the verge of a comprehensive effort to overcome constraints. These efforts will need to be intensified, and will require a variety of policies and actions, as well as resources. The analyses and discussions which have occurred in the production of this report have led to the following recommendations.

- *Ensure within the coming decade that all children enroll in and complete a five year primary education while developing the structures and processes for expanding a strengthened basic cycle of schooling for eight years, and expanding levels of adult literacy.* This would require the effective implementation of the several interventions which have been started under the Basic and Primary Education Project II, including getting children learning in grades 1 to 3, in particular, and removing underage children from the primary schools and putting them into early childhood development programs that are community based. In addition, some increased attention needs to be given to the five million or so of the 15 - 45 years age group who have never been to school.

- *Develop an integrated cycle of secondary education which is of higher quality, has greater relevance to the skills and attributes valued by the labor market and is more widely available to girls and to poorer students than is the current system.* Secondary education is underdeveloped in Nepal. The school cycle is too short, there is an over concentration on examinations and liberal arts subjects, schools and teachers are not equipped to provide a sufficiently varied and high quality education; and students (particularly girls) from poorer households do not have adequate access.

- *Improve the quality of university education and tertiary education, introduce greater cost recovery and target public subsidies to students from poorer households.* Efforts to remove Proficiency Level (pre university) students from the Tribhuvan University into higher secondary schools and to complete the program to strengthen degree courses need to be accelerated. Subsidies for students of poor households need to be developed but tightly targeted. More generally, the current pattern of public expenditures which subsidizes the better-off members of

the community at the tertiary level needs to be re-structured with higher levels of cost recovery complemented by student loan schemes and targeted scholarships for poor students.

- *Develop a teacher management system that includes teacher education and training and conditions of service (appointment, deployment, transfer, salaries and benefits, career paths) and that will meet the needs of primary, lower secondary and secondary education, and improve the quality of teaching.* At the core of school quality are teachers who need to be continually supported in their professional development and made accountable for student's learning. There is an urgent need for a coherent teacher training and management policy and strategy covering the entire schooling cycle. There is also a need for a national curriculum framework covering the entire school curriculum and for a more coherent examination and assessment system. The minimum educational level for teachers is low, most have had no preservice training and upgrading programs have been limited in number and effectiveness. As a result, classroom teaching has not improved. There is a lack of transparency for appointments and transfers which is deleterious for school quality and morale. A similar situation faces teachers in secondary schools. Ultimate success in this endeavor hinges on how serious the Government is in reducing the heavy political influences brought to bear on teachers.

- *Decentralize the education system to the institution (school, campus, technical institutions) level to allow autonomy, community ownership and support, technical leadership, and accountability.* In order to move away from a highly centralized system and the practice of applying uniform policies and approaches across a diverse population and landscape, there is a need to synchronize political and technical / administrative decentralization and to adopt differentiated forms of service delivery. As part of this effort, the capacities of central agencies as well as those in the districts need to be developed. Greater staff stability is necessary for sustaining management reforms and there is an urgent need to develop incentive schemes tied to performance. Increasingly, however, the district will become the focal point of oversight and technical leadership and the District Education Offices will have to be reorganized to support participatory district education planning and implementation, including school improvement planning, ensuring compatibility with the local self-governance act. Local participation could be enhanced through legal provisions for school governance with empowered School Management Committees formed through democratic processes and empowered principals identified through competitive selection. Schools might then be transferred to communities, or more broadly to teacher cooperatives, NGOs or private operators under an umbrella act with provisions similar to those covering other user groups such as in community forestry.

- *Improve the modalities of financing to trigger education reform with a focus on reducing inequalities and discouraging inefficiencies while providing incentives for positive innovation and the generation of additional incentives.* Changes in education financing are required to underpin the whole process of the education reforms. Financial needs are enormous across the sector, and would be even greater at the initial stage of systemic reforms. Analysis of the scenarios for expansion which would be implied by recent Government pronouncements suggest that they are unlikely to be financially sustainable within current financing modalities and expenditure patterns. In order for the Nepalese education system to move to a situation which is reasonably close to that generally aspired to both quantitatively and qualitatively, the following would be required: (i) the pattern of public subsidies redirected further towards the basic level in general, and to under-served communities and girls at all levels; (ii) cost sharing increased at post basic levels of education; (iii) an effective enabling regulatory framework established to encourage the private provision of education with a resulting higher share of enrolments including at higher education; and (iv) an increase in the overall amount of resources spent on education as a proportion of GDP including through an increase in Government expenditures

from 13 percent to at least 15 percent, with (v) an increased share of unit costs on non-salary items. Public resources should be used first to protect the basic level of education and to target under served communities and girls at all levels so as to have a major impact on poverty reduction. In addition, they could be used to lever resources to support qualitative expansion at all levels and, more generally, to trigger the reforms. New formulas for allocating budgets across districts are being developed for primary schooling. Similar formulas will be needed for secondary education which is generally underfunded and which requires additional community support. The next step could be block grants to institutions linked to quality improvement. This would require development of the quality indicators and a framework for classifying institutions along these lines. Again, any increases in public funds for tertiary education need to be linked to reform.

Conclusion

19. Compared to several other areas of development policy in Nepal, education has had some successes. While the system remains small compared to that in many other low income countries, its rate of growth has been impressive and two thirds of primary age children are in school. To some extent, however, the simplest part is over. The harder part will be in enticing the remaining third to enroll and remain in school to at least attain literacy, and to develop a firmer foundation for the secondary and higher education sectors which are currently in a state of flux. The education system receives the largest allocation of Government expenditure. It is doubtful that the returns are currently very high. With Government having recently announced several broad intended changes to the system, this is an opportune time to systematically consider the implications of these in a comprehensive manner and to determine a road to reform.

INTRODUCTION

1. Over the past five decades, the educational system in Nepal has successfully concentrated on increasing access to primary schools to 65 percent of the children in the relevant age group, and on developing the foundations of secondary and tertiary education. Literacy has increased from five percent to over forty percent of the population. These achievements constitute the first phase in the educational development of the country. As the pressures to further expand the system intensify, so do concerns over its equity and the quality of the education which is provided. The responses to these pressures and concerns, many of which will need to be made over the next few years, will determine the future structure and strength of the system. Many decisions need to be taken. In some cases this will require hard choices to be made, particularly when a reallocation of financial and human resources is entailed. The objective of this report and, equally important, of the processes which underlie it, is to help the Government in this task. The work builds upon a recent public expenditure review of the social sectors in Nepal (World Bank 2000b). The aim is to develop a framework for an equitable, efficient and affordable education system in Nepal which can play a major role in increasing economic productivity, reducing poverty and improving the overall quality of life. The report identifies a number of key constraints which currently are hindering the development of the system and, building on recent Government policy initiatives, suggests priorities and strategies for organizing and managing the required changes.

2. The process underlying this report has been in three parts. First, several analytical reviews of the separate educational levels and of cross cutting key issues facing the system were undertaken by a team of national consultants. These studies were based largely on existing information and analyses, and on Government policy documents, but augmented in several cases by interviews and fieldwork. The reviews were then combined into four separate free standing papers on management, quality, financing and tertiary/technical/vocational education. The papers provide a detailed account of the education system in Nepal only a small part of which is incorporated in this report. Second, through a consultative process, a twenty year vision of the educational system was developed. A comprehensive enrolment and financial projections model covering the educational system was then constructed and the financial feasibility of various scenarios assessed. Again, only a short summary of the results is incorporated here. Third, reactions to the analyses and to the emerging issues and alternative strategies for reform were sought from various groups of people at different stages in the process. Several focus group discussions with teachers, principals, district education officers, program coordinators, policy makers, politicians and members of student unions were organized. This report is just one result of the activities which have been undertaken to broaden and deepen the debate on education reform in Nepal. It is not the final activity. The intention is that its dissemination, in a variety of forms and gatherings, will provide a solid basis for further debate.

3. The report is divided into five chapters. The first provides a brief background of the socio-economic context in Nepal within which the education system functions. The second chapter reviews the level of educational attainment across the population and discusses the strengths and weaknesses of the current system. The third chapter provides a diagnosis of these weaknesses. In this, a set of common perceptions regarding the provision of education in Nepal is presented followed by an attempt to explain some of the underlying reasons behind the low level of educational attainment. These first three chapters set the stage for chapter 4 in which a set of strategies for education sector reform is articulated, starting in each case from the general set of intentions which the Government has recently announced. The final chapter reviews the core items of a proposed strategy for education reform.

CHAPTER 1 EDUCATION AND DEVELOPMENT

Introduction

1.1 Over the past few decades, the expectations of the beneficial impact of educational expansion on various aspects of economic and social development in poor countries have grown. Education is seen to be central to the development process and to empowering people to more fully exploit their own potential and exercise more control over their own lives. Education systems, however, do not exist in a vacuum. Their current shape reflects the interplay of many forces and circumstances and their development takes place within a variety of social, economic and cultural constraints. Positive outcomes are not automatic. They depend on the quality of the educational process itself and on the extent to which other aspects of the society and economy are conducive to allowing the potential benefits from education to occur.

1.2 Most of this report focuses directly on Nepal's educational system and its processes. The intention is to provide a clear statement of the current status, achievements and problems of the system and to provide some guidance on the nature of the choices and decisions which will be required to improve it. In this short chapter, however, a brief account is given of part of the socioeconomic context within which the educational system is located, particularly that which relates to poverty. An argument is made in this report that the educational system is central to reducing levels of poverty and that much remains to be done, and must be done, if it is to justify both the expectations of the population and the public resources which continue to finance it. The chapter concludes with a very brief description of the education system and its development over the past half century.

Economic Growth, Poverty and Education

1.3 With a per capita income of only US$220 per annum, Nepal is the ninth poorest country in the world. Relatively low and declining rates of economic growth through the 1990s, together with high rates of population growth have combined to reduce the growth of per capita income to the lowest in the region. Between 1995 and 1999, the increase was just 1.4 percent a year. In addition, the distribution of income is the most unequal in the region. A consequence of this combination of only very small improvements in per capita income and income inequality is the continuing very high level of extreme income poverty. Almost half of the population is below the poverty line and the share has hardly changed over the past thirty years, in contrast to the situation in several neighboring countries (Table 1). Hand in hand with low incomes are low levels of other indicators of development such as life expectancy, infant mortality, access to clean water and literacy. In spite of improvements in basic social and economic infrastructure, Nepal still lags behind other South Asian countries in most areas of social and economic development; and for several the indicators are more comparable to those of poorer African countries than of her immediate neighbors.

1.4 One of the causes, as well as the consequences, of income poverty is the very small amount of assets and capital held by most households. This includes human capital which is increased largely through education and training. The evidence in Nepal, as elsewhere, is that men and women who have received education alter their behaviors in ways which improve their quality of life. The level of education of a household head is strongly associated with that household's chances of falling below the poverty line (Prennushi, 1999). Using the Central Bureau of Statistics' definition of poverty (an annual income of NRs. 4404 per person in 1996), and data from the Nepal Living Standard Survey (NLSS, 1996)

Table 1: Social Indicators in the South Asia Region/a

Indicator	Nepal	Bangladesh	India	Pakistan	Sri Lanka	SAR/b	SSA/c
Poverty Ratio (percent), 1991-92	42/d	42.7	40.9	34.0	40.6	..	..
1995-96	42.0	35.6	35.0	..	35.3	..	..
GDP Per Capita (US$)	210	260	380	480	740	380	490
Gini Index (income inequality)	36.7	28.3	29.7	31.2	30.1	..	..
Population Growth Rate (percent), 1980-96	2.6	2.1	2.0	3.0	1.4	2.1	2.8
Total Fertility Rate	5.0	3.4	3.1	5.1	2.3	3.4	5.6
Contraceptive Prevalence Rate	31	45.0	43.0	14.0	n.a	..	..
Life Expectancy (years) Male	57	57	62	62	71	61	51
Female	57	59	63	65	75	63	54
Infant Mortality (per 1,000 live births)	85	77	65	88	15	73	91
Maternal Mortality (per 100,000 live births)	1500	850	437	340	30	..	..
Adult Illiteracy (percent) Male	59	51	35	50	7	38	34
Female	86	74	62	76	13	64	53
Gross Primary Enrollment (percent)	100	92	100	74	113	99	75
Net Primary Enrollment (percent)							
Access to Safe Water (percent)	48	79	81	60	n.a.	78	45

Source: World Bank, 2000

Notes: **a/** Except where stated, the data are for 1996.

b/ South Asia Region.

c/ Sub-Saharan Africa.

d/ Poverty ratio for Nepal for 1991-92 is not available. Estimate for 1984-85 was 42 percent. Using similar methodology comparable figures for 1996 range from 42 percent to 50 percent.

to measure per capita annual consumption, 54 percent of households with uneducated heads are "poor". Incidence decreases to 34 percent for those households whose heads have completed primary education. Completion of secondary and university level education by a household member further reduces the incidence to 16 percent and 8 percent respectively. These data confirm the wide belief that education increases employment opportunities and productivity, and helps to raise incomes. Most importantly, for those born poor, it enhances the possibility of escaping poverty.

1.5 Poverty is not simply a reflection of low levels of income but also encompasses the lack of an individual's ability to make choices which affect her or his life. One set of choices covers reproductive health, family health and nutritional status. Education is strongly associated with these and other demographic and health indicators as shown in Table 2. Reductions in both the fertility rate and the ideal number of children for those women with a primary schooling compared to those with no schooling are pronounced (from 5.1 to 3.8 and from 3.1 to 2.5 respectively), as is the reduction in the mortality rate of their children (from 149 to 99 per 1000 live births).

Table 2: Quality of Life Indicators by Level of Women's Education

Indicators	No Education	Primary	Secondary
Total fertility rate	5.1	3.8	2.5
Ideal number of children	3.1	2.5	2.1
Under five mortality (per 1000 births)	149	99	61
Children receiving full set of vaccinations (%)	38	56	72
Children chronically malnourished (%)	23	14	7
Children severely malnourished (%)	52	40	28

Source: Ministry of Health, 1997

1.6 Seventy-five percent of children whose mothers have no schooling are severely or chronically malnourished compared to 54 percent of children whose mothers have had a primary schooling. A full set of vaccinations among the latter group of children is also much more frequent. The effects of primary schooling on these measures are strong. They are *equally* strong for a secondary schooling and it is evident from the data that this level is required for the full and sustained change in behavior to occur. Other social indicators, including child labor and aspects of gender discrimination and women's empowerment, are also correlated with levels of literacy as the inter-district analyses undertaken by ICIMOD (1997) and described in table 3 demonstrate.

Table 3: Correlation Coefficient of District Level Social Indicators with the Overall Literacy Rate (OLR) of Districts

Social Indicators	Correlation with OLR
Child labor rate	-0.90
Child illiteracy rate	-0.96
Child marriage rate	-0.37
Gender imbalance ratio among the literate adult population	0.86
Gender imbalance ratio among the non-agricultural occupations	0.56
Percentage of share of females in literacy programs	0.87
Percentage share of females in non-agricultural occupations	0.67
Percentage share of females in primary level teaching	0.67
Percentage share of girls' enrollment at primary level	0.85
Infant mortality rate	-0.53
Contraceptive prevalence rate	0.73

Source: Adapted from ICIMOD, 1997.

1.7. Overall, an effective poverty reduction strategy must give high priority to programs and policies which both raise the productivity of the labor force and improve the quality of life of the whole population and especially that of women. Education programs and policies have a central role in achieving these objectives.

Education Provision – A Snapshot

1.8 The education system in Nepal is one of the youngest in the world. In 1951, only 9,000 pupils were enrolled in primary schools and only 1,700 in secondary schools. Consequently, the development of the system has been uneven and in several ways the system needs to be seen as embryonic.

1.9 Expansion of enrollments has been a major accomplishment in Nepal over the past three decades, in particular. In absolute figures, primary school enrolments (grades 1-5) grew significantly, from around 400,000 in 1971 to almost 3,500,000 in 1997 covering 65 - 70 percent of the appropriate age group, plus many over and underage children. Over the same period, enrolments in lower secondary (grades 6-8) and secondary (grades 9-10) schools combined increased from 120,000 to 1,190,000 resulting in gross enrolment ratios of 54 percent and 31 percent respectively. At the post-secondary level, including tertiary education, enrolments increased from 17,000 to 195,000 over the same period resulting in a current enrolment ratio of around four percent. During the period 1951 to 1971, enrolment growth at each level averaged over 20 percent a year, though from a low base in each case. In the following decade the highest annual rate of expansion was at the primary level (13.0 percent), while during the 1980s tertiary education expanded most rapidly (11.7 percent) and was again the fastest growing sector in the 1990s (10.5 percent). The structure of the education system is depicted in annex 1 and an expanded description is provided in World Bank (2000b).

1.10 The picture of recent enrolment trends which emerges is of a primary level whose rate of growth is slowing down markedly, a secondary level where growth is strong and the absolute increases are large and a tertiary level with a very high growth rate, though where the absolute numbers remain relatively small. This picture is of enrolments and enrolment growth only. The meaning behind these in terms of inputs, processes, outputs and distributions is examined in the rest of the report.

The Importance of Education

1.11 The expansion and improvement of education cannot solve all of the problems of development but they can play an important role. Education helps individuals to expand their knowledge of opportunities and options, and in general to navigate across society more effectively. In helping to change behaviors which have an impact on the quality of life within the household, such as through better health and nutritional practices, and which reduce rates of fertility, the impact of education in Nepal as elsewhere is very strong. The effects are likely to increase as coverage of both primary and secondary schooling further widens and behavioral changes deepen. Potentially, the educational system can also have a significant impact on reducing levels of poverty and increasing levels of economic growth. *To households with no or very few assets, increasing the human capital of its members is perhaps the most effective long term route out of poverty which is available.* However, this process does not result simply from sitting in a school. It requires an effective learning environment.

CHAPTER 2 EDUCATIONAL OUTCOMES

2.1 As described in the previous chapter, the education system in Nepal is one of the youngest in the world and operates within a political democracy that was established only in 1991. Not surprisingly, while parts of the system have been well designed and are implemented effectively, others remain in an embryonic stage and are only partly effective. Over the past several decades, there have been considerable quantitative achievements in terms of schools, teachers and students at all levels of the system. More recently, increased attention has been given by Government to developing new curriculum, distributing free textbooks and providing teacher training as well as attempting to reach out to communities which are particularly educationally disadvantaged. In spite of these successes, however, while enrolments at all levels of the system have improved dramatically, there is a general acceptance that access to primary education is still far from universal and that the quality of education received by the majority of students is unacceptably low. Both the low rates of primary school completion and the dramatic increase in enrolments in the private educational institutions over the past decade indicate that the outcomes of the public education system need to improve significantly. In this chapter, the information currently available on outcomes in terms of the overall level of educational attainment, access across various groups of the population, the quality of education, completion rates of the various cycles of education, and the way in which the labor market judges the graduates of schools and universities is presented. In some cases, such as labor market outcomes, the information is limited. Overall, however, sufficient is available to adequately convey the situation.

A Review of Outcomes

2.2 The analyses of the various levels of the education system (primary, secondary, vocational and technical, tertiary), and of its management and financing, which were prepared as background for this report, provide a set of information which can be used to begin to assess the outcomes of the system.

2.3 *Levels of literacy and educational attainment remain low.* Of the population aged fifteen years and over in 1995, 81 percent of females and 46 percent of males were illiterate. Only one in every three adults was literate. These figures, taken from the Nepal Living Standards Survey (NLSS) and described more fully in Prennushi (1999), reflect the underdevelopment of the educational system in previous decades. Large numbers of unschooled men and women will populate the labor force and be of parenting age for many years to come. Given the net enrollment rates of roughly 67 percent for boys and 46 percent for girls aged 6-10 years, the average levels of attainment across the population will increase, though slowly.

2.4 Literacy rates vary by geographical/ecological area. In the mountains, less than one in four persons is literate, including less than one in ten women. In the Terai, 47 percent of men and 17 percent of women are literate. Literacy rates also vary by income (consumption) group. Of the poorest two thirds of the population, 43 percent of males and less than 11 percent of females are literate

2.5 The National Labor Force Survey (NLFS) for 1998 provides information on the educational background of the wage labor force. Almost 43 percent are literate and 38 percent have completed at least a primary schooling. Seven percent have some formal training. Educational attainment varies widely across gender, and sector and location of employment. Twice as many males as females have at least a primary schooling (43 percent and 21 percent). Even more pronounced is the difference between sectors. Over 55 percent of the wage-workers in the non-agricultural sector have at least a primary schooling compared to only eight percent in the agricultural sector. Only one third of urban workers has less than primary schooling; compared to over two thirds of rural workers.

2.6 The low level of adult literacy, particularly of females and disadvantaged groups is not only important in itself, but also is a factor behind the continuing low level of participation in the education system of girls and of children from disadvantaged backgrounds in particular. While nearly four million adults attended literacy classes in the 1990s, the literacy rates for the age groups over forty years have improved only marginally. Achievement remains much below the targets set in several Plans.

2.7 Overall, across the adult population, including the wage labor force, the spread of education is very low, and for rural women in particular, exceedingly low. In recent years, analyses of the relationship between education and socio-economic development have pointed to the importance of a wide spread of education if the potential benefits are to be maximized. For instance, while the farmer with some schooling has been shown to be more productive than the unschooled farmer, his level of productivity is even higher if *most* of the farmers in the community have had a primary schooling. However, in neither the Terai nor the Mountain belt does the male literacy rate reach 50 percent. Similarly, while the average primary schooled woman has lower levels of fertility and healthier children than the unschooled woman, the differences tend to be significantly greater if *most* of the women in the locality have that level of education. Again, in none of Nepal's five regions is the female literacy rate above 25 percent. Put simply, there appears to be a threshold of the spread of schooling beyond which the benefits accelerate and in most localities in Nepal that level has not been reached. Given that average levels of agricultural productivity are low, that population growth in Nepal is the second highest in the region and is probably depressing per capita income growth and that levels of child malnutrition are extremely high resulting in both physical illnesses and reduced cognitive development in the future, the payoff from raising the share of young men and women who have received schooling to a level which promotes these stronger responses would seem to be of highest priority.

2.8 *While access to all levels of the education system has increased considerably, participation is unequal across income and social groups and the benefits of public subsidies are inequitably distributed.* The primary school gross enrolment ratio (GER) is officially recorded as 124 percent and the net enrolment ratio (NER) as 70 percent for 1998. Within the region, the coverage of primary schooling compares favorably with Pakistan but unfavorably with Sri Lanka, India and Bangladesh The Nepal Family Health Survey for 1996 estimated that 74 percent of boys and 57 percent of girls aged 6-10 years were in school, leaving slightly more than one million children in this age group out of school (Ministry of Health, 1997). The Nepal Living Standard Survey, again for 1996, provides lower estimates. According to the Survey, the overall gross primary enrolment ratio was 94 percent and the net ratio 57 percent, with 67 percent of school-age boys and 46 percent of girls attending school. Forty percent of the students are girls, up from 30 percent a decade ago though in the Far Western region the enrolment rate for boys is twice that for girls. There are also significant geographical variations in coverage with the range between regions being from 64 percent in the Eastern Terai to 104 percent in the Eastern hills/mountains. Finally, primary education coverage varies by level of household income/consumption. The GER for the poorest fifth of all households is 68 percent compared to 118 percent for the wealthiest fifth.

2.9 For lower secondary schooling the GER is 54 percent overall and 44 percent for females. Rural – urban differentiation is even wider than for primary grades with rates of 48 percent and 84 percent respectively. The range across regions is between 30 percent in the central hills and mountains and 73 percent in the Eastern hills and mountains. The differences across households by level of consumption are very striking. The GER for the poorest fifth of households is 22 percent compared to 90 percent for the wealthiest fifth. The variations are even wider for secondary education. For instance, while the GER for children in the poorest fifth of households is only 8 percent it remains at around 90 percent for the wealthiest group. In higher education (grade 11 and above), only 22 percent of the students are female and, incredibly, less than half of one percent of all students are from the poorest fifth of households and only 6 percent from the poorest half.

2.10 Since education at each level is highly subsidized by the Government, the large inequalities in access result in the benefits of public spending on education accruing unequally across household income groups. For every 100 Nepalese Rupees spent by Government on primary education, roughly 20 go to households within each income quintile. However, for each higher level of education the gap in participation rates and hence in the benefits from public spending across income groups widens. Only five percent of those enrolled in secondary level education are from the poorest quintile, 16 percent are from middle quintile, and 44 percent are from the richest quintile. At the university level, only 0.4 percent of students come from the poorest fifth of all households, and almost 81 percent from the wealthiest fifth. Overall, the wealthiest 20 percent of the population receive about 40 percent of the total public subsidy on education while the poorest quintile receives less than 12 percent.

2.11 Another source of inequality is the growth of private schooling resulting in a different educational experience for the children of those who can afford to pay fees and those who cannot. Although the proportion of private enrollment at the primary level is still less than 10 percent this will double in the next five years if current growth rates continue (see annex I for a comparison of the characteristics of public and private schools in the Kathmandu Valley). One third of the total increase in enrolments in recent years has been in private schools. The proportion of enrollments in private lower secondary and secondary schooling is 20 percent while it is over 50 percent in higher secondary education, over 20 percent in tertiary education and over 30 percent in technical and vocational education. The expansion of private education is a recent phenomenon with a high proportion of national and district education officials and urban public school teachers participating. There is a concern that this trend will erode the pressure to improve the quality of public education as many of those who are managing the school system have little direct stake in it. In addition, the highly subsidized places in higher education are being monopolized by graduates of the private schools.

2.12 *Quality of education is low.* A modern society needs an education system that provides its students with a sound basis for lifelong continuing education. Schools need to begin the process by establishing applied mathematical and problem solving behaviors, scientific and technological methods of inquiry, communication skills, the need for democratic institutions, reasoned debate and consensus building, and an appreciation of the richness of their own cultural heritage and that of others. Nepal's public schools do not do these things well: teachers are often not sufficiently well educated or trained to implement such programs and schools tend to be poorly equipped.

2.13 Learning outcomes of the school system are low overall and there are marked differences in the performance of students across geographical locations and also from public and private institutions. A national assessment of students in grade 3 in 1997 showed that in tests of mathematics, Nepali language and social studies, students were on average able to answer correctly less than half the questions (44, 46 and 50 percent respectively). The assessment of students in Grade 5 in 1999, provided even lower average scores (27, 51 and 42 percent respectively). Students in the Hills did better in each subject than students in the Terai and the Mountains in grade 3. Terai students did particularly poorly in both Nepali and Social Studies. Scores in the Kathmandu Valley were considerably higher than those in the rest of the country. Overall, girls performed similarly to boys in grade 5 in Nepali and Social Studies but considerably worse in Mathematics. A small study carried out in the private and public schools in the Kathmandu Valley showed higher scores in private schools in mathematics (42 and 36 percent) and in Nepali (69 and 63 percent), though they were similar in Social Studies.

2.14 There are no standardized tests of learning achievement for secondary school students. However, the average pass rate for the School Leaving Certificate (SLC) at grade 10 has ranged between only 25 and 35 percent over the past decade. This average hides wide differences between public and private schools. In 1998 the pass rates increased to 48 percent and 84 percent for public and private schools

respectively. It should be noted, however, that in the Kathmandu Valley, where most of the secondary schools are located, the differences in pass rates between rural and urban schools are greater than those between public and private schools. Twice as many boys as girls appear in the examinations, and their average performance is higher with pass rates of 52 and 44 percent respectively in 1998. High failure and repetition rates in the SLC examinations, and a low percentage of students passing in the First Division suggests that the quality of secondary education is relatively low.

2.15 For higher education (defined in Nepal as grade 11 and above), the story is similar. Pass rates in the two year proficiency level examinations at the University are very low as are those conducted by the Higher Secondary Education Board for students in higher secondary schools. There is, however, some sign of improvement in the latter with rates increasing dramatically from 24 percent in 1998 to 39 percent in 1999. In the University degree programs, pass rates vary by subject but are particularly low in the Humanities, Management and Education where most of the students are enrolled. Students enrolled in technical disciplines perform much better, but these are also the best students coming out of the school system. However, enrollments in technical disciplines are less than 5 percent of the total.

2.16 *High repetition and dropout rates throughout the system are wasting valuable resources.* Out of 100 children enrolling in Grade I, only around 18 complete the cycle five years later and less than 50 complete eventually. Two thirds of those who complete will have repeated at least one grade. On average, those who graduate take two years more than the prescribed time.

2.17 While dropout rates are lower in secondary education, repetition rates are again very high, and only 40 percent and 50 percent of those who complete the lower secondary and secondary cycles respectively do so without repeating at least one grade. Around 30 percent of grade 1 entrants complete lower secondary and 10 percent complete grade 10. The situation is similar at the university level, but there the cost implications are much higher. Surveys indicate that about 25 percent of the students at Tribhuvan University system regularly do not attend classes. Only 25 percent of students in non technical subjects complete without repeating at least one year of study. In technical subjects the proportion is 35 percent.

2.18 High repetition and dropout rates have a number of consequences. Repetition leads to higher class sizes, which in the first two grades of primary schooling can often be over 70 pupils, with a resulting reduction in the amount of time a teacher spends with each child. Having children of different ages and with different educational experiences in a class makes it harder to teach, particularly for inexperienced and untrained teachers. It is also possible that these large class sizes act as a disincentive for parents to send their young children to school or encourage the communities to develop additional schools for which they then put pressure on Government to provide teachers. High levels of repetition can be used to justify additional teachers in existing schools. Individual school cycles are designed to cover an integrated curriculum. For children who drop out within a cycle, much of the potential benefit of schooling which has been received is lost. This is most apparent in primary school where children who drop out before completing are unlikely to be literate and gain no permanent benefit. In secondary and higher education, some of the benefits from attending at least part of the cycle are likely to remain, but again they will be less than for those who do not drop out.

2.19 *The system does not serve the labor market well.* Education is valued both by individuals and governments for the ways in which it equips people to cope with the world more effectively. This has many aspects including an increase in self esteem, an improved ability to deal more effectively with those who have power and, in general, the possibility of increasing capabilities which broaden the areas of individual choice. In addition, for many, an important motivation for acquiring education is to increase the chances of being more economically productive, and consequently of enjoying a higher income/level of consumption. Both individuals and governments have a stake in this and both are involved in meeting

the costs. Whether parents are prepared to send their children to school and use the educational facilities which are available, and to demand them when they are not, at least partly depends on the anticipated economic benefits. While it is virtually impossible to forecast these over a lifetime, it is possible to present briefly some recent evidence of the current and past relationship in Nepal between education and the economic returns.

2.20 While only 15 percent of the labor force is in the wage sector, private rates of return for workers in this sector provide some evidence of part of the complex set of motivations for individuals to demand education. According to data from the 1998 Labor Force Survey, for those able to find wage employment the overall returns are relatively high at the primary schooling (16.5 percent) and university education (12 percent). For secondary school graduates the returns are around 8.5 percent. Females have higher returns than males for both primary and secondary schooling, but lower returns for university education. In rural areas, the highest return is for primary schooling while in urban areas the highest is for university education. Formal vocational training yielded much higher returns in rural areas (18 percent) than in urban settings. Similar calculations were also made for the self employed. For these workers, rates of return are much lower. For non agricultural activities, they range between 11 percent for primary to 4 percent for university. In agriculture, they are even lower, ranging from seven percent for primary to zero for university.

2.21 What can be implied from these results? Overall the private returns for all wage earners range between 8.5 percent for secondary graduates and 16.5 percent for primary graduates. However, they are probably lower for recent graduates, particularly for primary school graduates who are unlikely to be able to find wage employment at all, and they are much lower for the self employed. Given the high transition rates characteristic of the whole system, the continued demand for secondary education may reflect individuals' perception of this level of education mainly as a stepping stone to university. The returns to university education for employees are reasonably high, particularly for males, and given the probable overestimate of the returns to primary schooling could be the highest across levels. This suggests that there is scope for reducing the public subsidy to this level of education without reducing the demand substantially.

2.22 Estimates of social rates of return (based only on monetary benefits) need to take account of the public subsidies to schooling, which are substantial at all levels but particularly for higher education. The resulting rates of returns are below 10 percent for secondary and higher education graduates in employment, and lower for the self employed. For primary, they are around 15 per cent, though again this is likely to be a significant overestimate for recent graduates. Compared to the social rates of return calculated across a wide range of countries, those for Nepal are probably low. To what extent this is due to low rates of economic growth and/or to the nature of the education received is difficult to judge. The relatively low rates of return do not provide an overriding argument to restrict the expansion of the education system. The benefits to both the individual and to society go beyond the monetary ones. For instance, there is compelling evidence from both the Family Health Survey and the Living Standards Survey to suggest that primary and secondary education of females, in particular, is strongly associated with positive changes in social behavior. The question the set of returns does raise, however, is the appropriate amount of public subsidy for each level of education, and particularly for higher education.

Chapter 3 DIAGNOSIS OF THE OUTCOMES

3.1 In the previous chapter the argument was made that the outcomes of the education system in Nepal are insufficient to match the aspirations and requirements of the country. In spite of fairly rapid increases in aggregate enrolments in past years, the average attainment level is very low, many children never enroll in the schools and of those that do, too many dropout while the learning achievement of many of those who remain is unacceptably low. Very few of the children born into the poorest eighty percent of households are able to enter higher education institutions. The system is not yet operating in such a way that the potential of education to the country and its people is being effectively tapped. In this chapter the attempt is made to try to understand and describe some of the reasons for this. In the first part, a set of common perceptions of the causes of system failure which have emerged from wide consultations with a variety of interest groups is presented. The second part highlights additional reasons for each of the modest outcomes described in the previous chapter. Finally, separate attention is given to overriding issues of management and financing.

Common Perceptions about the Provision of Education

3.2 As part of the background work for this report, views on the condition of the education system were sought from diverse groups in society (see annexes B, C, D, E and F). Public perceptions strongly emphasize the tensions arising in a fledgling parliamentary democracy which has experienced frequent changes in government and shifts in political alliances. The view was widely expressed that political influence often takes precedence over transparency and good governance, and in turn causes many of the problems associated with the system. Six of the most common and significant viewpoints are described below; *four of them directly address issues of school management, while the other two are related to the underfunding of the public system.*

- *The teaching force is highly politicized.* This development is commonly perceived as a major cause of the decline in the quality of public education and the low level of accountability across the system. Political parties draw heavily on teachers for local political activities through teacher unions and frequently dispense rewards by arranging for their transfer. These actions result in high rates of teacher absenteeism and inefficient teacher deployment. School principals and school supervisors feel powerless and unable to manage the teachers in their school.

- *District Education Officers are frequently transferred and changes in education rules and regulations are frequently made.* Both of these factors are related to constant political changes and have weakened school management by creating instability and avoidance of risk-taking. District Education Officers on average spend less than one year in a district and are susceptible to transfers resulting from swings in local politics. They are perceived by the public as spending most of their time meeting political delegations and on matters relating to teacher transfers rather than supporting school supervision and promoting quality improvement.

- *Former community schools, nationalized after 1971, are now largely viewed as Government 'owned' schools over which communities have little control.* Although community participation in school management is recognized as a key ingredient for school improvement, many education managers express concern at the erosion in community support for public schools. Until 1971, School Management Committees managed schools with block grants from Government and were able to supplement these through mobilizing additional funds from parents and the community. In addition, changes to the way in which the Committees are constituted have increased the

number of members selected by District Education Officers, often on political lines, at the expense of parents of the school children.

- *The education system is lacking in professionalism and education leadership.* The role of management in the education system is largely perceived as administering and maintaining control of schools with very little leadership being offered on issues relating to learning, innovation and professional development. Career paths and incentives are poorly defined and there are few rewards for innovation at the school level or in education management.

- *The educational system is encouraging social disparities.* The education system that is supposed to increase equity is, in practice, resulting in large disparities between poor and better-off families as reflected in differences between what public and private schools can offer, and in the distribution of public subsidies. Parents who can afford to are willing to purchase the best education they can for their children and this is perceived as being offered in private schools. For the majority of families, however, there is no alternative to the public schools which are perceived as a place where their children are likely to fail, repeat grades or drop-out before learning anything meaningful. Growth of private schools results not only from an unmet demand for a good quality education, but also from a strong attraction for English language teaching.

- *Free education policies have been partly counter-productive.* Due to the inadequacy of public funding for schools, the free education policies may have inadvertently advantaged poorer households. Teachers and parents are increasingly recognizing that the 'fee-free' education policy from Grade 1 through to Grade 10 which in practice limits opportunities for public schools to levy charges and raise additional funds is reducing a school's capacity to provide vital teaching and learning materials. On average, the total revenues of public schools declined after the declaration of the 'fee-free' education policy, which provides funds only for teacher salaries and, in primary schools, textbooks. It is widely believed that this is the main cause for the proliferation of private schools, which are able to raise funds for the non-salary inputs that are critical for quality improvement.

3.3 The main message which comes across from the discussions is that there is an overriding perception that many of the problems in the education sector result from the way in which it is managed and financed. These issues are returned to in the third part of this chapter. Before that, more specific causes of the limited educational outcomes described in the previous chapter are discussed.

Explaining the Outcomes

Why are average levels of educational attainment low?

3.4 The main reason why levels of educational attainment are low in Nepal is that until fifty years ago, an educational system hardly existed. As described in the first chapter, in 1951 only 9,000 pupils were enrolled in primary schools, and 1,700 in secondary schools and the literacy rate was under five percent. Despite the progress made over the last fifty years in expanding access; and the high rates of enrolment growth documented in chapter 1, the base was very low. Even in 1971, only around 400,000 children were in primary school and 120,000 in secondary school which can be compared with around 3.5 million and 1.2 million respectively today. Factors affecting both the supply of educational facilities and the demand for them have been important in constraining yet faster growth than has been achieved. Over time, average levels of attainment are increasing. Data from the Living Standards Survey for 1996 shows literacy levels are much higher among younger cohorts (60 percent for the 15 – 19 years age group) compared to the population over 50 years of age (20 percent).

3.5 Historically, low levels of financial allocations to the education sector have constrained the capacity of public institutions (World Bank, 2000b). Until the late 1980s, the Government's allocation to the education sector was less than 10 percent of its total expenditure. In addition, a significant portion went to the tertiary level to finance a small number of students from better off families at the cost of much needed support at the primary and non-formal levels. Aggravating the low allocations, the introduction of the National Education System Plan in 1971, while stimulating a rapid expansion of the public system, also directed the takeover of community owned educational institutions by the Government. This led to an erosion in community participation and financial support to public educational institutions. The combined effect of low financing and weak ownership has contributed to the poor performance and accountability of public institutions despite a major increase more recently in Government funding as a percentage of total budget, and a re-direction towards primary schooling. As a result, most children from poor families still fail to complete even the primary cycle thereby limiting the increases in levels of literacy and average educational attainment.

3.6 Higher enrolment ratios in the future will not affect the literacy levels of today's adults. Despite several decades of Government support to literacy programs, around 60 percent of the adult population remains illiterate. Most literacy programs are "quota" or supply driven and fail to cater to the local needs of learners. Only around 60 percent of participants complete the courses and become literate, and many who do graduate relapse due to limited post literacy programs and few available reading materials. A survey of achievement levels of graduates of the courses showed an average score of 37 percent (Smith, Comings and Shrestha, 1996). Overall, the contribution of literacy programs to increasing the national literacy rate has been below that anticipated.

Why are current participation rates unequal across income and social groups?

3.7 The large inequalities in participation rates between gender, income, geographic and social groups result from sets of both demand and supply factors. Since transition rates for graduates from one level to the next are relatively high, the main source of system inequality lies in unequal enrolment in primary schools. Those children who never enrolled or enrolled but dropped out are most likely to be girls and children from socially disadvantaged families. Although overall the primary school gross enrollment rate in Nepal is similar to that in countries with the same per capita income, it is one of the eight worst countries in terms of the gender gap (UNICEF, 1997). Girls' enrollment is around 20 percentage points lower than that of boys. On the demand side, major factors cited in the Nepal Human Development Report, 1998 as contributing to low participation levels in primary schools among specific population groups include household work, income poverty, the perceived low value of education, and caste and ethnic discrimination. Supply side factors cited are under-age enrollment due to lack of provision of early childhood development programs, irregularity of school operation, neglect of mother tongue in school and physical distance to schools particularly in difficult terrain.

3.8 The main reasons cited in the NLSS survey (1996) for the age group 6 – 24 years not attending school include expense (20 percent), needing to help at home or on the farm (21 percent) and parental disinterest (30 percent). Parents were less likely to send girls to schools, particularly in the Terai region. In the Mountain region, and for both boys and girls, the need to help in the household was a particularly strong reason for non enrolment. Not surprisingly, participation rates were much higher in urban than in rural areas, but high costs were cited as the cause more frequently in the cities.

3.9 Household income and the educational level of parents are major determinants of whether children attend school. If the family does not earn enough to meet the basic needs, they are less likely to send their children to school, no matter how much emphasis is put on education. If a child comes from one of the wealthiest 50 percent of households, the probability of school attendance increases by 20 percent. This effect is more pronounced for females than males - 24 percent increase for females and 15

percent increase for males. Educated parents are more likely to educate their children. Having a literate father increases the chances of a child being enrolled by 17 percentage points; if the father has completed at least primary school, the child's school participation increases on average by an additional 14 percentage points. If the mother is literate, the effect is even stronger, and a child's probability of being enrolled increases by 19 percentage points. Once again, the effects of parental education on a female child's attendance are stronger than on a male child's. Social/ethnic factors also affect the likelihood of enrolment. If a child is from a Brahmin, Chettry or Newar family the probability of school participation increases by 13 percentage points (Prennushi, 1999).

Why is the quality of education so unacceptably low?

3.10 The school cycles are short by international standards. Primary schooling is five years and, provided no repetition, a leaver would only be around 11 years of age with an insufficient base for additional self-learning and insufficiently mature to be accepted by the community as a valued source of information. Secondary schooling ends at grade 10 though higher secondary education programs, almost entirely financed privately, have been established recently in response to a demand for a longer secondary cycle that will give some credibility for access to regional tertiary level institutions, and to anticipated higher quality national ones. The University campuses use half of their resources to provide the two year proficiency level courses, prior to the degree course. In turn, first degree courses at the University until very recently were only two years in duration.

3.11 Fragmented curriculum, weak student assessment systems both within and across schools, and a weak support system for teachers to translate their knowledge and training to real classroom situations have led to poor teaching and learning across all levels. Inadequate libraries and equipment, weak school leadership and sporadic school supervision and monitoring further constrain the teaching-learning environment. In addition, an overemphasis on quantitative expansion at the cost of quality and a failure to articulate and demonstrate good practices have led to an erosion in quality. Several of these factors were identified by 41 officers in the Education Department in a survey of the determinants of school effectiveness (see annex D).

3.12 The findings of the National Assessment of Grade 5 Students 1999 indicate that the factors that contribute to student achievement include the number of days of class operation, regularity in attendance, use of additional learning materials, qualifications of teachers, expenditure per student and the number of female teachers. The Grade 3 Assessment indicates that there is wide variation in the performance of schools in different parts of the country, again likely to reflect variations in inputs.

3.13 While each of the above factors constrains the improvement in learning achievement, the main cause is inadequate teacher development, support and management. More than 90 percent of the Government's regular budget for education is spent on salaries but teachers' effectiveness is constrained. Teachers are inadequately trained for their job, and at the primary school level, often have very low qualifications and do not have the experience to handle children with different learning problems. Teachers' performance standards are non-existent and the career and incentives systems are limited and not conducive to raising performance. Most teachers are aligned to one of the many associations formed on political party lines and appointment and deployment practices are often determined as a result of individuals' contributions to political activities rather than to open, transparent and professionally rigorous procedures. Teacher attendance in class has been estimated to be around 60 percent of instructional time. This problem is greatest in public schools and particularly in the lower grades. School principals and school management committees have little influence over teacher accountability.

3.14 Only 52 percent of primary teachers, 37 percent of lower secondary teachers and 55 percent of secondary teachers meet the teacher training standards which are already low. Overall, only around half

the teachers hold a trained teacher certificate or its equivalent. In recent years, efforts have been made to redress this situation by providing short-term training courses for teachers, but little evidence is yet available to suggest that teachers are applying newly acquired skills and transforming classroom behavior. Teachers' content knowledge is low and this cannot be adequately addressed by short-term training which, in the absence of pre-service training, has proven to be expensive, inefficient and unsustainable. As 70 percent of the teachers at the primary level are less than 40 years of age, and will remain in the schools for at least another 20 years, inservice training needs specific attention.

3.15 Teacher recruitment and deployment have not been carried out in any systematic way with regard to public resource availability. For example, in recent years, communities have been able to establish schools and then seek public subsidies for teacher salaries with little attention given to the proximity of other schools or the size of the new school itself. In aggregate, across the country, student: teacher ratios are acceptable. This provides a window of opportunity to raise entry levels of teachers and include pre-service training as a prerequisite to employment. There are, however, regional variations in teacher placement needs. What are required are transparent transfer procedures linked to incentive and professional support systems for teachers in small schools in isolated areas, and which address teacher placement across and within larger urban schools.

3.16 A recent study comparing public and private schools in the Kathmandu Valley suggests some of the reasons why parents perceive that private schools are more effective (Fulbright Alumni Association of Nepal, 2000: and see annex I). The private schools had more instructional days in the year, lower pupil-teacher ratios and a much higher proportion of teachers with a degree in their teaching subject. While private schools report marginally lower per student expenditure, offer lower teacher salaries and have worse physical infrastructure, they obtain better results in the SLC examination. There are many reasons for this, including the different home background of the students, but many argue that a major reason is that academic and administrative control is vested in private school principals.

Why are the levels of repeaters and dropouts high?

3.17 Major contributing factors for failure to complete primary schooling are the high opportunity and direct costs of schooling for the poorest families and the extremely low nutritional status of many young children. Nutritional deficiencies lead to slow development and high morbidity rates which in turn increase absenteeism and drop out. In addition, conditions in many schools are leading to inadequate teaching quality, high levels of grade repetition and, in general, a situation in which parents often see little point in their child continuing.

3.18 The main problem lies in Grade 1 where 40 percent of those enrolled are under-age and or repeaters. This leads to a viscous cycle of overcrowding, a poor learning environment and repetition.

3.19 Young teachers with inadequate qualifications and little experience are ill prepared to address the psychological and socio-cultural needs of young children, particularly in grades 1 – 3. Also a lack of training in differentiated teaching practices mean teachers are not prepared for managing the large class sizes which are common in Terai schools. Nor are they able to use effective multi-grade teaching practices in the many small schools in mountain and hill regions, or in the upper grades (4 and 5) of large Terai schools which generally have small class size (due to high levels of dropout in lower grades). There is no incentive to reduce inefficiency since the number of teachers in a school is tied to student enrollment irrespective of the number of underage children or repeaters.

3.20 At the post primary levels of education, dropout rates are lower but repetition and examination failure rates are significant. To a large extent the problems result from the inadequate educational base provided through primary schooling and there are insufficient resources at post primary levels to help

mitigate this situation. The 'free' secondary education policy may be exacerbating the situation since schools cannot supplement the inadequate government grants through fees. As a consequence, they have insufficient resources to pay for materials and extra-curricular activities. Also, the unplanned expansion of the number of schools leaves few resources for existing ones.

Why aren't the economic benefits of the educational system greater?

3.21 There are several possible reasons for the general perception (and for the partial documentation in chapter 2) that the returns to schooling are low. First, as described above, economic growth rates have been slowing down over the decade as investment levels have been stationary and policies have not yet been put into place to adequately stimulate the economy. Second, educational coverage does not yet appear to be at the level which is high enough for increasing economic returns to occur as behavioral changes become widespread. Finally, there is the possibility that the educational system itself is not providing the skills nor encouraging the behavior needed to increase labor productivity. Changes in the overall economic environment are beyond the scope of this report. The options and strategies for expanding and improving the educational system, however, are the subject of chapters 4 and 5.

System Management and Financing

3.22 The several individual causes of inequities, inefficiencies and low levels of quality in the education system suggest wide systemic problems in the way it is managed and funded.

Management

3.23 *Gaps exist between policies and their implementation.* Both the widely held public perceptions of the educational system and the discussion in the section above highlight the extent to which management requires a significant overhaul. At the center of the issue are the gaps between policy statements and the degree of implementation, and between the anticipated and actual outcomes. A few examples from among many are described below.

3.24 Problems arising from the policy of fee-free secondary education have been mentioned briefly above. Under this policy the Government allocates grants to public schools for teacher salaries plus a token amount for operation and maintenance costs. The condition attached to the grant is that schools may not raise fees from students beyond a very limited fixed amount. Since the grants have not increased at the same pace as enrolments, most public secondary schools are facing serious financial constraints yet are unable to raise additional funds for materials that are needed for good quality education. The rapid growth of private secondary schools indicates that many parents are willing to pay for their children's education if they see that this results in better examination results. The Government has not reviewed the impact of its free education policy on school financing and student learning. Inadequate school level financing particularly for non-salary expenditures and physical improvements is one of the causes of poor quality secondary education.

3.25 A second example of the disconnect between policy and implementation relates to the expansion of higher secondary education, and the establishment of private schools offering grades 11 and 12 under the Higher Secondary Education Board (HSEB). These have been established alongside the understanding that the equivalent 'proficiency level' courses at the University would be transferred out. This transfer process remains incomplete a decade after the enactment of the Board's Act and is weakening the consolidation of both secondary and higher education. The reasons for the slow pace include: (i) lack of qualified teachers outside of the University for teaching grades 11-12, (ii) student resistance due to the much higher fees in the private schools offering the HSEB programs compared to those in the highly subsidized University PCL programs, and (iii) the lack of an appropriate school

infrastructure to provide good quality secondary education. So far the projected reform lacks a consensus between the University and the HSEB, targeted mechanisms for providing support to eligible schools, and clarity in the roles of Ministry and the Department of Education to support and supervise higher secondary schools as part of an integrated secondary system. The result is a set of privately run higher secondary education schools where students pay high fees operating side by side with a heavily subsidized equivalent program at the University for the more fortunate students. The Government's policy of phasing out the proficiency courses from the University will need to be supported by greater cost-recovery in the degree programs of the University and a targeting of savings to the higher secondary schools so that students from poor families will be able to benefit from this level of education.

3.26 Another example of failed policy implementation is the multi-university concept. The 1992 and 1998 National Commission Reports recommended that the Tribhuvan University system be converted into three or four universities to improve management and raise the quality of tertiary education. However, the rationalization of the University has been slow and totally new universities have been established, each under a separate Act. These universities are now providing affiliations to institutions throughout the country though they do not yet have their own fully developed programs. The multi-university concept is misconstrued and the university system as a whole continues to face organizational problems at the cost of educational quality. Newly established universities have insufficient resources to function effectively as universities and are overly dependent on inadequate public subsidies.

3.27 As is described below in chapter 4, the Government is currently trying to move away from a highly centralized system for managing primary and secondary education to a decentralized one while addressing major reform issues. However, as yet, there is no institutional mechanism within the Ministry, such as a high level advisory group or a common forum, to guide the reform process in terms of developing vision, strategies and institutional arrangements and developing support for them through effective communications strategies and the creation of a political consensus.

Financing

3.28 Public resources currently available to finance major reforms at different levels of the education system are inadequate. Government resources for education increased from less than 10 percent of the budget in the mid-1980s to around 13 percent in 1992. Since then, the allocation has been between 12.8 and 13.4 percent, although Government has set the target of 15 percent (World Bank, 2000b: and tables on public expenditure in annex G). Achieving this target will not be simple in the overall context of constrained public finances. Around one third of all Government revenues are provided by donors through a mixture of grants and loans. Government own-revenue as a share of GDP is around 11 percent, which is extremely low compared to that in most other countries. This level has been constant since 1996 and development expenditure as a share of total expenditure has been falling. In this context, the need for additional resources for education will have to be strongly argued. In addition, however, the need to augment these resources from private and community sources has to be recognized if the appalling levels of female illiteracy are to be reduced and the large number of students who will graduate from primary schools in the near future are to accommodated in the post primary system.

3.29 While overall public and non public resources need to increase, the several inefficiencies in the system and the distribution of education subsidies which accrue across the population result in the allocations being less effective in both educational outcomes and in poverty reduction than they could be. Current expenditures on higher secondary and tertiary education have a retrogressive effect on income distribution. Students in higher education are mostly from the wealthiest 20 percent of households and are enjoying the highest subsidies, while 30 percent of the school-age children, mostly from lower economic quintile and disadvantaged communities are still out of school. Although public expenditures on education as a share of household expenditure is higher for the poor than for the better off, in absolute

terms it is lower. This implies that the expenditures as a whole, as they are currently allocated across levels of education and as access is currently rationed between income groups, cannot be justified on the grounds that they increase equity.

3.30 Not only are expenditures inequitably distributed, there are examples of inefficiency in the system of financing and in the composition of expenditures. An example is the way in which grants-in-aid to schools have become an entitlement for which no justification is required. Many secondary schools that receive grants have pass rates of close to zero in the School Leaving Certificate examinations. The system continues to operate under the traditional mode of quantitative expansion with little effort to introduce resource allocation modalities which might provide incentives for schools to be more efficient, or to provide more resources to existing schools rather than to fund unplanned expansion. Further, one of the most striking conclusions from studies which have compared the composition of unit costs in public and private schools, is the much larger share for non-salary items in private schools. In the public schools, very few of the available resources are being used to finance quality improvement inputs and almost all are used to finance salaries. The results of this are being reflected in high dropout and repetition rates and low achievement and completion rates across the system.

Conclusion

3.31 The problems and inadequacies associated with the educational system in Nepal are well known. This chapter has attempted to move beyond a description of them and to document some of the causes. Only when these are formulated and agreed upon can policy reform begin to move forward. In the following chapter, sets of interventions are described aimed at expanding and improving the system, and increasing its equity. Changes in the way the system is both managed and financed will be essential.

Chapter 4 AREAS FOR INTERVENTION

4.1 Actions to reform the educational system in Nepal need to take account of the three sets of factors discussed so far in this report: (a) the overall low levels of educational attainment in the population, (b) the large inequalities across income and social groups in their access to education, and (c) the low level of quality and efficiency in the education sector across all levels. In addition, the expansion of the system in line with the aspirations of the population will require increased levels of financial support from both the Government and the community.

4.2 The need for change has been reflected in recent reports (1992, 1998) of the National Education Commission and major reforms are in the early stages of implementation or are being considered. In particular, there are plans to restructure the school system by extending the basic cycle of education from five to eight years, creating a four-year cycle of integrated secondary education that includes both academic and technical vocational strands; and lengthening the university degree programs from two to a minimum of three years. Influencing each level of the education system and the projected reforms is the adequacy and quality of teachers. Each of these areas is considered below with regard to current plans, and to the additional considerations required if the system is to move more closely to the objectives of equalizing educational opportunity, raising levels of school efficiency and improving quality. Overarching the changes needed at each level are much needed management and financing reforms.

4.3 The overall required framework for education reform in Nepal would include:

- *Ensure that all children enroll in and complete a five year primary education while developing the structures and processes for extending a strengthened basic cycle of schooling to eight years.*

- *Develop a secondary education for grades 9 – 12 that has exit points at grades 10 and 12, which is of higher quality, has greater relevance to the skills and attributes valued by the labor market and is more widely available to girls and to poorer students than is the current system.*

- *Improve the quality of university and tertiary education, introduce greater cost recovery and target subsidies to students from poorer households.*

- *Develop a teacher management system that includes teacher education and training and conditions of service (appointment, deployment, transfer, salaries and benefits, career path), and that will meet the needs of primary, lower secondary and secondary education, and improve the quality of teaching.*

- *Decentralize the education system to the institutional level (school, campus, technical institution) to promote autonomy, community ownership and support, technical leadership and greater accountability.*

- *Improve the modalities of financing to trigger education reform with a focus on reducing inequalities, discouraging inefficiencies and encouraging incentives for positive innovation and the generation of additional resources.*

These individual parts of the framework are discussed below in turn.

Framework for Reform

4.4 **Ensure that all children enroll in and complete a five year primary education while developing the structures and processes for extending a strengthened basic cycle of schooling to eight years.**

4.5 **Current policy and status**. The Government intends to establish or encourage pre-school facilities for all children and to gradually introduce compulsory primary education throughout the country and to promote a basic education of eight years. A policy of liberal promotion up to Grade 3 combined with a system of continuous assessment is being implemented under BPEP II to improve quality within this critical set of grades. Similarly, incentive schemes (scholarships, free textbooks, feeding programs, uniforms, etc.) and alternative schooling programs are being developed and implemented to support universal participation.

4.6 By 2009, Government anticipates that at least two thirds of all school-age children will attain grade 8 in schools which are effectively supported by institutions at the community, district and national levels. To achieve this goal the Government intends to (a) give greater control to communities to manage schools for quality improvement and to districts to distribute resources based on school needs and under-served groups; and (b) improve the quality of teaching and educational content. The policies and programs are defined in a Policy Framework for Basic and Primary Education (1999) on the basis of which Government has been able to solicit considerable donor support for a five year program which is likely to be extended. The interventions will strengthen the institutional capacity of management at the school, district and central levels; improve teaching and learning by focusing initially on the learning needs of children in the first three grades; target resources to under-served communities; and link school grants for quality and physical improvements to school plans and performance. School improvement plans will be developed by School Management Committees with the participation of Village Development Committees and Village Education Committees to plan for both formal and non-formal programs including early childhood development, mothers' literacy, and alternative school programs for hard-to-reach groups. Progress is being measured against institutional benchmarks, and against quality and efficiency performance indicators. It is expected that at the program's mid-term, preparatory work will be carried out to refine the strategy to move to an eight year basic education cycle.

Future Directions

4.7 **Increasing access/equity**. Several additional coordinated interventions are required to improve equitable access and retention for girls, particularly those in rural areas. Major efforts to convince parents and communities about the benefits of girls' education, and incentives to target girls' enrollment, need to be pursued aggressively and school environments both physical and socio-cultural made more conducive. Girls are not the only disadvantaged groups and specific strategies to reach boys from underserved and remote communities, and from poor families, also need to be more vigorously pursued. Getting poor children into school is not the only task. Much international evidence indicate that mental and physical development in children's earliest years promote learning readiness, academic achievement, dropout rates, and labor force productivity. Limited research on the impact of ECD programs in Nepal shows that children from such programs are less likely to drop-out and more likely to do well in schools (CERID, 1997). Consequently, and particularly for disadvantaged children, there needs to be a major focus on early childhood development programs. In addition, school feeding programs including micro-nutrient supplements could target areas where the incidence of malnutrition has a particularly debilitating impact on children's learning ability. Efforts might also be made to implement school health programs (including deworming, the provision of pure drinking water and toilet facilities, and the promotion of healthy lifestyles) with periodic medical check-ups. The measures to expand the enrolment of disadvantaged children could be complemented by targeted literacy programs that benefit women

particularly in the 15 – 35 age group in order to motivate them to send their girls to schools and to raise their awareness of the nutritional and health needs of school going children.

4.8 **Increasing efficiency**. The strategies to increase performance in grades 1 to 3 where repetition and dropout rates are greatest will need to remain a key priority for several years in order to generate results. One of these strategies will be to actively discourage the enrolment of under age children in primary schools at grade 1 in favor of appropriate early childhood development programs. In addition, efficiency gains would require a combined strategy covering: (i) a sustained focus on the implementation of a liberal promotion policy combined with continuous assessment in grades 1 – 3; (ii) significant improvements in the regularity of schools being open and in students and teachers attending to increase time on task; and (iii) a revision in the system of school financing to reward schools which reduce drop-out and repetition rates.

4.9 **Increasing quality**. Strategies to increase the quality of primary schooling could include: (i) the development of the head teacher cadre and its preparation to lead school reforms; (ii) an increase in time on task by ensuring that each school runs classes for at least 200 days a year with a minimum student and teacher attendance of over 80 percent; (iii) the use of continuous assessment in grades 1 – 3 to improve classroom practices and to support students and teachers in the classroom; and (iv) improvement in the quality of the academic support system for teachers. The development of school improvement plans should also help teachers and school management committees to devise strategies for more effective teaching. Considerable investments made recently in revising the curriculum and textbooks need now to be implemented through school-based support and teacher-prepared materials that adapt the curriculum to local conditions. But more needs to be done in the design of materials to reflect the findings of the national assessments of learning achievements at grades 3 and 5. Concurrently, development of the institutional capacity to identify and publicize the practices of effective schools across the country and to support school improvement is needed if a continuing process of reform is to be encouraged. Equally, the identification of international good practices such as Colombia's Escuela Nueva for multi-grade teaching, Chile's school based quality improvement projects, and Pakistan's Agha Khan Foundation initiatives for teacher support, could also guide this process.

4.10 In parallel with the focus on the formal primary school system, there is an urgent need to place much higher priority on increasing literacy and life skills education for women and, as described above, on early childhood development programs. Both of these programs require a multi-sectoral and integrated approach.

4.11 **Develop a secondary education program for grades 9 – 12 that has exit points at grades 10 and 12, which is of a higher quality, has greater relevance to the skills and attributes valued by the labor market and is more widely available to girls and to poorer students than is the current program.**

4.12 **Current Policy and Status**. A four year secondary education program is being proposed that would build on the eight-year cycle of basic education. Government intends to integrate grades 9 to 12 under one secondary education management and the proposal to undertake the necessary legal amendments to facilitate such integration is contained in the Ninth Plan. The Government is considering administering a School Leaving Examination only at grade 12. The restructuring of higher secondary education (grades 11-12) is being discussed and corresponding changes are taking place in Tribhuvan University. Intake into the two year proficiency level course in the University (equivalent to grades 11 and 12) is being reduced and currently is planned to be phased out completely by 2004.

Future Directions

4.13 The policies and strategies to put in place an integrated secondary education system, that consists of a coherent four year program with alternative exit points and relevant links to the labor market or further education and training, require considerably more discussions. Since the demand for this level of schooling will be relatively constrained until the reforms for basic education are implemented and a larger cohort completes, there is a window of opportunity now to articulate the implications and options surrounding this proposal.

4.14 **Increasing access/equity**. Several strategies need to be adopted to improve equitable access to secondary schooling. Among those which might be considered are: (i) scholarship programs for girls tied to attendance and completion such as have been successfully implemented in Bangladesh and Tanzania; (ii) competitive fellowships to allow talented students from low income families from different parts of the country to enroll in some of the best public and private schools, following a more targeted and replicable form of Budhanilkantha school; (iii) development of a number of good quality schools to cater mostly to disadvantaged communities and students from low income families; (iv) the merger of existing urban public secondary schools to release more resources for schools which cater to students from rural low income families and working children; and (iv) adoption of formula funding to provide more public resources to districts and schools that enroll targeted students.

4.15 **Increasing efficiency**. Recent expansion has intensified several of the causes of inefficiency in the secondary school system. Given the anticipated further expansion it is therefore critical to develop strategies to increase efficiency, including for instance: (i) the development and application of policies to reduce the variation in pupil-teacher and class-teacher ratios between schools, curtail teacher absenteeism, adapt the curriculum to local conditions, and increase student time on task; (ii) systematic school mapping exercises to rationalize school structures and school location so as to use resources more effectively and target public subsidies to priority areas; (iii) exploring double shifting in urban locations and providing funds to private school as matching grant to enroll students from low income families; (iv) increasing the size of secondary schools by adding higher secondary grades to large secondary schools to enable the absorption of proficiency level students who are to be phased out from the university system; and (v) examining proposals from some of the district development committees to establish some high quality residential schools by merging several smaller schools.

4.16 Building on the BPEP II approach to primary education, the reform agenda for an integrated secondary system also needs to consolidate the several administrative structures which have been created under various projects prior to the recent establishment of the Department of Education. Such an approach would encourage the Department to address school reform in a holistic way with more effective involvement of those central agencies which focus on curriculum, teacher training and examinations, and of those district level agencies which would initiate local planning.

4.17 **Increasing quality**. Associated with the change to the proposed four-year secondary education program, is the need to review the objectives and expected outcomes at grades 10 and 12. Although some successful initiatives have already been made to improve the lower secondary curriculum (grades 9 and 10), there is a critical need to establish linkages between it and the curricula for higher secondary within a coherent national curriculum framework. This will include improving curricular sequence, reducing irrelevant subject matter, shifting the focus from factual materials to critical thinking and problem solving, and to skills in oral and written communication.

4.18 An agreed curriculum structure for secondary education would then provide the basis for determining the physical resources required. Several analyses such as those in the Secondary Education Perspective Plan, Higher Secondary Transition Plan and the National Education Commission Reports

indicate that a good quality secondary education requires appropriate facilities and equipment for science and technology activities including computers, libraries and, in some cases, boarding facilities. Teachers will be required in greater numbers and with professional training and an appropriate mix of subject specialization to address the most difficult subjects which tend to be English, science and mathematics. The incentives to recruit well-trained teachers and to retain them will need to be in the form of both financial and career rewards. Improved examinations, the balance of academic, technical and vocational strands and links with the labor market will all have to be taken into account if the system is to provide graduates who are sufficiently prepared for employment or to be enrolled in additional education and training programs.

4.19 In addition to a long term strategy for the development of the secondary education system, there is a need for a supporting policy framework to guide implementation over the medium term. As part of the implementation plan, some model schools might be developed that meet minimum quality standards such as total enrolment, class size, the pupil-teacher ratio, teacher qualifications, and library and laboratory facilities.

4.20 **Improve the quality of university and tertiary education, introduce greater cost recovery and target subsidies to students from poorer households.**

4.21 **Current policy and status**. Reforms to improve the quality of university education are being put in place by increasing the length of degree level programs to comparative international standards, transferring sub degree programs to the school system where they belong, revising curricula and decentralizing the system. The Government has supported the establishment of several independent universities each under a separate Act with the aim of encouraging decentralized, specialized and high quality institutions. The Government also intends to introduce a Deemed University Act to allow colleges meeting eligibility criteria to develop into potential universities. Recently, a University Grants Commission has been established responsible for allocating grants, mobilizing resources, coordinating higher education and enforcing quality control. An important aim of these reforms is to improve efficiency and create competition among different institutions for access to public funds based on performance. However, implementation of these policies has so far been rather weak. In addition, there is a further need to ensure complementarity between the 20 year strategic plan being prepared for Tribhuvan University and the legislation to implement the multi-university policy which is being prepared by a task force established by the Ministry of Education and Sports.

Future Directions

4.22 **Increasing access /equity**. There are critical institutional and financial issues which have not yet been resolved and which impact both on the availability of public resources for this and other levels of education, and on issues of equity. Essentially, there is an urgent need to reorient higher education subsidies. Since the private rate of return to higher education graduates is relatively high and the overwhelming majority of students come from the wealthiest 20 percent of households, there is the prospect of higher levels of fees. Implementation of these, and also the establishment of private universities, would require targeted scholarships and perhaps student loans to support eligible students (for instance, from the poorest 40 percent of households, or from remote locations) who simply cannot pay. Several low and middle income countries have attempted to operate student loan schemes and more generally to raise levels of cost recovery, but few have been successful (Salmi, 1999). However, some recent successes have been recorded in East African countries.

4.23 **Increasing efficiency**. Several measures are critical for improving the efficiency of the tertiary system. A start could be made by strictly limiting admissions according to the physical capacity of each institution and basing them solely on a competitive selection process. The Institute of Engineering has

demonstrated that this is possible. Another area of needed reform is the process of examination retakes which currently does not discourage students from staying on for an indefinite period. There is also a need to adopt and enforce a standard academic calendar and the minimum attendance of faculty members and students to ensure that course materials are completed in a shorter time. Incentive schemes are urgently required to attract high quality practitioners to teach part-time and to optimize the use of high quality faculty members and discourage moonlighting at the cost of parent institution. The PCL phase-out from the University needs to be expedited through high level joint collaboration between the Government, the University and the Higher Secondary Education Board. Additional retained revenues from cost recovery measures are necessary to improve the physical and academic environment critical to improving overall system efficiency. Finally, the Government might employ formula funding to force tertiary institutions to improve efficiency.

4.24 **Increasing quality**. Resources need to be leveraged to trigger reforms in high priority areas which aim to increase the quality of higher education. Reforms could focus on establishing a minimum set of international standards for admissions (procedures, quality and diversity of students), faculty (qualification and diversity), physical facilities (capacity and quality to deliver prescribed curricula), and curricula (international knowledge, needs of the world of work and society, teaching methods to nurture intellectual leadership and entrepreneurial talents of young students, use of modern technology, and so on). Relevance would be boosted by drawing from international good practices in teaching and research and carrying out more fundamental and applied research to support wider development efforts.

4.25 Both management and financing reforms are required to improve quality in higher education. Management reforms would need to include implementation of the multi-university policy recommended by several education commissions, the establishment of an accreditation system to ensure that each university meets minimal international quality standards, rationalization of the affiliation system, and decentralization of management at the department, institute and campus level. Reforms in financing and in the use of resources could include targeted programs of staff development, additional facilities and equipment and, most importantly, a system of formula funding linking block grants to the implementation of reforms and performance as measured by a set of indicators such as the amount of sponsored research, internal resource mobilization, priority given to science and technology, partnerships with the private sector, and targeted support to financially weak students and graduate outcomes.

4.26 **Develop a teacher management system that includes teacher education and training and conditions of service (appointment, deployment, transfer, salaries and benefits, career paths), and that will meet the needs of primary, lower secondary and secondary education, and improve the quality of teaching.**

4.27 **Current policy and status**. The minimum qualification to teach primary classes is the grade 10 School Leaving Certificate. This is inadequate in terms of both educational attainment and the level of maturity to handle the psychological needs of young children. Although the policy requires 10 months of training to become a permanent teacher at the primary level, there is no provision for pre-service training and the Government has not been able to prevent the growth of untrained teachers in the system. In addition, despite the Government's policy of having one female teacher in every primary school, this is not implemented in over 30 percent primary schools. The teacher qualifications for lower secondary, secondary and higher secondary are 12^{th} grade, bachelor degree and masters degree, respectively. However, there is no coherent policy on, and no provision for, certification training. Overall, there is an urgent need for a national teacher training policy from early childhood classes to higher secondary schooling.

4.28 The status of teachers in society has fallen. On the one hand they are not compensated according to their ability, experience and responsibilities and on the other, the qualifications required to become

teachers are not very high. Public confidence in the quality of teachers has weakened as some of the best public schools are performing poorly.

Future Directions

4.29 **Increasing access/equity**. Research in Nepal and elsewhere shows that female teachers are an incentive for rural girls to enroll. Unfortunately, in Nepal most of the female teachers are located in urban schools. A survey of schools in the Kathmandu Valley revealed that 44 percent of the teaching force in public schools were females compared to the national average of 18 percent (Fulbright Alumni Association of Nepal, 2000). This suggests the need for a strategy to create appropriate conditions for female teachers to teach in rural areas where the needs are critical. Such a strategy might include short term measures such as higher salaries, benefits for family members, training and career opportunities together with additional support from the community. Longer term measures would have to focus on identifying and training more young women from rural areas in the expectation that they would return to their communities.

4.30 There is a need to redeploy teachers who are experienced in bilingual education to support children in the early grades in disadvantaged locations and in multi-grade situations in many parts of mountain and hill regions. Teacher training curricula should address the multi-ethnic, multi-lingual and multi-cultural issues that Nepali children bring to the classroom. At the secondary level, the greatest need is for subject teachers in mathematics, English and science particularly for disadvantaged communities and remote locations where the failure rates are particularly high.

4.31 **Increasing efficiency.** There is a sufficient number of teachers in primary schools to cope with a net enrolment of 100 percent. Unfortunately they are not deployed across schools and across regions as efficiently as they might be. For instance, there are several mountain districts such as Mustang and Manang where small schools have many more teachers than the norms require. Conversely, in the Terai, pupil:teacher ratios are often very high. Any re-deployment of teachers between schools would have to consider their education and training levels, need for additional in-service and pre-service teacher training, and the gender balance. Again systematic school mapping is needed urgently to reduce variation in school inputs across regions and to establish a more efficient system of public and private schooling. The extension of the basic education cycle to eight years and the proposed reform of secondary education have further implications for teacher management. All options to provide additional pre-service training, including in the private sector, need to be explored. Teachers with the experience and ability to teach several courses at the primary and secondary level would be necessary in more remote and disadvantaged locations that have small schools. Training allowances could be replaced with training premiums as part of salary increases to encourage teachers to take training more seriously, and credits earned for each training period could be among the criteria for promotion and certification.

4.32 **Increasing quality.** There is an opportunity to increase the competence of new primary teachers by introducing a pre-service certificate of training as a pre-requisite to employment. This could provide a grounding in child psychology and sociology, the role of languages in learning and instruction, and a pedagogical understanding of how children learn to read and write and develop mathematical and science concepts. Ideally, training should combine on-campus courses with continuous in-service professional training and support over a number of years. The currently underutilized resource centers already in place could be used for this purpose. By linking training to classroom performance through a targeted teacher support system, combining efforts from training centers and resource persons / supervisors, it would be possible to improve the relevance and effectiveness of teachers substantially. Additional approaches for raising teacher quality would be to recruit teachers with a higher level of general education (completed higher secondary for primary level), and to pay salaries according to qualification rather than level of teaching.

4.33 Currently even in primary school, teachers are deployed as subject specialists. The extension of the basic cycle to eight years, and the raising of teachers' levels of education and training, is an opportunity to re-assess the benefits of grade versus subject teachers at each stage of the cycle. With the introduction of a four year secondary education cycle with a differentiated curriculum between grades 9-10 and 11-12, there will be an increased demand for teachers with a first degree in at least one major teaching subject and a professional qualification in education. The number of qualified and trained mathematics, science and English teachers is inadequate even for the current size of the system and the demand will be even higher for meeting the proposed reforms of secondary education. More thought will need to be given to incentive structures, in terms of financial and career rewards, in order to recruit sufficient numbers of qualified teachers and to retain them. At the tertiary level, there is a need to upgrade the capabilities of university teaching staff, to nurture career development and to develop systems of incentives which would reduce the common practice of moonlighting.

4.34 Overall, teachers are not sufficiently well educated or trained to carry out their work nor are the current salaries and career rewards sufficient to attract more qualified graduates into the profession. The proposed reforms in basic and secondary education will require teachers with higher levels of education and training and will demand higher levels of performance. Prior to implementing any large scale teacher improvement program, it will be critical to review teacher needs in totality, including comparisons with the standards for teachers in other countries and with conditions of service across the civil service as a whole in Nepal. Such a review would also cover the role of the newly formed Teacher Service Commission which can play an instrumental role in improving the teaching force by reinforcing the licensing system and linking recruitment to qualification, training and regular tests of competency. While this Commission, and possibly other institutions, could ensure teacher licensing linked to qualification and training level, actual recruitment could be gradually decentralized to local administrative levels or even to the schools to reduce undue political influences and to increase the accountability of teachers to the community.

4.35 **Decentralize the education system to both the district and the institutional (school, campus, technical institutions) level to allow autonomy, community ownership and support, technical leadership, and accountability.**

4.36 **Current policy and status**. The Local Self-Governance Act 1999 allows local governments (village and district development committees and municipalities) to assume greater responsibility in the management of public schools. As part of civil service reform, the MOES is being restructured to reflect decentralization and to strengthen its technical capacity. Similarly, the DOE has been established within the Ministry to implement national policies and programs and to provide technical support to district education offices who will now plan and implement school improvements in the context of decentralization.

4.37 Several changes are already underway through BPEP II. For example, since 1999 district education officers have been responsible for preparing annual district budgets and plans which will consume 80 percent of the total subsectoral budget. These have to be approved by the district development committees. To be eligible for grants for upgrading physical facilities, schools are preparing Improvement Plans. In addition, selected schools are preparing school quality improvement plans in order to qualify for additional school grants from the district budgets.

4.38 The Government has proposed a legal amendment in the Education Act to allow the formation of school management committees (SMCs) through a democratic process with the purpose of making the school system more accountable. All members will be elected and a majority must be parents/guardians of children attending the school. A teacher representative is to be selected by the group of teachers in the

school and a chairperson will be elected from among the parents/guardians representatives. The Government also intends to empower the head teachers and enhance their leadership. Similarly, the Government is proposing the formation of Village Education Committees and the establishment of village education funds to support infrastructure and quality improvement in public schools.

Future Directions

4.39 Many countries are pursuing decentralized approaches to education reform. Experience from Latin American countries indicates that "there is growing evidence that at least some of the characteristics of education decentralization reforms that focus on school autonomy, as opposed to municipal or regional autonomy, contribute to higher performing schools" (Winkler and Gershberg, 2000). Chile is cited as a good example. A prominent weakness in several of these experiences has been in defining the performance goals against which to assess the impact of accountability.

4.40 The major purpose of educational decentralization in Nepal is to enable schools themselves to address the key factors and priorities relating to **equity, efficiency and quality**, and to reform the school support system to assist schools to do this. This will require continuing efforts to expand autonomy and improve the quality of school governance through effective governing boards, headteachers meeting minimum eligibility requirements and selected competitively, and the school boards and headteachers having adequate legal authority to undertake their tasks. An ultimate objective might be that schools meeting the governance criteria could be handed over to the communities under an umbrella act. Such community schools would then receive block grants which the SMC and headteacher would use according to their priorities. Where needed, additional resources could be mobilized from communities and local government. Such a situation would not be new to Nepal. It would closely correspond to the general practice prior to the nationalization of all education institutions under the National Education System Plan in 1971. In addition to the hand-over of public schools to communities, consideration could be given to management by local governments, NGOs, teacher organizations or even private operators. Each would have to meet similar eligibility criteria.

4.41 The short-term benefits expected from a decentralized school system are higher levels of accountability in the form of improved student and teacher attendance and an increased number of class days leading to more time on task, regular interaction with the communities to seek their support, and the beginnings of differentiated forms of service delivery depending on local conditions.

4.42 The more far reaching alternatives outlined above require the essentials of educational decentralization to be first put in place. The first steps would include, (i) clarification of the roles and responsibilities of political bodies (municipalities, DDCs, VDCs) and line agencies (MOES, DOE, schools); (ii) definition of policy and administrative areas to be decentralized and to be administered centrally; and (iii) establishment of districts as the focal point of decentralization and the targeting of technical support and resources to strengthen district level institutions.

4.43 Once these critical decisions have been made, several supporting actions will be required if decentralized management is to be effective. These include: (i) a reduction of the high level of staff turnover particularly at the district level by introducing more transparent transfer procedures; (ii) establishment of an effective communications strategy, including social auditing, to regularly inform the public of the rationale of the education reform agenda, its goals and strategies; (iii) development of high caliber staff with better incentives at the center to support strategic planning and budgeting, policy implementation and monitoring; (iv) the targeting of resources towards priority groups within the population; and (v) engagement of a network of national and district level resource institutions to provide different forms of targeted technical and capacity building support. The role of central and district agencies will need to evolve and performance incentives be put in place to encourage leadership in a more

demanding and transparent context. The beginnings of the decentralization efforts, (through BPEP II) are already revealing many of the challenges that the system confronts. This may lead to pressures for further reforms such as to improve the governing structures of educational institutions, and a further targeting of public funds to improve equity.

4.44 **Improve the modalities of financing to trigger education reform with a focus on reducing inequalities and discouraging inefficiencies while providing incentives for positive innovations and the generation of additional resources.**

4.45 **Current policy and status**. Government's medium term objectives with respect to financing the education system are to allocate 15 percent of the regular budget to the education sector with 55 percent of this for primary schooling. While the Government has declared free education up to grade 10, the school grants-in-aid provided under this policy cover the salaries of teachers, some small grants for administrative salaries and a token amount for operating expenses. There are few or no funds for non-salary recurrent expenditures for instructional materials, extra curricular activities, and so on. At the tertiary level, the Government is encouraging higher levels of cost recovery but the difficult decisions necessary for this have yet to be taken. Private sector involvement is encouraged across the system.

Future Directions

4.46 **Increasing access/equity**. It is important to ensure that any charges made in primary schools do not result in any child being unable to attend. At the same time, schools need to be provided with the opportunity to be able to raise funds additional to those provided by Government. Combining these needs is a major challenge. Under a decentralized system, Government could move to block grant financing based on criteria and procedures linked to performance. The objective would be to provide more resources directly to schools for non-salary expenditure critical for quality improvement and to increase resources to those schools that perform well. The private sector has been growing, particularly in the Kathmandu Valley, and many of the schools are of good quality. Thought might be given to ways in which these schools might be encouraged to provide programs for out of school urban children.

4.47 The financing of secondary education needs to be revisited. Cost sharing where parents are willing to spend more and the mobilization of additional non-public resources to finance expansion and quality improvement will be needed. Again, however, any increase in cost sharing at the secondary level will require well targeted subsidies to students from poorer households. In their absence, the poor would be further left out of the system and the country would not be creating a large enough pool of well educated workers for both the private and public sectors, including the teaching service.

4.48 With a growing private sector, an enabling regulatory framework for public subsidies to the private sector might be developed provided that it (i) resulted in increased overall funding for the education sector; (ii) improved the outcomes of resources currently available through healthy competition for innovation and quality improvement; and (iii) could be seen to increase equity by providing targeted public subsidies for students to attend.

4.49 Most schools providing grades 11 and 12 are private and tuition fees are high. The result is that students from poor households have very little or no access to this level of education, and therefore to higher education. This points to the need for a clear policy on public subsidies for private institutions, and on the role of public institutions under the planned integrated secondary system.

4.50 There is an urgent need at the tertiary level to implement higher fees together with either a scholarship or student loan scheme. The current situation in which the University is starved for funds

while fees are low and over nine out of every ten students are from the wealthiest 20 percent of families begs for reform.

4.51 **Increasing efficiency.** Another key objective of reform is to improve the efficiency of the system through reducing unplanned growth and increasing cycle completion rates. New ways of financing could lead to efficiency gains. Increased financing could go to districts or institutions that are able to improve the use of critical inputs through policies such as teacher redeployment, school mapping and optimal location of schools, and grade teaching. The introduction of matching grants particularly at the post basic level could lead to increased contributions from communities and stakeholders, and also help to sustain the higher costs of improved service delivery.

4.52 Over the medium term the distribution and organization of schools needs to be reviewed based on education mapping, including demographics and the availability of private and public schools, with the intention of utilizing public expenditures on teachers and facilities more efficiently, reducing variations across schools and regions, and targeting under-served areas. The current pattern of schooling provision is somewhat inefficient since most schools that start with primary grades aspire to extend their grade enrolments up to secondary level without adequate consideration of the characteristics of the catchment area. Currently, about 60 percent of primary schools are attached to secondary schools having grades 6-8 or grades 6-10. As the system expands further, choices will need to be made about the location and consolidation of public schools. In some cases schools just offering grades 6-8 could provide for a number of small primary schools.

4.53 In the more densely populated areas such as the Terai and urban centers, options for double shifting and larger schools through mergers could be explored before building new ones. In the process of consolidation, the Government could consider closing down inefficient or non-viable schools and release resources to improve the quality of existing schools which cater to the poor. School consolidation needs to be combined with teacher rationalization. In mountain and remote districts characterized by sparse populations and seasonal migration, boarding schools could be explored and more multi-grade teaching in small local schools supported

4.54 **Increasing quality.** The third major objective of financing reform is to improve the quality of education. Resources need to increase substantially to address critical needs for non-salary expenditures particularly at the post basic level. These could be used for school based teacher training, laboratory consumables, instructional materials, library materials, extra-curricular activities, computer software and internet connections. Significant resources are also required to fund physical improvements to meet the minimum standards for implementing the curriculum. Such investments need to be linked to school mapping and school performance.

4.55 At the tertiary level, additional public resources will be required, at least initially, to support the reforms. Staff development alone would be a major exercise since less than ten percent of the teaching faculty hold doctoral degrees and only a very small percentage has had exposure to new technologies. Physical facilities, laboratories and libraries also need upgrading. However, any such provisions would need to be linked to the institutional reform of each recipient institution, and be sustainable under a coherent policy framework.

Financial Constraints

4.56 The expansion and improvements in the educational system described above, many of which are being implemented or are planned by the Government, are ambitious given the resource constraints and the low base of the educational system from which the required process of reform has to begin. In order to provide a broad framework within which the choices and constraints facing the educational sector over

the medium term might be analyzed, an enrolment and financial projection model of the system was developed to 2020, using base data for 1997. Sets of projections were made for several scenarios of system (enrolment) growth in a context of low, medium and high assumptions for public expenditure and school-age population growth. The results of two sets of projections using the medium assumptions are described below (some of the background tables can be found in annex H).

4.57 In the first 'no change' scenario, existing gross enrolment ratios, unit costs, transition rates and the private sector's share of enrolments are maintained for each level of the educational system. Changes in enrolments are driven only by changes in the size of the relevant age groups. The same dropout and repetition rates prevail and inputs per pupil are constant. The current level of cost recovery is also retained. The scenario essentially reflects no reforms.

4.58 The projections demonstrate that even under this situation of 'no change' the current objective of increasing education's share of total Government expenditure from 13 to 15 percent would need to be revised upwards slightly over at least the next decade. At the same time, enrolment ratios would not increase, inequalities would remain and there would be no improvement in the quality of educational outcomes. Overall, the system would be increasingly financially demanding but its slow growth would be neither socially nor politically feasible.

4.59 The second scenario for the education system reflects a more ambitious vision for the system in 2020 : a 60 percent coverage for early childhood development classes (up from less than 10 percent currently), universal basic education, a 50 percent gross enrolment ratio for secondary education (up from the current level of 25 percent), a 12 percent gross enrolment ratio for tertiary education (up from around 4 percent currently) and a one percent gross enrolment ratio for technical education (up from around 0.2 percent currently). In addition, real unit expenditures would increase by 2 per cent a year at each level to allow for increases in non salary expenditures.

4.60 This scenario cannot be achieved without significant increases in the share of education in total expenditure, substantial increases in cost recovery rates in publicly provided education and in the enrolment share of fee paying private schools and tertiary institutions. The results of projections of financial requirements would necessitate that even if the share of education expenditure rose to 17 percent, cost recovery levels would need to increase from the current level of around 20 percent and to 55 percent in higher education, while the shares of students in private schooling would need to increase from 12 percent to 20 percent in basic schooling (grades 1-8), from 25 percent to 40 percent in secondary schooling (9-12), from 20 percent to 53 percent in higher education. If these large increases in rates of cost recovery and of the private sector did occur, an enhanced ability of the Government to protect educational opportunities for the poorest sections of society would be crucial. In the absence of these increases, however, the share of public expenditure would need to increase very significantly.

4.61 If Nepal is to achieve an expanded education sector with higher levels of quality along the lines of this scenario, there would need to be:

(i) the allocation to education of at least 17 percent of a growing Government budget, including through the mobilization of additional external support;

(ii) an increased willingness across the population to provide a higher share of the total cost of government schooling through cost recovery and/or cost sharing measures, particularly for secondary, technical and vocational training and tertiary education;

(iii) a conscious effort to support the further growth of the private sector so as to increase its proportion of students at each level, but particularly at the higher secondary, technical and vocational training, and tertiary levels; and

(iv) mechanisms on the part of the Government to facilitate and support the entire sector more effectively so as to translate the increased resources into educational inputs and practices which improve quality and reduce the numbers of failing students.

Conclusion

4.62 Compared to several other areas of development policy in Nepal, education has seen its successes. While the system remains small compared to that in many other low income countries, its rate of growth has been impressive. To some extent, however, the simplest part of that initial expansionary phase is over with almost two thirds of children in school. The harder part will be in enticing the remaining third to enroll and to remain in school to at least attain literacy, and to develop a firmer foundation for the secondary and higher education sectors which are currently in a state of flux. The education system receives the largest allocation of Government expenditure. With Government having recently announced several broad intended changes to the system, this is an opportune time to systematically consider the implications of these in a comprehensive manner and to determine a road to reform. In several areas of the reforms, such as decentralization, the application of block grants, targeted interventions for children of disadvantaged communities and the several implications arising from the universalization of basic education, details are yet to be developed. This chapter, the discussions which informed it and those which it will hopefully inspire, are intended to contribute to the process.

Chapter 5 CONCLUSION

5.1. The four major principles to guide the process of educational reform in Nepal are: (i) the urgent need for more **equitable access** to all levels of the educational system, (ii) the importance of raising the **quality** of education outcomes, (iii) the development of a more effective system of **education management** in terms of organizational structures, institutional capacity and governance, and (iv) the high priority that needs to be given to designing a more equitable structure of **public finance** in the educational system.

5.2 Given the low quality of life indicators in Nepal and the considerable potential that the impact of education has on poverty reduction a fundamental principle in determining strategies is to ***increase access*** to education services of all kinds through targeting resources to the poorest communities and especially to poor girls and women.

5.3. Public subsidies for education, which are currently grossly inequitable and do not reflect the pattern of social returns, need to be restructured towards the poor and focused on under-served areas and communities which are under represented.

5.4. The ***quality*** of learning outcomes in public schools needs to be raised considerably if Nepal is to reduce poverty and inequality. To do this, standards need to be set and schools made accountable for achieving them. Simultaneously, all schools need to have at least a minimum level of resources required to implement the curriculum effectively. A national effort could usefully be made to identify and recognize effective schools to demonstrate what could be achieved in the current environment.

5.5 At the core of school quality are teachers who need to be continually supported in their professional development and be made accountable for students' learning. There is an urgent need for a coherent teacher training and management policy and strategy covering the entire schooling cycle. There is also a need for a national curriculum framework covering the entire school curriculum and for a more coherent examination and assessment system.

5.6 The ***management*** of the education system needs to better reflect both national priorities and community felt needs by being more open, participatory and professionally responsive.

5.7 As part of the effort to decentralize government services, it will be important to develop the capacities of central agencies as well as those in the districts. Greater staff stability would be a fundamental requirement for sustaining management reforms and there is an urgent need to develop incentive schemes tied to the performance. This requires effort and expertise, suggesting the need for the establishment of a high level advisory group to guide the process.

5.8 Increasingly, the district will become the focal point of oversight and technical leadership under the decentralized management. The District Education Offices will have to be reorganized to support participatory district education planning and implementation, including school improvement planning, ensuring compatibility with the local self-governance act.

5.9 Local participation could be enhanced through legal provisions for school governance with empowered School Management Committees formed through democratic processes and empowered principals identified through competitive selection. Schools might then be transferred to communities, or more broadly to teacher cooperatives, NGOs or private operators under an umbrella act with provisions similar to those covering other user groups, for example in community forestry.

5.10 Changes in education ***financing*** are required to underpin the whole process of the education reforms.

5.11 There is a need for Government to increase the growth of real education expenditure and, in the absence of rapid revenue growth, of the share of education in total expenditure. However, it is also necessary to realize that public resources will remain insufficient and that more radical measures are required.

5.12 The current disparities in the distribution of government subsidies need to be reduced. This will require a more effective targeting to basic education and to under-served communities and girls at all levels, and allowing schools to charge fees for quality improvement from those who are able to pay. New formulas for allocating budgets across districts are being developed for primary schooling. Similar formulas will need to be developed for secondary education. The next step could be block grants to institutions linked to quality improvement plans.

5.13 Secondary schooling remains underfunded. Since recent increases in public resources to the secondary level have all been directed towards salaries, additional resources both public and through greater cost sharing are needed to both increase quality and expand access. Increases in public investments, however, need to be tied to policy reforms including those required to integrate the four year cycle, and promote increased equity.

5.14 By reducing subsidies to tertiary level students from relatively wealthy households and at the same time increasing financial resources, it should be possible to go some way to improving coverage and quality at this level.

5.15 For the further development of the private sector, there is a need to establish an enabling regulatory framework which would facilitate competition and innovation and protect parents from commercial exploitation

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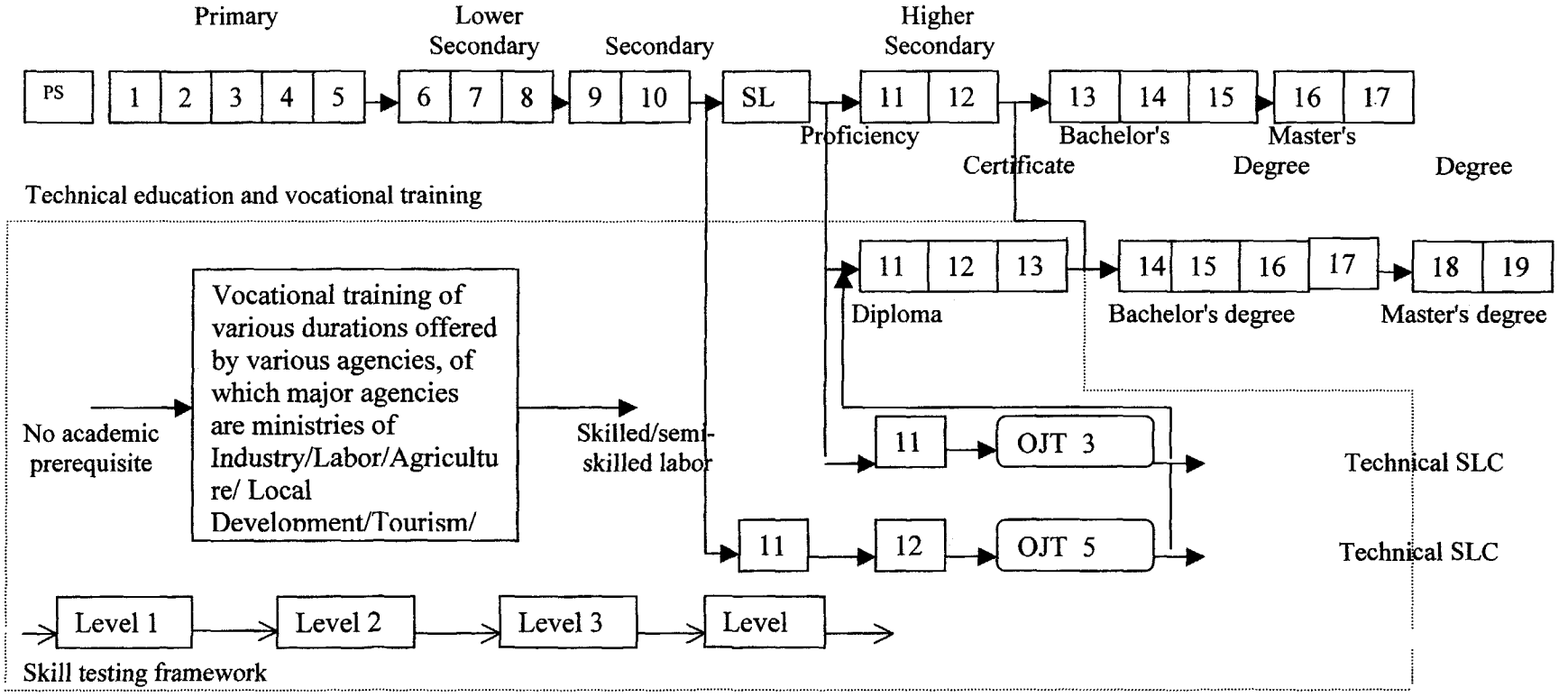
Annex A
Education System in Nepal

General Education



Annex B
Findings from Focus Group Discussion with Headteachers

A focus group discussion of headteachers from selected schools in Kathmandu, Patan and Bhaktapur districts was organized at the Research Centre for Educational Innovation and Development (CERID). The discussion concentrated on areas such as the appointment procedure and characteristics of headteachers, minimizing politicization, characteristics of School Management Committee members, indicators of quality and effective schools, etc. The group also identified schools from the Kathmandu Valley that could be considered as effective. The conclusions of the discussion are presented below according to the topic of discussion.

Criteria for headteacher selection

- Minimum qualification for, and the rank of, the headteacher should be upgraded, and the person should have instructional leadership and managerial skills.

Characteristics of headteacher

- Headteacher should have complete authority to mobilize financial, administrative and physical resources and act as a role model.

Teacher selection

- Two opposing views emerged during the discussion. Some favored a centralized selection system while others favored a localized one. The debate covered the consequences of different options and the measures required to mitigate various concerns.

How to reduce politicization?

- In order to reduce political interference, a process of handing over schools to the community should begin immediately. Opposing views on the roles of the headteacher and the management committee in issues of teacher management emerged.

Characteristics of SMC members and issues related to SMC formation

- The SMC members should include people who can give an educational vision, those who can mobilize the community, those who can offer financial support to the school, and parents paving the way for handing over schools to the community etc.
- The SMC members should monitor teacher performance.

Quality education

- Functional/relevant education that can address individual and parents' desire and expectation, society's interest and the nation's need

Evidence or indicators of school failure

- Poor results
- Inability to remove incompetent teachers
- Lack of means to attract more competent and more qualified teachers
- Lack of professional accountability among teachers
- Headteacher's role is unclear with no authority
- Teacher management is weak
- Centralized decision making
- Most of the time headteacher's decision is not supported or backed up by the District Education Officer (DEO)

Indicators of an effective school

- Community link established
- Focus on classroom practice including appropriate student teacher ratio (STR), teacher professionalism, and additional instructional materials available
- High pass percentage
- Early childhood development classes
- Compulsory English from grade one and an English speaking environment
- Substantial time on task
- Effective headteacher

What can the DEO do to make schools more effective?

- Efficiently perform both administrative and academic jobs by releasing the regular budget on time and supervising the schools and supporting headteachers' decisions.

Overall, there are many instances of misconduct by the headteacher, the SMC and the District Education Office. For many of these to be solved, there is a need for greater clarity and cohesion in the roles and responsibilities of all concerned. There is a need for political commitment and will to restrain politicization.

Establishing good operational order is the first and foremost need in effectively managing a school. This required that the headteacher is respected by all. This requires combining several aspects: the professional integrity of the headteacher, the transparency of the school system and management mechanism and the commitment of the teachers.

Annex C
Findings from Focus Group Discussion at Sunsari District
Behaviors and Characteristics Associated with Effective and Ineffective Schools

The respondents of a questionnaire survey were first requested to identify one effective and one ineffective school that they knew and to indicate the features of such schools. Discussions were then held with parents, teachers and community members of both schools. The names of the schools are not provided for reasons of confidentiality. Findings of the discussions are organized below under appropriate headings.

(a) Existing characteristics of the visited schools

Areas of Exploration	Effective School	Ineffective School
Teacher at school	• Visionary headteacher • updated teacher's log book • collegial supervision and in house sharing • daily discussion on an issue	• lethargic and non-visionary headteacher • careless teachers • open politics in school
Teacher with students	• parental discussion for student's regularity • student involvement in material development • student's portfolio • monthly test of the students • entrance test and tight exam	• no entrance exam • excessive cheating in the exam
Teacher with curricula	• English at grade I • Reflection of parental concerns • Tutorial class for students	• No reflection of parental concerns in teaching
Teacher at the community	• ensured parental support • issue discussion with the parents along with their students	• no interaction between the school and the community • teachers insensitive towards the community needs

(b) Behaviors

Existing behaviors of effective school	Ineffective school's required behavioral change
• Issue based discussion with political parties • Constant link with community • Regular in house sharing • Exchange learning among schools • Seasonal transfer of teachers • Change in questioning techniques • Incentive for extra class teaching • Vocational training for school drop-outs and completers • Educational advocacy in the community • Portfolio reporting of individual student • Recognition of best teachers and SMC members through the teacher made SMC	• Community made SMC and tight exam • Reorientation of the teachers and the community • Leadership training and the exposure visits for parents and SMC members • Composition of school-watch group and presentation of its monthly assessment report • Social recognition of the teachers and the parents • Reduction of the teacher's work-load • Capable and dynamic headteacher • Issue based discussion with all political parties • Pedagogical reform through monitoring and supervision

Annex D
Survey of Education Offices on School Effectiveness

Findings of survey questionnaire

A survey was conducted among 41 officials from the Ministry of Education and Sports (MOES), including District Education Officers (DEOs). The questionnaire mainly focused on the features of effective schools, elements that influence school effectiveness, and roles of headteachers, teachers, communities, and MOE institutions such as DEO, Regional Education Directorates and Resource Centers.

The response is organized in three sections. The first presents the findings according to the conceptual framework for school effectiveness. The second section provides causes of school failure in Nepal. The final section provides objectives of an effective school.

Internal factors that make a school effective

- Conducive physical and managerial conditions
- Freedom to mobilize resources
- Active, qualified, trained, disciplined, professional and dedicated teaching force
- Effective pedagogical approaches
- Enhanced collegiality among teachers and staff
- Teacher professionalism
- Capable instructional leadership
- Subject-wise teacher's quota
- High time on task
- Appropriate teacher evaluation system

External factors to make a school effective

- Relevant and decentralized policy support with efficient and effective teacher management and teacher education
- Educational awareness among the community
- Financial support
- Favorable socio-cultural condition
- Adequate physical facilities with relevant curricula and textbooks
- Good relationship with, and full support from, parents and community
- Constructive political support and mobilization of intellectual resources
- Standardized examination system
- Provisions for reward and punishment
- Creation of demand for school leavers in the labor market
- Constructive monitoring and supervision from DEO, resource persons and community
- Intra-school teacher supervision along with exchange of ideas and technology between schools
- Connection with feeder schools and ECD centers

Objectives of an effective school

- To provide education according to students' interest and capacity
- To provide education that prepares disciplined citizens who are able to face challenges in future
- To organize student centered teaching learning activities
- To enhance student outcomes
- To provide satisfaction to parents

- To offer more interactive teaching learning education for all round development of children

Causes of school failure in Nepal

- Professional development has been affected owing to teachers being politically protected
- Political interference resulting in biased rewards and punishments
- Unstable education regulation with many loop holes
- Loss of confidence within the teaching profession resulting in lack of sense of responsibility, motivation and effective teaching learning environment
- Lack of financial and human resources resulting in inadequate physical facilities and competent teaching force
- Decline of people's participation in schools
- Weak education leadership, inappropriate student teacher ratio, irrelevant curricula, weak monitoring and supervision, low achievement, and incompetent teaching force. Faith in public school system has eroded as a result. Public schools tend to increasingly cater to only the poor and powerless resulting in school segregation
- Centralized system with inefficient implementation mechanisms and faulty teacher management

Annex E
Findings from Focus Group Discussion with Student Unions

Two focus group discussions were organized with representatives from different student unions to discuss their views regarding decentralization, equity, quality, management and other related issues confronting tertiary education, particularly Tribhuvan University (TU). Some consensus emerged from the students who expressed their support for genuine reforms that would ultimately benefit the students' learning and skill enhancement.

Issues of Decentralization

- Decentralization should not mean privatization. Privatization may lead to more commercialization of educational access. This can create a big gap between the poor and rich.
- Decentralization should be for the well being of the people and the overall prosperity of the community and society.
- Currently TU is almost synonymous with of higher education, but after decentralization, will there be a body accountable for the whole of the sub sector.

Issues of social equity

- Most secondary students in Nepal do not have sufficient financial resources to be able to enter higher education. A system of government scholarships or student loans is needed.
- Proficiency Certificate Level (PCL) programs will be phased out by the end of the Ninth Plan, but without an appropriate alternative, the phase-out will be very difficult. Currently there is an attempt to expand higher secondary education as an alternative to PCL in all parts of the country. However, higher secondary schools are opened by the private sector only and are thus out of reach of the average people. Most students are still joining TU's PCL programs because of the high cost of higher secondary education.
- There is a provision for the waiver of tuition fees for 20 percent of the students. This provision needs to be reviewed in order to make it more realistic and useful. The tuition fee is nominal in terms of the actual cost as well as in terms of the total revenue raised. Besides, in some cases the waiver money is distributed to all the students as dividend as opposed to targeting.
- Since only about 1.4 percent of the students from the poorest 40 percent of households have access to higher education, there should be more adequate provisions to increase the participation of the poor in higher education.
- There is a need to differentiate between students based on their economic standing (those who can invest and those who need support). The government should develop that capability to differentiate / discriminate.

Quality control, monitoring and supervision

- Issues are being raised now regarding the impact of rules and regulations in many TU campuses.
- The quality of higher education in Nepal is currently seen in terms of better implementation of the rules and regulations. However, quality is also related to curriculum and its practical application. The quality of the curriculum and the practices should receive more attention from the concerned agencies.
- Setting of norms and standards and their strict observation are other concerns of quality in higher education. This includes the number of day classes actually run, student and teacher attendance, the

teacher student ratio, the capacity of the laboratories and the classrooms and the actual number of students in a class.

- Since the percentage of passes in higher education is very low, there is a need to review the curriculum, pedagogical practices and the examination system to make the system more efficient.

Issues of Policy, Planning and Management

- Some of the higher education institutions in Nepal are opened on an ad hoc basis largely resulting from political demand rather than on rational and feasible grounds. Consequently, some of the institutions are highly inefficient and ineffective in terms of cost and quality of programs.
- There is a lack of clarity regarding the Government's responsibility towards higher education. For example in higher secondary education, it has not taken any responsibility to run public schools. The Government also does not have a set of criteria regarding the provision of funds to various higher education institutions. For example, Kathmandu University, which is a private university, is receiving a larger amount of government support per student than is Tribhuvan University. The per student government spending is much higher for the Mahendra Sanskrit University and the other new universities.
- Access to higher education should be developed based on the needs of the country – currently, there are fewer education institutions running science programs compared to the institutions running liberal arts and commerce programs.
- There is a need for a campaign approach to break down the barrier against girls' participation in education, particularly in higher education. Similarly, there is a critical need to enhance the participation of disadvantaged communities in higher education.
- Community participation in education is now being emphasized. However, the role communities might is still not clearly understood for higher education.

Other issues

- There has been international support coming for the education sector, including higher education, over the last several decades. There is now a need to review the nature of such support and the outcomes.
- There is sometimes confusion regarding the responsibilities of TU and the government, particularly in the areas of financing and in prioritizing programs. The responsibilities should be outlined more clearly.
- Often the investment in education, particularly in higher education is questioned on the grounds of low immediate return. However, it should be noted that the returns on such investments are realized only in the longer term, after several decades.

Annex F
Findings from Focus Group Discussion with Teacher Unions and University Teachers

Cost recovery and resource mobilization

- Cost efficiency of higher education is difficult to assess because the cost relates to so many factors including the quality of education delivered and the standards of the product. Cost recovery has several aspects -- the costs of operating different programs, the level of the programs and the student numbers. Therefore a simple cost recovery norm cannot be assigned.
- There is no ideal proportion of cost recovery and therefore the issue at the higher education is confusing. From the Government side, there is a need for its role and responsibility to be clearly outlined, including what level of resources it can commit and what it expects the University to generate.
- Due to the lack of clarity in the policy, public institutions are confused, and privatization is often misunderstood as the commercialization of higher education which is unfair.
- In the present context, cost recovery is contradictory to the expansion of access to the poor.
- In the current situation, there are various ways to mobilize resources : e.g. hotel run by the University, technological park, industry, and there is growing competition in high technology areas.

Issues of access to higher education

- Education is a basic human right. In this regard, it is important for the Government to form a clear policy to ensure that the people are not denied this provision.
- There is a need for differential schemes to address the complex socioeconomic reality of Nepal.
- The PCL phase out from TU is already overdue and is crucial for the development of the University. However, phasing out has become difficult because of the slow pace of development in the higher secondary education sub system. Without this, access to higher education would be limited.

Decentralization of management

- Currently, the management of higher education institutions, particularly Tribhuvan University is very challenging because of the lack of a conducive environment to properly implement rules and regulations. On some campuses there is total breakdown of the system's integrity. Decentralization of management in such environment is rather confusing and difficult.
- Public participation should be promoted in the development of a campus, in rationalizing the management, and in mobilizing local resources.
- It is not sufficient to discuss the traditional issues of higher education. It is important to understand that the reality is harsh: the campuses are practically managed by the students.
- Decentralization is an important step taken by Tribhuvan University to bring effectiveness and efficiency in the management. However, due to lack of experiences in decentralized management, even decentralization is taking place in a centralized way which in a way could hinder the whole process.

Quality and relevance

- The attrition rate in higher education is very high, examination results are not encouraging and it is often pointed out that the marketability of the graduates from the higher education institution in Nepal is difficult.

- There is a need for monitoring and supervision mechanisms to ensure better quality of higher education.
- Affiliation without affiliating rules and regulations are counterproductive for the quality of higher education. There should be a separate affiliating body or at least a separate section in the university for the purpose of affiliation.
- Salaries of university teachers are very low. Consequently, the teachers have to work in several places. Because of this they are not fully dedicated to their employing institution. In the present context, most of the 10+2 schools are run by part time teachers coming from Tribhuvan University. This is contributing to the deterioration of the quality of higher education.

Other issues

- The private sector should be developed but at the same time it should be regulated. There should be provisions to make them contribute to helping the poor but deserving students, or to pay government tax.
- Politicization is a complex issue in higher education, particularly in Tribhuvan University where the Council members are associated with political parties.
- The splitting of TU is taking place in an irrational way; earlier there was the concept of cluster formation and the eventual growth of major regional campuses. However, this approach was completely ignored in the formation of the new universities in the East and the Western region.
- New universities have been established in Nepal and are now affiliating campuses across different parts of the country in an overlapping manner. This confusion should be removed.
- There is a lack of framework of action and long term vision, consequently the current higher education institutions are engrossed by the current problems and issues of today.
- There is a need for a realistic 20-year vision that brings different perspectives – strategies, courses and faculties.
- There is need for competitive management – there is need for election system in the selection of institutional heads (leaders).
- Role of students in campus development should be sought; their involvement should be such that they are dictated by their need to have better education and not by other interests including the interest of the political parties.

Annex G
Key Tables on Public Expenditure

(Taken from World Bank: Nepal Pubic Expenditure Review. Volume III Social Sector. 2000)

Table 1

National Education Accounts by Use and Source of Funds, 1994/95. (percent)

Use of Funds	*Source of Funds*			**Total**
	Government	*Donors*	*Household*	
Primary	21.6	5.9	15.7	43.2
Non-formal	0.3	1.8	0.0	2.1
Secondary	8.4	0.3	22.8	31.6
Technical/vocational	0.4	5.6	0.0	6.0
Tertiary	7.0	6.4	2.9	16.3
Other	0.5	0.3	0.0	0.8
Total	38.2	20.4	41.4	100.0

Source: Hotchkiss et.al., 1999

Table 2

Government Expenditure on Education. 1980/81 – 1998/99. Selected Years.

Education Expenditure	1980/81	1985/86	1990/01	1991/2	1992/3	1993/4	1994/5	1995/6	1996/7	1997/8*	1998/9**
As % GDP	1.4	2.0	1.8	2.0	2.5	2.4	2.4	2.6	2.7	2.7	2.6
As % TGE	9.4	11.1	8.8	10.9	13.4	12.8	13.3	12.9	13.9	13.1	13.1
Real growth	4.9	17.5	6.7	-2.3	31.1	-3.9	13.6	8.0	10.6	5.5	5.3

Source: HMGN, Ministry of Finance (various years)
Note: GDP is gross domestic product and TGE is total government expenditure.
* Revised Estimates
** Provisional Estimates

Table 3

Education Expenditure as a Share of Total Government Expenditure 1990/91 to 1999/2000

	1990/1	1991/2	1992/3	1993/4	1994/5	1995/6	1996/7	1997/8	1998/99*	1999/2000**
Regular	4.8	4.8	6.0	6.0	18.7	20.0	19.9	20.1	20.0	19.4
Development	10.9	14.5	17.8	18.0	7.3	7.0	8.9	7.9	6.1	7.9

Source: HMGN, Ministry of Finance (various years); HMGN, Ministry of Finance, 1998a
* Revised Estimates
** Provisional Estimates

Table 4

HMG and Donor Expenditures on Education 1998/99. (Rs millions)

	HMG	Donors		Total
		Grants	Loans	
Regular	6403	-	-	6403
Development	797	803	700	2300
Total expenditure	7200	803	700	8703

Source: HMGN Ministry of Finance, 1999

Table 5

Foreign Assistance, Total Government Expenditure and Education Expenditure 1990/91 to 1997/98 (percent).

	1990/1	1991/2	1992/3	1993/4	1994/5	1995/6	1996/7	1997/8
Foreign Assistance								
In Govt Expenditure	25.4	29.5	29.9	34.4	31.5	30.7	29.6	29.3
In Education Expenditure	5.9	7.2	17.2	14.4	25.4	21.9	24.8	24.1
Percent loans								
In All Sectors	72.8	81.4	64.6	79.3	59.4	66.2	60.2	67.2
In Education	74.8	71.6	19.6	73.3	65.7	64.7	52.3	65.9

Source: HMGN, Ministry of Finance (various years)

Table 6

Government Education Expenditure from Internal Sources, 1975 – 1998 (Rs. Millions).

	1975/76	1980/1	1985/6	1990/1	1995/6	1996/7	1997/8	1998/9
Total Government Expenditure From Internal Sources	1408	2530	6306	17560	32353	35692	39661	42551
Total Education Expenditure From Internal Sources	208	353	892	1960	4696	5417	6403	7201
Education as % of total	14.7	13.9	14.1	11.1	14.5	15.2	16.1	16.9

Source: HMGN, Ministry of Finance (various years)

Table 7

Allocation of Education Expenditure by Level for Selected years. (Percent)

	1980/1	1985/6	1990/1	1992/3	1994/5	1996/7	1997/8	1998/9*	1999/2000**
Primary	36.3	41.6	55.1	48.9	53.5	55.6	53.2	52.8	54.2
Non formal	0.8	0.3	0.4	0.8	1.0	1.4	1.5	1.5	1.4
Secondary	25.2	17.7	16.0	15.6	17.1	22.4	21.8	25.0	23.0
Tech/voc	0.0	1.4	1.8	3.8	4.8	3.2	1.7	1.3	1.1
Tertiary	37.6	38.9	26.6	30.9	23.6	17.3	21.8	19.3	20.3

Source: HMGN, Ministry of Finance (various years)

* Revised estimates

** Provisional Estimates

Annex H
Key Tables from the Projection Model

Table I: Summary Table with Projected Gross Enrollment Ratio (GER) Under Different Scenarios									
	GER in 1997			Expected GER in 2010			Expected GER in 2020		
	One	Two	Three	One	Two	Three	One	Two	Three
Early Childhood	7.7	7.7	7.7	7.7	24.5	24.5	7.7	60.0	60.0
Primary (G1 - 5)	122.1	122.1	122.1	122.1	100.9	100.9	122.1	101.7	101.7
Lower Secondary (G6 - 8)	53.6	53.6	53.6	53.6	74.4	74.4	53.6	95.1	95.1
Basic Education (G1 – 8)	97.9	97.9	97.9	97.5	91.4	91.4	96.8	99.3	99.3
Secondary (G9 - 10)	36.1	36.1	36.1	36.1	53.3	53.3	36.1	60.0	60.0
Higher Secondary (G11 – 12)	12.8	12.8	12.8	12.8	27.5	27.5	12.8	40.0	40.0
Integrated Secondary (G9 – 12)	24.9	24.9	24.9	24.9	40.8	40.8	24.9	50.3	50.3
Tertiary	3.9	3.9	3.9	3.9	3.9	5.6	3.9	3.9	12.0
TEVT	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2	1.0

Table II: Resource Envelope Scenarios				
		Low	**Mediu**	**High**
Annual GDP Growth Rate		4.5%	5.0%	6.0%
Annual Revenue Growth		4.5%	5.0%	6.0%
% of GDP				
Foreign Assistance		4.5%	5.5%	6.0%
Internal Borrowing		1.8%	1.5%	1.2%
% Govt Budget in GDP				
% Ed Exp in Tot Govt		12.0%	15.0%	15.0%

Table III: Population Projection Under Three Scenarios						
Age Group	**1997**	**2000**	**2005**	**2010**	**2015**	**2020**
Low Growth						
5 –9	2,882,189	3,016,767	3,183,518	3,254,301	3,196,098	3,113,279
10 - 14	2,572,440	2,730,090	2,964,871	3,135,058	3,209,705	3,264,625
Medium Growth						
5 –9	2,900,824	3,095,486	3,392,592	3,635,140	3,800,328	3,953,396
10 - 14	2,572,439	2,730,088	3,042,230	3,340,950	3,585,325	3,829,647
High Growth						
5 –9	2,918,965	3,173,681	3,600,907	4,014,808	4,405,461	4,819,226
10 - 14	2,572,419	2,730,067	3,119,084	3,546,093	3,959,789	4,405,728

Table IV: Population and Enrollment Projection for 2020									
	Corresponding Population (in 000)			Total Enrollment (in 000)			Public Enrollment (in 000)		
	Low	Medium	High	One	Two	Three	One	Two	Three
Early Childhood (Age 3-5)	1,750	2,370	3,020	183	1,422	1,422	37	924	1,014
Primary (Age 6-10)	3,165	3,945	4,746	4,817	4,014	4,014	4,383	3,652	3,361
Lower Secondary (Age 11-	1,968	2,307	2,652	1,236	2,193	2,193	989	1,754	1,658
Secondary (Age 14-15)	1,284	1,461	1,640	528	876	876	422	701	560
Higher Secondary (Age 16-	1,247	1,388	1,531	178	555	555	71	222	309
Tertiary (Age 18-22)	3,013	3,254	3,501	127	127	390	102	102	183
TEVT (Age 14-22)	5,545	6,102	6,673	13	13	61	10	10	19
NFE				500	500	500	200	200	200
Total	*17,972*	*20,827*	*23,764*	*7,582*	*9,700*	*10,012*	*6,214*	*7,566*	*7,304*

Table V: Projected Recurrent Budget and Proportion Under Different Scenarios - 2020									
	Projected Need for Total Recurrent Budget (in million NRs) in 2020			Proportion of Budget			Annual Increment in Unit Cost		
	One	Two	Three	One	Two	Three	One	Two	Three
Early Childhood	26	647	721	0.3%	5.5%	5.3%	0%	0%	2%
Primary (G1 – 5)	5,260	4,383	5,060	54.1%	37.1%	37.2%	0%	0%	2%
Lower Secondary (G6 - 8)	1,483	2,632	2,832	15.3%	22.3%	20.8%	0%	0%	2%
Secondary (G9 - 10)	718	1,192	938	7.4%	10.1%	6.9%	0%	0%	2%
Higher Secondary (G11 – 12)	57	666	914	0.6%	5.6%	6.7%	0%	0%	2%
Tertiary	1,322	1,322	1,605	13.6%	11.2%	11.8%	0%	0%	2%
TEVT	168	168	581	1.7%	1.4%	4.3%	0%	-2%	2%
NFE	140	140	191	1.4%	1.2%	1.4%	0%	0%	2%
Management and Others	550	669	771	5.7%	5.7%	5.7%			
Total	*9,725*	*11,819*	*13,612*						

Table VI: Projected Private Enrollment Proportion							
	Ann Growth	1997	2000	2005	2010	2015	2020
Early Childhood	-5.0%	80%	80%	62%	48%	37%	29%
Primary (G1 – 5)	3%	9%	9%	10%	12%	14%	16%
Lower Secondary (G6 - 8)	1%	20%	20%	21%	22%	23%	24%
Basic Education (G1-8)	derived	11%	11%	13%	15%	17%	19%
Secondary (G9 - 10)	3%	20%	20%	23%	27%	31%	36%
Higher Secondary (G11 – 12)	-1.5%	60%	60%	56%	52%	48%	44%
All Secondary (G9-12)	derived	40%	31%	32%	35%	37%	39%
Tertiary	5.0%	20%	20%	26%	33%	42%	53%
TEVT	2.0%	20%	20%	22%	24%	27%	30%
NFE	0%	60%	60%	60%	60%	60%	60%

Table VI: Unit Cost - Cost Recovery Proportion							
	Ann Growth	1997	2000	2005	2010	2015	2020
Early Childhood	-3%			50%	43%	37%	32%
Primary (G1 - 5)	3%			10%	12%	13%	16%
Lower Secondary (G6 - 8)	3%			15%	17%	20%	23%
Secondary (G9 - 10)	2%			25%	28%	30%	34%
Higher Secondary (G11 – 12)	2%			25%	28%	30%	34%
Tertiary	7%			20%	28%	39%	55%
General	7%			20%	28%	39%	55%
General Science	7%			20%	28%	39%	55%
Technical	7%			20%	28%	39%	55%
TEVT	7%			15%			
Trades (after G8)	7%				15%	21%	30%
Technician (after G10)	7%				20%	28%	39%
Advanced (after G12)	7%				20%	28%	39%
NFE	5%			0%	5%	6%	8%

Annex I
Survey of Public and Private Schools in Kathmandu Valley

The Fulbright Alumni Association of Nepal conducted a survey of 21 public and 23 private secondary schools in the Kathmandu Valley (Kathmandu, Lalitpur and Bhaktapur districts). The selection of schools provided a mix of top, medium and low performers in the School Leaving Certificate (SLC) examination taken at the end of grade 10.

The study revealed the following:

- Among all of the sampled schools, only 17 percent have good physical facilities. Among the public schools, 20 percent have good facilities compared to 15 percent of the private schools.
- Public schools have a higher percentage of female teachers (46%) than private schools (28%).
- 58 percent of teachers in private schools and 49 percent of the teachers in public schools have a university degree.
- 80 percent of private schools and 64 percent of public schools have major subject teachers.
- Public schools have a higher share of trained teachers (24%) than private schools (14%).
- 98 percent of students in private schools are promoted from one grade to the next compared to 86% in public schools.
- Students in private schools appear to perform better in English. Ninety percent of students failed in English in public schools while only 41 percent failed in private schools. English teaching is obviously a difficult area for teachers in general.
- Per student expenditure is higher in public schools.
- Science, English, and Mathematics are the most difficult subjects for students in both private and public schools. Seventy five percent of private schools also stated that students find Social Studies difficult.
- The most common measure in both types of schools for helping students with difficulties is to organize additional classes.
- The survey revealed that almost all the schools had textbooks over and above those prescribed by the government. Some were reference books and others were taught as regular texts.
- Private schools are not monitored in many areas. Only the mandatory government regulation that the District Level Examinations be held at the end of primary and secondary levels is being implemented. Students are being taught through different textbooks along with the government's prescribed ones.
- Both public and private schools feel they have insufficient financial support and are dissatisfied with the condition of their physical facilities. In addition, the public schools feel they have a lack of appropriate subject teachers, a lack of science equipment for experimentation and a lack of trained teachers. Private schools report a lack of educational materials and an insufficient number of students as major problems, besides the constraints in financial and physical facilities.

Suggestions provided by Public and Private Schools

- Public schools suggested that the school education system should be able to produce skilled human resources, who were trained to earn a livelihood for themselves. Thus, curriculum needs to be revisited, reviewed and revised.
- The teacher appointment system needs to be improved.
- Academic sessions need to be changed and adjusted to suit the majority of schools and students.
- Textbooks need to arrive on time in the market.
- Private schools expressed their concern that they too were serving the needs of the society, but the government had not acknowledged their services to the community. The government's teacher-training program must include the teachers of private schools as well.

- They also felt that the supervision and inspection of schools by the District Education Officer (DEO) should be regularly carried out, not only in public schools, but in private schools, as well.

Characteristics of Private and Government Secondary Schools, Kathmandu Valley

	Private	Government
SCL Pass Rate 1998	88	66
Active School Management Committee %	59	59
NGO Inyolved in School %	0	27
Female Teacher %	28	46
BA or BA plus Qualification Teacher %	58	49
Over 30 Years of Age Teacher %	70	77
Major Subjects' Teacher %	80	64
Trained Teacher %	14	24
Age of Head Teacher (HT)	44	49
Male Head Teacher %	76	86
HT with at least MA Qualification %	27	41
HT specialized in Major Subjects %	23	23
Trained Head Teacher %	48	68
Class Days in a year	202	195
Promotion from one class to next %	98	86
English as Most Failed Subject in SLC %	41	91
Coeducation %	86	91
Girl Attendance %	44	48
Higher Secondary Education %	33	17
Number of Buildings	3	5
Number of Classrooms	14	20
Presence of Science Room %	41	73
Presence of School Hall %	27	36
Presence of Playing Field %	64	77
Number of Students	558	860
Number of Teachers	29	31
Student-Teacher Ratio	19	28
Per Teacher Salary (prior to the recent revision)	47,903	48,839
Per Student Expenditure	2,147	2,341

Note: The school sample included 23 private schools and 21 public schools.