Report No. 12243-NEP

Nepal
Critical Issues in Secondary Education and Options for Reform

August 26, 1994

Country Department I, South Asia Region
Population and Human Resources Division

Document of the World Bank

CALENDAR

Nepal Year 2051 = 1994

FISCAL YEAR

July 16-July 15

CURRENCY EQUIVALENTS

Currency Unit = Nepalese Rupees
US$1 = NRs. 49.58

ABBREVIATIONS AND ACRONYMS USED

ADB	-	Asian Development Bank
BPE	-	Basic and Primary Education
CBS	-	Central Bureau of Statistics
CDC	-	Curriculum Development Center
CL	-	Certificate Level
CPI	-	Consumer Price Index
Crore	-	10,000,000, written as 1,00,00,000 (see Lakh)
CSHE	-	Council for Higher Secondary Education
DEO	-	District Education Officer (Office)
DTVE	-	Directorate of Technical and Vocational Education
EFYP	-	Eighth Five-Year Plan
FOE	-	Faculty of Education
FY	-	Fiscal Year
GDP	-	Gross Domestic Product
HMG	-	His Majesty's Government
HSE	-	Higher Secondary Education
HSS	-	Higher Secondary School
IDA	-	International Development Association
JEMC	-	Janak Education Materials Center
Lakh (lack, lac)	-	100,000, written as 1,00,000 (see Crore)
MHPP	-	Ministry of Housing and Physical Planning
MOEC	-	Ministry of Education, Culture, and Social Welfare
MOF	-	Ministry of Finance
NEC	-	National Education Commission
NESP	-	New Education System Plan of 1971
NGO	-	Non-governmental Organization
NPC	-	National Planning Commission
NRs.	-	Nepalese Rupees
OCE	-	Office of the Controller of Examinations
PBSO	-	Private and Boarding Schools Organization
PEP	-	Primary Education Project
RDE	-	Regional Director(ate) of Education
SETI	-	Education for Rural Development Project
SLC	-	School Leaving Certificate
SMC	-	School Management Committee
SAARC	-	South Asian Association for Regional Cooperation, including Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka
Tarai	-	Plains (also Terai)
TU	-	Tribhuvan University

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CRITICAL ISSUES IN SECONDARY EDUCATION AND OPTIONS FOR REFORM

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This report is based on the findings of a mission that visited Nepal in October 1992. The mission was led by Ana M. Jeria (Economist) and consisted of Messrs./Mmes. Linda Dove (Senior Evaluation Officer), Shiva Raj Lohani (Economist, Consultant), Richard D. Noonan (Educator, Consultant), Mun Tsang (Economist, Consultant), and Kin Bing Wu (Educator, Consultant). Mr. Ratna B. Bajracharya (Consultant) prepared a contribution on private and boarding lower secondary and secondary schools. Mr. David A. Ramse prepared a report on experiences with secondary vocational and technical education. Peer reviewers are Messrs. Albert Agbonyitor (Senior Country Economist), Donald Holsinger (Education Specialist), William Rees (Principal Economist) and Ms. Himelda Martinez (Education, Division Chief).

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CRITICAL ISSUES IN SECONDARY EDUCATION AND OPTIONS FOR REFORM

Executive Summary

i. With low internal efficiency and poor quality, low coverage and severe underfinancing on the part of the Government, secondary education in Nepal has some of the most acute problems in the country's education sector. While analyzing some of these problems in the secondary system, this report focusses on a few of the most salient questions of strategic importance for Nepal, namely: How to improve the quality of inputs and their utilization in the secondary education subsector so that a desired level of learning is attained? How to improve internal efficiency? How to promote equity in the provision of educational opportunities? and How to finance the current and growing demands in secondary education?

Background

ii. Nepal's formal primary and secondary education system provides for five years of primary education (Grades 1-5 for students 6 to 10 years old), three years of lower secondary education (Grades 6-8 for students 11 to 13 years old) and two years of secondary education (Grades 9 and 10 for students 14 and 15 years old). Just over three million students are enrolled in primary education, representing about 60% of the boys and 30% of the girls between the ages of 6 and 10. Despite a six-fold increase in secondary enrollments over the past 20 years, the current gross enrollment ratio is below 40%. Students who pass the School Leaving Certificate (SLC) examination after Grade 10 are eligible to enter the higher education system. Virtually all higher education is provided by Tribhuvan University in numerous campuses dispersed throughout the country. In 1992, approximately 150,000 students were enrolled at the university.

iii. Dropout and repetition rates are high in primary education, particularly in Grade 1. Sixty-five percent of the children enrolled in Grade 1 drop out by the end of Grade 5, compared to a much lower 40% average dropout rate for Asia.[1] The lack of participation and attendance is mainly due to the high opportunity cost of the child labor, especially the girls engaged in minding their siblings. The quality of primary school facilities is poor, especially in rural areas; there is only a small minority of trained teachers.

iv. At the other end of the education system, the university absorbs the few students that pass the SLC examination. During the past years cost recovery has been nominal in the higher education subsector. More recently however, University authorities started to increase charges and reduce subsidies (tuition fees were doubled in 1991 from NRs. 20 to NRs. 40 per month). Higher education also suffers from very low quality manifested in the obsolete curricula for most courses, a centralized examinations system which reinforces utilization of the old curricula and lack of sufficient books and other instructional inputs.

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[1] Tan, J.P. and Alain Mingat (1989), Educational Development in Asia: A Comparative Study Focussing on Cost and Financing Issues (Appendix A: Individual Country Profiles), World Bank: Washington D.C.

v. Against this background, secondary education has been called upon "to produce self-reliant citizens who cherish the dignity of labor, who have faith in the nation and democracy, who are wakeful to the need of maintaining the balance of nature, and who have high regard for the moral, cultural and social values; and to instill in them the knowledge and skills required for the higher secondary level".[2] However, only about 40,000 students graduated from secondary schools in Nepal in 1992. For a country of almost 20 million people, 40,000 graduates represent only 2% of the 11 to 15 year age group and a grossly insufficient number of persons with higher level knowledge and skills. During the mid-eighties, gross enrollment ratios in secondary education were only 60% of the average figures for Asian countries.[3] These low numbers are of concern due to the fact that fertility behavior, health and nutritional practices, women's status, agricultural productivity, self-employment and ability to participate in the political life of the country, are strongly influenced by secondary education. In fact, secondary education is important in achieving a wide range of social, economic and political outcomes, central to developing and modernizing societies.

Secondary Education by the Year 2000

vi. Extensive historical data across countries as well as empirical work show that education is a very important policy instrument which can stimulate economic growth, improve agricultural and industrial productivity and reduce poverty. Evidence of the contribution of education to economic growth and agricultural output has been documented in Nepal during the past two decades. This evidence seems to be consistent with findings from other countries and with more recent Nepalese studies, which show high rates of return for primary and secondary education.

vii. The economy of Nepal is gradually moving away from primary agricultural production and towards manufacturing and services. Favorable expectations have been created by the changing political and economic environment. The changing economic setting, highlighted by the Eighth Five-Year Plan will have a direct impact on the labor market, where a considerable imbalance between the supply of skilled labor and the new demands of the economy may broaden even further, due mainly to the low levels of educational attainment of the population. Sixty-five percent of the economically active population is illiterate and only 14% have attended school beyond the primary years.

viii. As Nepal moves from the traditional society towards modernity and an expanded market economy, basic literacy, numeracy and at least basic generic skills will be a necessity for survival. However, literacy and numeracy represent a necessary but not sufficient human resource base for national economic growth and development. Higher level skills will also be needed. Without at least a full primary education and increasing years of lower secondary and secondary schooling needed for many jobs, the Nepalese labor force is unlikely to be equipped with the minimum levels of knowledge, skills and adaptability required by a modernizing economy. Therefore, a key investment for growth and development will be widespread provision of basic literacy and numeracy and expanding numbers of lower secondary and secondary graduates.

2/ HMG-National Planning Commission (1993), Education and Culture (excerpts from the Five Year Plan), Kathmandu, Nepal.

3/ Tan, J.P. and Alain Mingat (1989), Educational Development in Asia: A Comparative Study Focussing on Cost and Financing Issues (Table 2.6), World Bank: Washington D.C.

Critical Issues in Secondary Education

ix. The quality of the educational process is inferior and its efficiency is very low. The low quality of secondary education is evident from the results: two thirds of the Nepali students who enroll in primary education do not continue into lower secondary education and one quarter of those who do enter Grade 6, drop out after Grade 7. Low pass rates in the Secondary Leaving Certificate (SLC) examination (the gateway to post-secondary education) and overall poor achievement also afflict the secondary sector. It is very likely that the early dropouts do not have the knowledge and skills to enter paid employment. Efficiency is very low: only about 37% of the student cohort that enters Grade 6 will pass the SLC. On average, it takes 12.5 student-years to produce one SLC graduate. The overall low pass rates in the SLC examination in recent years (25-30%) should be the strongest signal yet for policymakers that government-aided and community schools [4] are currently unable to meet the very modest levels of achievement required by the exam.

x. The majority of the school buildings reflect the poverty of the communities they serve, lacking even the most basic amenities, such as drinking water, sanitation and electricity. The secondary curriculum has not been overhauled since the New Education System Plan (NESP) of 1971, more than 20 years ago, and today's teachers are communicating to the current generation of students more or less the substance they themselves were taught a generation or two ago. Because curriculum development has been piecemeal and the structure of the school system has undergone frequent changes there is a lack of proper sequence, coherence of subject matter and integration. The validity, reliability and fairness of the examinations has been questioned often. Textbooks, which are the main teaching aids in lower secondary and secondary grades, suffer from poor design, coverage and educational usefulness.

xi. Teacher effectiveness, another critical element in providing quality education, is low in Nepal. The average number of teachers per school is only about three teachers at lower secondary and five at the secondary level. This means that teachers may be attempting to cover subjects in which they are not specialized, or the official curriculum is not fully covered, or both. Teachers are under-qualified and untrained. Their status is low, with low pay which does not keep up with the rising cost of living, fails to attract well-qualified candidates and leads to widespread moonlighting. Many teachers do not have permanent positions and have to rely on community contributions. The rural areas often fail to attract qualified teachers. Adequate supervision, technical support, professional development and training for teachers are all major needs which are largely unmet.

xii. The distribution of educational opportunities for children from different backgrounds is highly inequitable. Regional inequalities in student participation rates are very apparent with large differences in gross enrollment ratios (GERs) between Kathmandu Valley and the rest of the country. Regional inequalities tend to increase with higher levels of education. On average, there are 39 secondary schools for every 100 primary schools in Kathmandu and this ratio falls to 15:100 in the Central Mountain and Mid-Western Hills districts. Private and Boarding Schools (PBS) and community schools are concentrated in urban and semi-urban areas of relatively better-off regions: 56% of the approximately 290 private lower secondary schools and 200 private secondary schools in Nepal are located in the Kathmandu Valley.

4/ Where 95% of all the students in secondary education are found.

xiii. Although female enrollment in lower secondary and secondary levels is increasing, there remain large gender differences in educational participation. In 1991, the gross enrollment ratio for girls was 26.9% and 19.5% for lower secondary and secondary levels respectively, while the GER for boys was around double in both lower secondary (52.1%) and secondary (44.3%). Region-wise, again Kathmandu Valley had the highest GER for girls. The proportion of female enrollments decreases with increasing levels of education. Female teachers account for only about 10% of the total stock (one female teacher for every 1.7 schools in average) and 59% of all female teachers are in schools in the Kathmandu Valley. There is evidence that the gap in educational participation between the poor and the non-poor is very wide and that ethnic minorities hardly participate in secondary education.

xiv. The private secondary education system, which includes both the private and boarding schools and the community schools, serves a minority of students.[5] The fees charged by PBS schools are about five times those for students in government-aided or community schools. PBS schools are affordable only to the top income/asset groups of Nepalese society. In terms of student achievement, PBS schools perform much better than government-aided schools which in turn perform better than community schools. Private enrollment has been increasing at a fast rate as the poor quality of government-aided schools pushes parents to look for alternative schooling opportunities.

xv. The Government has not invested enough in secondary education. Beyond the underfinancing of the education sector as a whole, there has been a long-term decline in the share of the total education expenditure devoted to secondary education, from about 22% between 1978 and 1980 to about 13-14% during the past few years. Salary support for teachers in government-aided schools consumed 88% of the government contribution.

xvi. Total national expenditure on secondary education and prevailing unit cost estimates establish that it is private financing which has the major role in the financing of secondary education. Parents and community accounted for 74% of total national resources devoted to secondary education in 1991. Even in Government-aided schools, the Government pays for less than half of the total recurrent cost of secondary education. While per-student Government expenditure on secondary education averaged 1.5 times that on primary education, per-student Government expenditure on university education averaged 8.4 times that in secondary education.

The Major Challenges

xvii. In the next few years, major challenges in the development of secondary education would be related to: (i) improving the internal efficiency and the quality of inputs and processes of the subsector, so that a desired level of learning is attained; (ii) promoting equity in secondary education; and (iii) properly addressing and financing the growing demand for secondary education to meet social and production needs. In view of these challenges, the Report's main recommendations discussed below include a set of strategies which would involve reallocating existing Government resources, using them more efficiently, targeting Government programs at specific population groups and mobilizing additional resources.

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[5] PBS schools have less than one-third of the total enrollment in private schools; the other two-thirds attend community schools.

INCREASED EFFICIENCY TO IMPROVE LEARNING ACHIEVEMENTS

xviii. Increased efficiency in the secondary subsector involves interventions to improve learning achievements and the quality of school inputs. This report points to a number of specific proposals to start introducing quality reforms immediately, including strengthening data collection and analysis, finalizing major policy decisions, formulating a national secondary development plan which includes curriculum, examinations and textbooks reform, as well as teacher development and a supervision program.

xix. The quality and accuracy of the educational and financial data needed for planning the development of secondary education needs to be strengthened. This will facilitate the formulation of a national secondary development plan. The process of reforming the curriculum for the entire secondary education is also essential. Work can begin during the Eighth Plan period in Grades 6 and 7, following current reforms in the primary education curriculum, consolidating institutional capacity in curriculum development at central level and building upwards in later phases. Development of the secondary curriculum needs to be conducted alongside development of examinations so that they are coherent and test the same competencies. There is a need to remedy deficiencies in the content, design, affordability and availability of textbooks and to develop reference and reading materials.

xx. A comprehensive 10-year teacher development and teacher training plan is needed to provide upgrading and career opportunities for teacher trainers, serving teachers and new teachers. School principals and supervisors should also be trained and supervisory guidelines need to be reviewed and developed. Finally, a high priority should be assigned to strengthening the quality of private schools, focussing on community schools. Outcome based methods for distribution of financial assistance to community schools should be established.

TOWARDS MORE EQUITABLE EDUCATIONAL OPPORTUNITIES IN SECONDARY EDUCATION

xxi. Sizeable differences in the quality of schooling between economically backward rural and remote areas and the more affluent urban areas are clearly reflected in the availability of qualified teachers, quantity and quality of schools and the overall achievement of the students. Low public investment in secondary education is implicitly tolerating the accumulation of differences in educational opportunities and perpetuating social inequality. The Government can promote increasing levels of regional and gender equity through actions to increase priority for schools and teachers in remote areas including increased incentives, model schools and facilities for higher secondary students from backward regions; extension of the primary teachers' policy of one female teacher per school to the lower secondary and secondary levels; establishment of single sex schools where culturally desirable, provision of uniforms and stationery for girls and assistance for admission into higher education levels; and provision of freeships by the PBS schools for students from poor and remote backgrounds in agreement and coordination with MOEC.

FINANCING THE GROWING DEMAND FOR SECONDARY EDUCATION

Reallocation of Existing Government Resources to Improve Quality and Equity

xxii. Although secondary education already suffers from major problems of quality, efficiency and equity which are not being adequately addressed, the Government is further compounding these difficulties with the introduction of the free secondary education policy in the face of continuing resource constraints. Existing resources in the secondary sector are not efficiently utilized due to low internal efficiency and poor quality and a large number of school-age children are not in secondary schools, especially those living in the rural areas and the less developed regions of the country. However, the Government is exempting secondary students in government-aided schools from paying tuition and compensating such schools with additional resources in the form of teacher salaries and other subsidies.

xxiii. While this policy reduces the economic burden for poor families with children in secondary schools, it also reduces private financing of secondary education from families who would otherwise be able to afford the tuition fee. The Government's additional resources to schools to compensate for their tuition loss will have very high opportunity costs: such resources could be used to improve the quality of government-aided or community schools, to promote equity in secondary education, or to provide additional student places in government-aided schools. The policy can be a form of redistribution of Government resources such that the gains of parents in Kathmandu and other urban areas are linked to the losses of parents in the rural areas of Nepal.

xxiv. The policy creates a significant challenge to the Government to search for additional public resources. It is estimated that if the Government continues with the current practice of not charging tuition to Grades 6 and 7 students, the total recurrent cost of secondary education to the Government will be about NRs. 3,956 million in the Eighth Plan period and about NRs. 5,761 million in the Ninth Plan period. In other words, it will cost the Government about 38% more in the ten-year period to fully compensate government-aided schools for the loss in tuition revenue from Grades 6 and 7 students, as compared to the case where no free secondary education policy existed. If the free-tuition policy were extended to Grades 6-10, this would add 50% to the Government financial commitment to the secondary sector. This case would require a very high and unsustainable average annual growth rate (in real terms) in Government expenditure on secondary education: 12.0% during 1993-1997 and 11.5% during 1998-2002.

xxv. The introduction of the free secondary education policy will compound the difficulties if the Government honors its commitments in the primary and higher education subsectors, where a large proportion of the expenditures represents investments in quality improvements which will have important pay-offs in the medium- and long-term and without which the education system would continue to deteriorate and call for much larger investments in later years. Government resources in the secondary sector would be much better spent on quality improvements.

xxvi. In sum, the free secondary education policy should be discontinued. If this is not politically feasible, the scope of the policy should be limited and the pace of implementation should be slowed down as much as possible. Instead, the Government resources should be reallocated to

improve the quality of government-aided schools and community schools, to promote equity in secondary education, or to provide additional student places in government-aided schools.

Higher Secondary Education Reform

xxvii. Cost savings could be achieved in the secondary education subsector with the Higher Secondary Education Reform. This reform is mainly aimed at mitigating the impact of the large projected enrollment increases in Grades 11 and 12 on Tribhuvan University campuses. There are other important rationales for introducing the reform, such as international comparability for secondary qualifications, discipline of young students, the need for Tribhuvan University to upgrade its bachelor degrees and so on. However, in view of the high per-student public expenditure in the university, efficiency in the education sector would also be improved with measures that would achieve cost savings, such as the Higher Secondary Education reform. The reform consists in extending by two years the secondary education offered in schools beyond the SLC in Grade 10 to "higher" secondary level in Grades 11 and 12. SLC pass students would continue to study within the school system rather than switch to university campuses which currently accommodate them. Concomitantly, the Certificate Level courses, which cater to the equivalent student cohorts, would be dropped from the campuses. The report shows that the net savings in Government regular costs could become substantial: by the year 2001/02, HMG's net regular costs savings are projected to exceed NRs. 50 million, which is equivalent to about 22% of the regular costs in the "without 10+2" case.

xxviii. The report recommends that the Higher Secondary Education Reform be introduced with the help of a Master Plan and in the context of a national plan for secondary education development. The Government would need to ensure adequate contributions in terms of teachers and facilities from Tribhuvan University, increased cost recovery from the higher secondary students and a plan based on the results of the present introductory phase.

Increased Private Sector Role

xxix. With high population growth, higher development and improvements in primary education, enrollments in secondary education are destined to increase at a rapid pace. The government's resources to the education sector are limited and therefore, increased enrollments will have to be accommodated by both the government and the private sector. In order to compensate for the low public investment, the Government can stimulate the provision of private education by providing further incentives to the establishment and operation of private schools, and reducing barriers to private education. The report discusses several options such as private ownership of private schools, assistance to private schools to secure loans for construction of school buildings, indirect subsidies and the streamlining of the regulatory framework for private education.

xxx. The report calls for the Government to allow private ownership of private schools, distinguishing between proprietary schools and non-profit schools. Subsidized loans to private schools for school construction are not recommended, as the granting of private ownership should be a sufficient incentive for setting up private schools. The report also suggests that the Government should do more to encourage establishment of community schools: by promoting the sense of community ownership of such schools, providing indirect subsidies (such as free land and tax exemption on education items) and enabling an increased community control of the School Management Committees.

Education Expenditure Requirements

xxxi. The level of education expenditures that would be needed during the Eighth Five-Year Plan will be substantial. A large proportion of these expenditures in the primary and higher education subsector represents investments in quality improvements which will have important pay-offs in the medium and long term, and without which the education system would continue to deteriorate and call for much-larger investments in later years. Estimates indicate that the sector allocation under the Eighth Plan may fall short of the needs. The free secondary education policy will exacerbate the resource shortage. Thus, the Government runs the risk of having to cut back on needed quality reforms in the subsector or even in other education subsectors.

xxxii. Given the resource situation (the sector allocation under the Eighth Plan represents about 8 percent real increase), the Government will need to select the combination of programs within secondary education which will best contribute to improving the quality of government-aided schools (and community schools), promoting equity and financing the growing demand for secondary places. In this context, a review of the free secondary education policy should be the priority choice. Savings could then be allocated to the quality and equity improvements recommended above. Initial reforms in the higher secondary grades should proceed concurrently.

Chapter I: INTRODUCTION

A. The Growth of Secondary Education

1.1 Durbar High School, the first secondary school in Nepal, was founded 140 years ago. For the next century education remained the right of the sons of the Nepali urban elite. Table 1.1 traces the development of secondary education since 1971. Enrollment growth has escalated from some 120 thousand to 774 thousand in the past 20 years, more than a six-fold increase. Gross enrollment ratios [6] more than doubled during the 1971-1981 decade and further increased by 76% during the 1981-1991 years. The current total gross enrollment ratio is 36%. Despite the fact that gross enrollment ratios grew faster in the case of female students,[7] they still lag behind those of boys by 25 percentage points. Enrollment rates also vary widely across regions.

1.2 New secondary schools have been established at a rate of some 250 schools per year. Schools tend to be small with a mean of 94 students per lower secondary school and 190 at the secondary level. From 1976 to 1991 the total number of teachers in lower secondary schools increased from 7,930 to 13,005 (64%). In the secondary schools, the number of teachers increased more rapidly during the same period, from 3,449 to 11,627 (237%). Unfortunately, the shortage of trained teachers and the student-teacher ratio have also continued to increase during this period.

1.3 The major objective of the system remains to provide access to higher education. The 1971 National Education System Plan (NESP) tried to impart a different character to the secondary level which would allow some students in vocational streams to leave at the end of Grade 10 prepared for employment in the local community. However, the planned vocationalization of secondary education failed because of lack of funding, weak linkages with the labor market, and lack of motivation and demand on the part of the students.

1.4 The current Eighth Five-Year Plan (EFYP) states that the objective of secondary education is "to produce self-reliant citizens who cherish the dignity of labor, who have faith in the nation and democracy, who are wakeful to the need of maintaining the balance of nature, and who have high regard for the moral, cultural and social values; and to instill in them the knowledge and skills required for the higher secondary level". The goal for the higher secondary level is" to produce the medium level manpower, capable of making solid contributions to the all-round development of the country, and to impart to them the basic knowledge required for receiving graduate-level education".[8]

6/ Gross enrollment ratios represent total enrollment as a percentage of school age population. In the case of lower secondary and secondary education, school age population includes ages 11-15. There is no detailed information on the age structure of students enrolled in schools in Nepal and therefore net enrollment ratios are not available.

7/ The proportion of girls as percentage of total enrollment doubled in the last 20 years while the proportion of boys fell from 85% to about 60% of total enrollment. At primary level girls make up 36% of the enrollment.

8/ HMG - National Planning Commission (1993), Education and Culture, (excerpts from the Eighth Five-Year Development Plan, unofficial translation), Kathmandu, Nepal.

Table 1.1: Historical Evolution Of Secondary Education In Nepal, 1971-1991

			1971	1976	1981	1986	1991
1.	Number of Schools						
	Lower Secondary		677	2,289	2,786	3,731	4,045
	Secondary		494	520	918	1,411	2,079
2.	Enrollment						
	Boys:	Lower Secondary	44,255	57,786	135,203	202,162	259,298
		Secondary	56,612	61,524	117,065	206,980	281,768
		Total	100,367	119,310	252,268	409,142	541,066
	Girls:	Lower Secondary	8,521	12,274	34,361	69,082	119,180
		Secondary	10,229	12,536	27,266	61,825	113,562
		Total	18,750	24,810	61,627	130,907	232,742
	Total:	Lower Secondary	52,776	70,060	169,564	271,244	378,478
		Secondary	66,841	74,060	144,331	268,805	395,330
		Total	119,617	144,120	313,895	540,049	773,808
3.	Gross Enrollment Ratio (%)						
	Boys:	Lower Secondary	15.3		36.4		52.1
		Secondary	15.5		25.6		44.3
		Total	15.4		30.4		47.7
	Girls:	Lower Secondary	3.6		10.9		26.9
		Secondary	3.2		6.8		19.5
		Total	3.4		8.6		22.7
	Total:	Lower Secondary	10.0		24.7		40.2
		Secondary	9.8		16.8		32.4
		Total	9.9		20.3		35.8
4.	Numbers of Teachers						
	Lower Secondary:	Total	-	7,930	10,820	12,493	13,005
		Trained (%)	-	38	40	41	34
	Secondary:	Total	-	3,449	4,909	9,290	11,627
		Trained (%)	-	50	63	49	44
5.	Indicator Ratios						
	a. Enrollment per School						
	Lower Secondary		78	31	61	73	94
	Secondary		135	142	157	191	190
	b. Enrollment per Teacher						
	Lower Secondary		-	8.8	15.7	21.7	29.1
	Secondary		-	21.5	29.4	28.9	34.0
	c. Girls as % of Total Enrollment						
	Lower Secondary		16	18	20	25	31
	Secondary		15	17	19	23	29

Sources: HMG-MOEC-USAID (1988), Nepal Education Resources Sector Assessment, Tables 5.1 and 5.3), IEES, Florida;
HMG-MOEC (1990), Educational Statistics of Nepal at a Glance (1986-90), Kathmandu;
HMG-CBS (1992), Population Census, 1991 (Advance Tables), Vol. 1: Kathmandu, Nepal
HMG-CBS (1991), Statistical Yearbook of Nepal 1991, Kathmandu.

1.5 Despite the rapid expansion of secondary enrollments, a great majority of the school-age children still do not attend secondary school. Projections of secondary enrollment for the period of the Eighth and Ninth Development Plans (1992-2002) indicate, however, that the system will double in the next 10 years (see Annex 1: Enrollment Projections). This enrollment explosion is due in part to demographic factors, increased participation and increased quality in primary education.[9] Assuming (a) that the population growth rate remains at 2.6% for 1992-1997 and declines to 2.5% for 1997-2002; (b) that primary education grows at modest rates of 3.12% (1992-97) and 3.18% (1997-2002); and (c) that the system achieves small gains in internal efficiency, Table 1.2 projects average annual enrollment growth rates of 5.9% to 7.8% in lower secondary and secondary students and up to 8.7% for current certificate level students.

Table 1.2: Enrollment Growth Summary

	1991/92	2001/02	Average Annual Growth Rate (%) 1992-97	1997-02
Students ('000)				
Primary (Grades 1-5)	2,972.7	4,053.1	3.1	3.2
Lower Secondary (Grades 6 and 7)	389.5	779.6	7.8	6.6
Secondary (Grades 8-10)	417.4	780.3	5.9	7.0
Higher Secondary (Grades 11 and 12)/a	78.6	166.7	8.7	6.9
Total Secondary	885.5	1,726.6		

/a These students currently attend Tribhuvan University Certificate Level Courses.
Source: Mission estimates.

1.6 Using constant student/teacher and student/school ratios by region for 1991, the following are projections for the number of teachers and schools in the lower secondary and secondary levels that would be needed during the next 10 years:

Table 1.3: Projections For Teachers And Schools In Lower Secondary And Secondary Education

	Teachers		Schools	
	1991/92	2001/02	1991/92	2001/02
Lower Second	13,282	26,259	4,171	8,473
Secondary	12,269	22,571	2,197	4,134

Source: Mission Estimates

9/ In order to project enrollments in the five development regions and three ecological zones, average annual lower secondary and secondary enrollments growth rates were estimated for the 16 regions between 1985/86 and 1990/91. This was then extrapolated for the projected years. The pattern of secondary enrollments is highly consistent with the demographic/migration patterns discussed in other studies, i.e. the higher rates of enrollment growth are observed in the Terai while lower rates of enrollment growth are in the Mountains and Hills. In addition, rates of enrollment are not growing as fast in the Western Region as in the Far Western and Mid-Western.

B. The Development of the School System

1.7 Mass education was non-existent for most of the time during the Rana regime (1846-1950). Only the privileged few had education opportunities abroad or in the very few schools in Nepal. In 1939, the Government allowed the communities to establish and run schools to provide education to the common people. Since the end of the Rana regime in 1950, education became accessible to an increasing percentage of the population. In the 1950s, education was loosely organized, with several systems of schools existing side by side, including the English-type schools which were accredited on the basis of the Oxford and Cambridge examination, and the Nepali/Hindi/Sanskrit schools providing a "classical" and religious education.

1.8 The Ministry of Education was established in 1951 and planning for educational development began only with the Fourth Five-Year Development Plan (1970-1975). Between 1950 and 1970, education expanded rather rapidly. Very few of the existing schools were government schools. Some of the independent or private schools started to offer boarding facilities; these school were reputed to have high quality and were attended by the children of the elites. The 1971 NESP introduced a new national system of "public" education. All the different types of schools were brought under the national system and the Government paid for 100%, 75%, and 50% of the teachers salary respectively at the primary, lower-secondary, and secondary levels. Except at the pre-primary levels, no new private schools were permitted. Financial and other reasons led the government to modify its education policy in 1980. Grants to private schools were withdrawn. The Seventh Amendment of the Education Act allowed private schools to open again and to be financed by private sources.

1.9 Today, there are essentially three types of schools in Nepal. Government schools are government-aided schools. In 1992, the government increased financial support for teachers in government-aided schools so that it currently pays 100% and more than 60% of teacher salaries respectively at the lower-secondary and secondary levels. There were a little over 300 Private and Boarding Schools (PBS) with Grades 6-10 in 1992. PBS schools are represented by the Private and Boarding Schools' Organization (PBSO). PBS schools are almost exclusively founded and operated by individuals; very few such schools are run by non-profit or religious organizations. Although some founders and/or operators of PBS schools are genuinely interested in providing education services to their community, a substantial number of them are said to be driven primarily by a profit-making motive.

1.10 Community schools are schools founded by the community since 1980 that are potentially eligible for government grants-in-aid; there were an estimated 1089 community schools in 1991. In Nepal, these community schools are also called "proposed" schools. The community first constructs and operates these schools and hopes that they will eventually be converted into government-aided schools when the Government has sufficient funds. During the Seventh Plan period (1986-91), community schools did not receive any financial aid. But they are starting to receive some aid for teacher salaries from the government during the Eighth Plan period. Community schools do not have a national organization that represent their interests.

1.11 In the education statistics of Nepal, community schools and PBS schools are classified as private schools. However, community schools and PBS schools are two very different types of private schools. PBS schools are the most elitist and highest performing schools in Nepal and they serve a small minority of students. On the other hand, community schools are at the bottom of the school hierarchy, especially in terms of financial resources and academic performance.

1.12 The school system has been re-structured at least four times during the past twenty years. Initially there were three years of lower secondary and two years of secondary education after the five-year primary cycle (5+3+2). The NESP changed to four years of lower secondary and three years of secondary, following three years of primary education (3+4+3). In 1981, the (5+2+3) structure was introduced. The National Education Commission recently recommended that, beyond the five years of primary education, secondary education should consist of three levels: lower secondary (Grades 6, 7 and 8), secondary (Grades 9 and 10) and higher secondary (Grades 11 and 12) (5+3+2+2). Following the NEC recommendation, the Education Act (Fifth Amendment) has just introduced this new structure.

C. The Current Education Policy Context

1.13 The entire educational system in Nepal is currently facing structural changes which reflect Government plans and which will have major consequences for quality, efficiency and access to education. The Government has recently recognized the need to improve the quality of the primary school system, increase access for the 6-10 year old children towards universal primary education and strengthen the management capacity of the subsector.

1.14 Primary education in Nepal is characterized by low levels of internal efficiency, low access of educational opportunities and poor educational quality. Dropout and repetition rates are high: these rates are particularly heavy in Grade 1 with 24% of students leaving school and 40% repeating the first year of school. Sixty-five percent of the children enrolled in Grade 1 drop out by the end of Grade 5. Overage and underage children fill many of the primary places in schools. Only 60% of the boys and 30% of the girls between the ages of 6 and 10 are actually enrolled in primary school. Internal and external factors contribute to this situation. Within the primary school system, the quality of the physical facilities is poor, especially in rural areas. There is widespread lack of teaching materials and teaching aids and only a small minority of the teachers is trained. The lack of participation and attendance in primary schools is also due to the high opportunity cost of the child labor, especially the girls engaged in minding their siblings.

1.15 Current projects in the primary subsector emphasize increasing the quality and efficiency of primary schooling by simplifying and making more relevant the curriculum, improving the quality of school buildings, training the primary teachers and improving the instructional materials. In addition, girls, the very poor and those in remote areas will have increased opportunities to receive a basic education. Progress is also being made in the management of primary education. Nepal is at the early stages of the improvement process and to achieve a system of reasonable quality will requiremany years of steady investment before quality improvements are fully institutionalized and universal primary education is achieved.

1.16 Resolving the problem of a low performing university has been another priority of the Government in recent years. Tribhuvan University, virtually the only provider of higher education in the country, suffers from a runaway enrollment growth mainly at the certificate level, chronic underfinancing, a highly centralized and ineffective management structure, poor physical facilities and outdated curricula. Enrollments at the university have risen from about 23,000 in 1975 to about 150,000 in 1992. The proportion of the Government's education budget devoted to higher education has declined and, since the declining resources have been spread over an increasingly large student body, the allocations per student have also decreased. There is very little cost recovery. Recently, University authorities started to increase charges and reduce subsidies. Tuition fees which had not been changed for the past 17 years, were doubled in 1991 from NRs. 20 to NRs. 40 per month. The extremely low quality of higher education is mainly evident in the obsolete curricula for most courses, a centralized examinations system which reinforces utilization of the old curricula and lack of sufficient books and other instructional inputs. Only 10% of the students are enrolled in engineering, agriculture, forestry or medicine; the rest attend humanities and social sciences.

1.17 Appropriately, recent Government strategy on higher education focuses on cost containment, improvements in educational quality and efficiency and greater resource mobilization. An IDA Higher Education Project will provide support to the ongoing reform process at Tribhuvan University by supporting the implementation of a package of administrative, financial and management changes in higher education. The project will initiate and facilitate reforms designed to regulate the growth of enrollments, improve resource utilization and cost recovery, implement a higher secondary education program in collaboration with the Ministry of Education and improve the quality and management of higher education.

1.18 Two recent strategic policy decisions affecting secondary education, namely the introduction of free secondary education and the implementation of the higher secondary education, are also among the Government reform plans. As a result of a campaign promise during the 1990 elections, the government has introduced a free secondary education policy by which students in government-aided schools do not have to pay tuition (which ranges between NRs. 40-60 per month). Because of financial constraints, the Government plans to implement this policy in a phased manner. The cost of this policy will be substantial. It is not clear yet whether the policy will cover only lower secondary grades, secondary grades up to Grade 10 or even include the higher secondary Grades 11 and 12. In 1993, all Grades 6 and 7 students in government-aided schools do not have to pay tuition.

1.19 The "10+2" initiative is envisaged as extending secondary education by two years to higher secondary level in Grades 11 and 12. Students who pass the SLC examination would continue to study within the school system rather than switch to university campuses which currently accommodate them. Concomitantly, the Certificate Level courses, which cater to the equivalent student cohorts, would be transferred to higher secondary education. The reform is perceived as a means of mitigating the burden of the large projected enrollment increases in Grades 11 and 12 on Tribhuvan University, meeting the need to upgrade Tribhuvan University degree courses to international standards, dealing with concerns about closer supervision for younger students and achieving better quality education.

D. The Changing Economic Context

1.20 While Nepal is still a predominantly agricultural country, the economy is very gradually shifting away from primary production, to secondary and tertiary production. Agriculture has declined from 57% of the GDP in 1981/82 to 53% in 1990/91. Meanwhile, manufacturing has grown from 4% to 6.7%, electricity gas and water from 0.3% to 0.8%, trade, restaurants and hotels from 3.4% to 5.3%, transport and communications from 6.4% to 8.7%, and community and social services from 7% to 7.4%.[10] This gradual transformation is also evident in the changes in distribution of the economically active population by sector. As Table 1.4 shows, agricultural employment as a share of the economically active population declined from 1981 to 1991, while manufacturing, construction, commerce, transport and communication grew considerably.

Table 1.4: Economically Active Population Aged 10 And Above By Economic Sector, 1981-1991

Sector	1981 Persons	1981 %	1991 Persons	1991 %	Annual Growth Rate(%)
Agriculture	6,244,289	91.15	5,773,330	80.50	-0.78
Mining and Quarrying	971	0.01	2,140	0.03	8.22
Manufacturing	33,029	0.48	124,220	1.73	14.16
Electricity, Gas and Water	3,013	0.04	5,300	0.07	5.81
Construction	2,022	0.03	53,900	0.75	38.86
Commerce	109,446	1.60	239,830	3.34	8.16
Transport and Communication	7,424	0.11	43,400	0.61	19.31
Finance and Business	9,850	0.14	18,780	0.26	6.67
Person and Community Service	313,570	4.58	768,730	10.72	9.38
Others and not stated	127,272	1.86	119,508	1.67	-0.63
Total	6,850,886	100.00	7,172,060	100.00	

Note: The 1991 figures which are based on a 10% sample have been multiplied by 10 in order to obtain figures comparable to the size of the work-force in 1981 to calculate the percentage change.

Sources: Statistic Yearbook of Nepal, 1991, p. 23; 1991 Census - Advance Tables.

1.21 Agricultural production is still at the subsistence level. Since agriculture is directly linked with the employment and income of the majority of people, improvement in the sector is critical to alleviating poverty, as well as to meeting the needs for raw materials for agro-based industries. The manufacturing sector is still small, but is rapidly growing. Manufacturing has been significantly diversified and the export of carpets and garments grew rapidly in the 1980s. Labor markets will need to change and knowledge, skills and attitudes will need to stay abreast of these developments.

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[10] Economic Survey, Fiscal Year 1991-92, Ministry of Finance, 1992 (p. 17).

1.22 The Eighth Five-Year Development Plan. The Plan seeks to achieve sustainable economic growth, the alleviation of poverty and a reduction of regional imbalances.[11] The Plan estimates that a 5.1% average annual growth rate could be achieved during the period. Table 1.5 shows the growth rate of total and sectoral value added. Although agriculture is by far the largest sector in Nepal, its expected value added growth is about 60% that of the non-agricultural sectors combined. The major growth sectors are expected to be industry and mining and electricity, gas and water. In the industry and mining, construction, trade, hotel and restaurant and finance and real estate sectors, growth will be led primarily by private sector investment. In electricity, gas and water, transport and communications and social services the government will take the lead role.

Table 1.5: Growth Rate Of Total And Sectoral Value Added /a
(In millions of NRs. at 1991/92 prices)

	1991/92		1996/97		Growth Rate
	Amount (NRs.)	Share (%)	Amount (NRs.)	Share (%)	1992-97 (%)
Total Value Added	113,024	100.0	142,992	100.0	4.8
Agriculture, Irrigation and Forestry	62,712	55.5	75,364	52.7	3.7
Non-agriculture	50,312	44.5	67,628	47.3	6.1
Industry and Mining	7,283	6.4	12,169	8.5	10.8
Electricity, Gas and Water	1,054	0.9	1,617	1.1	8.9
Construction	9,408	8.3	11,604	8.1	4.3
Trade, Hotel and Restaurant	5,995	5.3	8,685	6.1	7.7
Transport and Communication	6,878	6.1	8,548	6.0	4.4
Finance and Real Estate	9,321	8.3	11,735	8.2	4.7
Social Services	10,372	9.2	13,270	9.3	5.0
Indirect Tax	8,038		12,168		8.6
GDP (at Market Price)	121,062		155,160		5.1

/a 1996/97 projections and growth rates are based on estimates of sectoral production for 1991/92 and earlier years. These estimates are subject to revision on the basis of on-going efforts to improve both agricultural and non-agricultural production data. Revisions may lead to changes in estimated savings, investment and other macro-economic variables as well as changes in base year sectoral production.

Sources: Eighth Plan (1992-1997), National Planning Commission.

1.23 As a result of the new political environment and the favorable expectations created by the new democratic government, the changing economic policies and the Eighth Plan will have a direct impact on the labor market. The expected pattern of growth in employment, by sector, may correspond to the above patterns of growth in value added. Although in absolute terms, employment growth would be much larger in agriculture than in all other sectors combined, the share of agricultural employment in total employment is expected to decline by the end of the Eighth Plan, while the share of non-agricultural employment is expected to increase. Labor demand in the industry

11/ HMG, National Planning Commission. "Eighth Plan (1992-1997) - Summary", Kathmandu: National Planning Commission, July 1992.

and mining sector is expected to almost double during the five-year period. With labor demand growing at a rate of 3.1% per annum, a total of over 1.4 million jobs will need to be created (or close to 300,000 jobs per year).

1.24 A considerable imbalance exists between the supply of skilled labor, however, and the demand of the Nepali economy. A labor force with low levels of educational attainment is not likely to be able to take advantage of the more favorable policy environment being promoted. According to the 1991 Population Census figures, the educational attainment of the economically active population is extremely low. About 65% are illiterate and 12.4% of the total have no schooling. The illiteracy rate among females is as high as 83%. Only 11.4% of males and 4.2% of females has had primary education, and 10.7% of males and 2.6% of females had secondary education (Table 1.6). While the new entrants to the labor market will in general have higher educational attainment, given Nepal's low enrollment ratios, few possess the skills needed to propel economic growth.

Table 1.6: Educational Attainment Of Economically Active Population Age 10+

	Total	%	Male	%	Female	%
Illiterate	4,665,620	65.05	2,264,480	52.78	2,401,140	83.32
No School	887,360	12.37	697,470	16.26	189,890	6.59
Primary	612,460	8.54	490,610	11.44	121,850	4.23
Secondary	533,120	7.43	457,840	10.67	76,280	2.65
S.L.C.	167,990	2.34	150,070	3.50	17,920	0.62
Certificate	72,940	1.02	65,320	1.52	7,720	0.26
Bachelor's	54,160	0.76	48,900	1.14	5,260	0.18
Post-graduate	12,360	0.17	10,790	0.25	1,570	0.05
Others	80	0.00	80	0.00	0	0.00
Not Stated	165,960	2.31	104,610	2.44	61,350	2.13
Total	7,172,060	100.00	4,290,170	100.00	2,881,890	100.00

Source: Population Census -- 1991, p. 42 (figures based on 10% Census sample).

1.25 The trend of growing urban sector employment indicates changing skills requirements in the labor market and has special implications for employment opportunities of secondary school graduates. For example, services jobs (which have experienced considerable growth) include the broad category of positions in tourism, catering, and hotel business, as well as personal and community services. This is the field in which language skills, particularly proficiency in a foreign language, entrepreneurship, and management and marketing skills can provide handsome economic returns. In industry, the skills requirements are predominately in two levels -- the supervisory, skilled and semi-skilled personnel at the factory level; and high level manpower would be required in scientific, technological and managerial disciplines.

E. Education for the Year 2000 and Beyond

1.26 Extensive historical data across countries as well as empirical work show that education is a very important policy instrument which can stimulate economic growth, improve agricultural and industrial productivity and reduce poverty. In Asia, Japan's rise as a major economic power has been attributed, in part, to its highly educated and education-conscious population. In the early 1960's,

Korea's relatively strong base of human capital was key to its technological capability and the fast rise in its industrial output. Kenya's attainment of almost universal primary education and increased enrollment in secondary schools, contributed to a much better than average economic performance among sub-Saharan African countries. Research for the World Bank's 1991 World Development Report suggests that increasing the average amount of education of the labor force by one year, when this average is three years or less, raises aggregate real output by 9%.[12]

1.27 Evidence of the contribution of education to economic growth and agricultural output has been documented in Nepal since the 1970s. The evidence seems to be consistent with findings from other countries. Several studies dealing with the effects of education on productivity in agriculture and conducted in a few regions and districts[13], showed that education made a positive contribution to agricultural output, showing higher efficiency results in modernizing farms than in traditional farms. During the early 80s. Pudasaini [14] re-examined the effects of education in agricultural output in a modernizing economic environment as opposed to a more traditional one. The study showed that an increase in the average education of a farm operator by one year expanded output by 5.2% in the Terai and 5.9% in the Hill region.

1.28 Jamison and Moock [15] in a study of 683 households in Bara and Rautahat districts of Central Terai, near the Indian border, examined the mechanisms of education's effects on efficiency, as well as the impact of a newly introduced training and visit extension service in the area. Their study found a positive effect of education on efficiency for the then newly introduced wheat crop, confirming previous studies which stated that education is important for adapting to changing circumstances. Education helped the farmers adapt and innovate in an environment of changing prices and technology and produce a larger output from given quantities of input. The latest estimates on the contribution of education to economic growth are found in the Education and Human Resources Sector Assessment.[16] Table 1.7 summarizes results from this study and shows that the highest returns are found in primary, lower secondary and secondary education. Private rates of

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12/ King, Elizabeth, P. Glewwe and W. Alberts Human Resource Development and Economic Growth: Ghana in the Next Two Decades, The World Bank, PHREE Background Paper Series, 1992.

13/ Sharma, S.F. (1974) Technical efficiency in traditional agriculture: An econometric analysis of the Rupandehi district in Nepal. Unpublished master's thesis, Australian National University.
- Pudasaini, S. (1976) Resource productivity, income and employment in traditional and mechanized farming of Bara District, Nepal. Unpublished master's thesis, University of the Philippines at Los Banos.
- Calkins, P. (1976) Shiva's Trident: The effect of improving horticulture on income, employment and nutrition. Unpublished doctoral dissertation, Cornell University.

14/ Pudasaini, S. (1982) Education and Agricultural Efficiency in Nepal, Population and Human Resources Division Discussion paper No. 82-3, The World Bank; and (1983) The Effects of Education in Agriculture: Evidence from Nepal, in American Journal of Agriculture Economics (August).

15/ Jamison, Dean T. and Peter R. Moock (1984) Farmer Education and Farm Efficiency in Nepal: The role of Schooling, Extension Services, and Cognitive Skills. The World Bank, Washington, D.C.

16/ HMG/USAID/IEES (1988) Nepal: Education and Human Resources Sector Assessment, Florida State University, Florida.

return are not available. There is a 1976 cost-benefit study which shows private rates of return for higher education higher than social rates of return, reflecting the highly subsidized subsector.

Table 1.7: Social Rates Of Return To Education In Nepal

Education level	Percentage return
Primary education(1-5)	over 100
Lower Secondary(6-7)	29.1
Secondary(8-9 only)	15.0
Secondary (10, SLC)	7.5
Certificate (11-12)	8.0
Bachelors	21.7

Sources: IEES study, Table 2.85 (page 2-162)

1.29 Education for Basic Needs. As emphasized in the Eighth Plan, basic literacy and numeracy are preconditions for democratic decision making and for making effective participation in the design, planning, and implementation of development projects. Literacy and numeracy represent basic needs for survival in all modern societies. Education a powerful enabling condition for the improvement of health and fertility regulation. As Nepal moves from a traditional society toward modernity, these are the essential conditions of human resource development, without which the country cannot attain economic development. Today the gap between the reality and these essential conditions is large, especially in the rural areas, where 90% of the population lives. The best contribution that education can make to continued agricultural growth would be expanded primary education (especially in rural areas) in order to assure the widespread presence of at least basic literacy and numeracy. In this regard, the desirability of combining primary education with the lower secondary cycle in a so called "basic education cycle"-for-all would not be appropriate for a country like Nepal, where 50% of the children are not in school and, of those enrolled, only half attend regularly. Retaining children in school and having them complete five years is already an immense challenge and should remain the focus of the Eighth and Ninth Plan periods. Attempts at spreading already scarce resources over a basic eight-year cycle may result in further loss of enrollments.

1.30 Education for Development. Economic growth and development is accompanied by diversification of markets, in accordance with rising levels of income and expectations. This market development generates a variegated range of employment opportunities, including processing of primary sector products, production of producer and consumer goods, marketing, transportation, sales, services, etc. The challenge of the education system in Nepal is to provide, in a cost-effective way, the kinds of knowledge and skills needed to meet the labor market demand. Widespread literacy and numeracy represent a necessary but not sufficient human resource base for national economic growth and development. Higher level knowledge and skills are also necessary.

1.31 The crucial importance of primary education in national development has long been understood. There is a growing body of evidence that also general secondary education is important for achieving a wide range of social, economic, and political outcomes central to development planning and public policy. Women's status, fertility behavior, health, nutritional practices, agricultural productivity under technology intensive conditions, self-employment, political beliefs and values may be more strongly influenced by secondary education than by primary education. General

secondary education not only provides information and understanding, but also increases the capacity to absorb new information and to learn new skills.

1.32 Social and economic returns to secondary education are high in Nepal. Apart from the contribution of education to health, population control and life expectancy, educational gains would make a significant contribution to growth. More rapid and larger increases in investment in the sector could contribute to the provision of educational opportunities to a larger share of the population, thus also improving equity. Poverty reduction would result as a consequence of both, increased output and greater access and equality. The need for technical manpower, efficient managers and potential entrepreneurs as well as increased participation of women at all levels of education would further contribute to increased efficiency, equity and growth. Without at least a full primary education and increasing provision of lower secondary and secondary schooling, needed for many jobs, Nepalese workers are unlikely to have the knowledge and adaptability required in the evolving economy.

1.33 Human capital investments must also ensure that every group realizes its economic potential. For example, young people living in the Kathmandu Valley have approximately three times the probability of attending lower secondary and secondary school as young people from the rest of the country. The geographic distribution of education and training services is partly an equity issue, but it is also partly an efficiency issue. From an equity point of view, the issue concerns the equitable allocation of public resources, the distribution of political power and the fruits of development. From an efficiency point of view, the issue concerns allocation of scarce education and training resources where they are needed most and can yield the highest benefits. In this regard, also the role of women is crucial to the development process. Achieving a more balanced educational development, involving a closer correspondence between population distribution and distribution of educational services, as well as improvements in female participation, should be treated as a national development priority.

Chapter II: THE QUALITY OF SECONDARY SCHOOLS

A. Quality of School Outcomes

2.1 Two thirds of the Nepali students who enroll in primary education do not continue into lower secondary and one quarter of those who do enter Grade 6, drop out after Grade 7. In 1992, about 210,000 students entered the secondary school system but fewer than 160,000 are expected to complete lower secondary school. As the school age population bulge gets bigger, the absolute numbers of young children who have less than eight years of formal education will also rise unless dropout rates fall drastically. By the year 2002, there are projected to be over 400,000 students in Grade 6 of whom 100,000 would not reach Grade 8. Given the deficiencies of educational quality inputs both in primary and lower secondary schools, it is unlikely that these school dropouts, around thirteen years of age, will have achieved the competencies and life skills required to enter productive employment.

2.2 There is no yardstick as yet by which the learning gains of early dropouts can be accurately measured. Schools regularly run teacher-constructed tests but these are not at all valid and reliable. Annual district-based examinations are also of uneven quality. Nepal does not yet have the capacity to run national assessments of educational performance which would enable comparisons of educational achievements to be made at various levels of the school system. Tracer studies of early dropouts could be mounted to assess their school-derived competencies. It is likely that such studies would reveal that early dropouts rarely have the knowledge and skills to enter paid employment and that the majority, stay at home, enter subsistence farming or the informal sector.

2.3 Internal Efficiency. Efficiency in the secondary education system in Nepal is low. The reported [17] repetition and dropout rates for 1988, 1989, 1990, and 1991 show that the heaviest dropout occurs in Grade 7, at the end of the lower secondary cycle and the heaviest repetition occurs in Grade 10 (actually double the repetition rate in Grades 8 and 9). Using the reconstructed cohort method to map the flow of students from Grade 6 to Grade 10 (as shown in Annex 2), it is found that only two-thirds of the students will eventually complete Grade 10. Assuming the appearance rate of regular students at the SLC examination of 80% and the pass rate of 40%, only 26.7% of the cohort pass the SLC for the first time they take it. Similarly, assuming a compartmental and exempted students' appearance rate at the SLC of 80% and pass rate [18] of 47%, an additional 10% of the cohort will eventually pass the SLC exam by re-taking it. In total, only 37% of the student cohort that enters Grade 6 will pass the SLC. [19]

17/ The MOEC has estimates of promotion, repetition and dropout rates for 1987/88, 1988/89, 1989/90 and 1990/91. The 1989/90 estimates were available only for Grades 1 to 5. The 1990/91 estimates did not have information on four districts (Kathmandu, Morang, Kailali and Banke). Because these rates fluctuate from year to year and the information is incomplete for the most recent years, a best estimate judgement was made with the above estimates.

18/ Compartmental candidates are those students re-taking one or two subjects only; exempted candidates re-take the entire examination.

19/ If we considered a student cohort of 1,000 entering Grade 1, only 15% will eventually pass the SLC.

2.4 If the Grade 10 students are regarded as output of the secondary education system, the input-output ratio is 1.37. In a perfectly efficient education system where there is no repetition and dropout, this ratio would equal one. Thus the system is operating at the efficiency rate of 72.9%. However, if only SLC passers are considered as output of the education system, the input-output ratio is 2.50, meaning that the school system uses two and a half times more input than that of the optimal system. The efficiency rate is only 40%.[20] Another way of illustrating the internal efficiency of the Nepal secondary school system would be to say that it requires, on average, 6.9 pupil-years to complete the five-year cycle for students leaving Grade 10 and 12.5 pupil-years for students holding a Secondary Leaving Certificate.

2.5 Without repetitions and dropouts, the cost to produce a graduate is simply the product of the unit costs and the number of years in the cycle. When many of the students either repeat or dropout, the cost per graduate is always higher. The reason is that repeaters raise the number of years it takes to graduate and dropouts lower the denominator over which total costs are spread. In other words, even with the existing resources, many more students in Nepal could be educated within the existing system if it were operated more efficiently.

2.6 Grade 10 Outcomes. The SLC Examination is conducted annually by the Office of the Controller of Examinations (OCE). The SLC results are not a very credible measure of the performance of Grade 10 students. However, it is the only measure currently available, apart from a few small-scale studies on students' learning achievement for various subjects.[21] While not much reliance can be placed on the raw marks, some glaring differences do indicate worrisome areas of concern about relative performance levels.

2.7 In 1992, the pass rate for regular (first time) candidates in the SLC examination was only 31.7%. Out of 76,982 regular candidates in 1992, 52,612 failed the examination (Table 2.1). Every year the SLC examination in effect disappoints the aspirations and diminishes the life chances of the majority of the Grade 10 cohort. The low pass rate in the SLC examination in recent years has dismayed and shocked the public and led to demands for remedial action because low pass rates mean fewer pupils can gain entry to Grades 11 and 12.

20/ This is comparable to the estimated efficiency rate of 41.2% for the primary grades when Grade 5 completers are regarded as output.

21/ For example, Tribhuvan University, Development of Standardized Tests in Selected Subject Areas, Research Center for Educational Innovation and Development, Kathmandu, 1988.

Table 2.1: School-Leaving Certificate Examination Results, 1992 (Regular Candidates)

	No. of Districts Covered	Students		
		Total Appeared	Total Pass	%
PBS Schools	20 /a	5,328	4,319	81.1
Community Schools	64	14,764	3,570	24.2
Government-Aided	75	56,890	16,481	29.0
Total	75	76,982	24,370	31.7

/a Includes Ilam, Thapa, Morang, Sunsari, Dhanusa, Sarlahi, Kavhre, Bhaktapur, Lalitpur, Makwanpur, Chitwan, Parsa, Kaski, Tanahun, Syangja, Rupandehi and Bank districts (these districts have either municipalities or towns).

Source: OCE

2.8 One area of concern is the low level of achievement in the government-aided and community schools, compared to the prestigious private schools. Private schools outperform all other schools by a huge margin. In 1991, for example, 96% of the listed "Top Schools" in the SLC examination were in the of Private and Boarding Schools Organization (PBSO). The PBS schools achieved a pass rate of 79%, of which 46% were in the first division (60 or above marks) and only 3% in the third (lowest pass, 32- 44 marks). In 1992, 81.1% of the private school (regular) students appearing at the SLC passed the test. In contrast, the community schools which put forward some 15,000 candidates attained only a 24.2% pass, lower even than the government-aided schools at 29.0%. These disparities should signal to policymakers that the community schools in particular, and many government-aided schools, are currently unable to meet the modest levels of achievement at secondary level required by the SLC.

2.9 Regional comparisons between the three types of school are also dramatic. In 1990, the lowest pass rate for PBS schools was 88% in the Eastern region and 89% in Central. But the highest pass rate for all schools was only 54% in the Central region and 53% in the West. Differentials in the numbers of first division passes were equally dramatic. Poor preparation for the SLC examination in government-aided and community schools also appears to affect girls more severely than boys. Every year, regular female candidates have lower pass rates than the average by three to six percentage points. In PBS schools girls pass rates were only slightly lower than boys.

B. Quality of School Inputs

2.10 Worldwide experience shows that there are a number of factors which contribute to the quality of the educational process (teaching and learning) and final outcomes (students' knowledge, skills and values). Critical out-of-school factors include the financial inputs of society to the school system, the monetary and non-monetary contribution of parents and communities to school operations and, not least, the attributes of learners themselves - their health and nutritional status and the prior knowledge, skills and motivation which they bring with them to school. At the school level, the

resourcefulness and skill of school principals and administrators is crucial to school efficiency and effectiveness. In the classroom, it is the quality of the teacher which is critical to whether students achieve their potential to learn. Without an appropriate teaching-learning environment, teachers' capacities to make learning a productive experience for students are severely constrained. Key elements of a stimulating educational environment are the physical environment (well-designed and maintained buildings, furniture and equipment), the curriculum, the textbooks and instructional materials.

Physical Facilities

2.11 The evidence that exists about the contribution of the physical environment to the quality of teaching and learning indicates that much can be achieved even with minimal facilities. Nevertheless, well-designed schools with good space utilization, lighting and air-circulation help ensure safety and effective operation. For a number of subjects at secondary level, space and storage for reading and writing materials and simple science equipment and materials is essential. In addition, well-maintained and equipped school have unquantifiable but positive effects on the morale of teachers and pupils and become the symbol of community pride and aspirations.

2.12 In Nepal, school buildings are usually contributed by patrons or the community. They are constructed by community members or by contractors. Although models for school design and unit cost norms have been developed under donor-financed projects by Government agencies, they are not always enforced as the Government is practically not involved in financing school buildings. Furniture and equipment are also not provided by the Government except as part of externally-financed projects. A few schools in more affluent communities have substantial facilities provided from fees levied on parents over the years. But most schools reflect the poverty of the communities which they serve. They lack basic amenities, including electricity, drinking water and sanitation. Maintenance and security are poor and desks and chairs are insufficient. The lack of lighting hampers efforts to run late classes. Systematic data is also lacking on the status of school facilities.

Curriculum

2.13 Curricular goals have been modified over time to reflect the country's changing socio-economic imperatives. In 1971, the NESP's goals for all post-primary education emphasized vocational utility and disciplined citizenship, loyal to the country, Crown and God. In the mid-1980s, the National Education Commission (NEC) added the concepts of education for national development and integration and secondary education as a preparation for more advanced levels of education. Under the Eighth Five-Year Plan, the objectives of lower secondary education maintain the emphasis on character-building and preparation for work or more advanced education, whilst secondary education is to prepare pupils to contribute to the country's development and lay the knowledge base for higher education. Despite the evolution of broad goals, curriculum content has not been systematically and thoroughly overhauled since the NESP twenty years ago.

2.14 In 1991 a NEC report recommended broad curricular goals for the entire education system, to strengthen social unity and national identity, relevance to the community's environment and development, and the needs of the disadvantaged, minorities and girls. In particular, it recommended development of mother tongue teaching in primary education, use of Nepali in secondary education, with English taught as a subject, and English as the medium of instruction in higher education. Compulsory science education was recommended for all levels, with a technology

emphasis in higher education. It also recommended that history and geography should not be optional alternatives but should be an integral part of the curriculum.

2.15 The proposed new curriculum, centrally prescribed for all levels of primary and secondary education, has nine subjects at lower secondary level. Five core subjects are defined by the greater amount of lesson time allotted to them and the greater weighing of marks given them in the school examination. At secondary level, seven subjects are covered; five core subjects, one option and one vocational option. All subjects are weighted equally, with about four hours of instruction each a week and 100 marks each in the school examinations (Table 2.2).

Table 2.2: Lower Secondary And Secondary Curriculum (Proposed)

Lower Secondary Grades		Secondary Grades	
Nepali	100	Nepali	100
English	100	English	100
Mathematics	100	Mathematics	100
Science	100	Science and Env.Ed.	100
Social Studies	100	Social Studies	100
Sanskrit	50	Health and Phys.Ed or Computer Sc. or Population Ed.	100
Health and Physical Education	50		
Prevocational/Art	50	Optional subject	100
Population and Environ.Education	50		
Total Marks	700	Total Marks	700

Source: MOEC

2.16 Weaknesses. Nepali educators recognize many weaknesses in curriculum content and the process of curriculum development, dissemination and implementation. The main weaknesses are:

(a) Obsolescence. Because there has been little change of curriculum content, today's teachers are communicating to the current generation of pupils more or less the objectives and content they themselves were taught a generation or two ago. Secondary curricula need updating to take account of changing technologies, communications and ecology which will impact students' lives and work in the next century.

(b) Lack of Sequence, Coherence and Integration. Because curriculum development has been piecemeal and the structure of the school system has undergone frequent changes (for example, from 3+4+3 in 1971 to 5+2+3 in 1981 and the recent change to 5+3+2+2), the sequencing and coherence of subject matter and skills acquisition is unsystematic. Teachers complain at both lower secondary and secondary level that students promoted from the level below have not acquired the prerequisite knowledge and skills to enable them to benefit from the next level of education.

(c) Too Much Coverage and Too Little Practice. Curriculum content is unrealistically crowded and teachers lack time and materials to give students opportunities to practice and reinforce what they have learned. In practice, teachers teach facts to be memorized at the expense of skills acquisition, student participation and problem-solving. Curriculum materials need to be revised to guide teachers in how to

teach thinking and problem-solving skills and how to access the competencies and weaknesses of students so that they can take remedial action.

(d) Irrelevant Subject Matter. Curriculum planners are aware that curriculum content needs revision to render it meaningful to Nepali cultures. For example, literary appreciation is taught from the English classics. However, in an English language course which emphasizes communication, 14 and 15 year-olds in Grade 9 who have been studying the language for five years cannot hold a simple conversation about their own community.

(e) Ineffective Language Policy. At what stage English should be introduced as a second language subject is everywhere controversial on social and pedagogical grounds. But there is no question that English taught as early as Grade 4 gives a headstart to children from urban and middle class families. This is a legacy of a former period when primary education ended at Grade 3. The fee-paying PBS schools attract students by emphasizing English and use a variety of English texts other than the standard ones. Even in these schools English is often poorly taught.[22] Government-aided and community schools suffer more from the severe shortage of specialist English teachers and basic reading materials, as well as trying to cater to minority students for whom English is often a third language. Deficiencies in English plague other subject specialist teachers also. Science education is particularly problematic because most advanced texts are in English. The real problem to address is how to deploy scarce resources for teaching English well to schools which do not enjoy the means to attract expert English teachers and do not use English as a medium.

(f) Overload and Instructional Time. The curriculum is certainly overloaded. Nine separate subjects in lower secondary and seven in secondary is a very full load for 11-15 year-olds by any standards, and in Nepal additional time for study through homework is rare, except in the best private schools where teachers report assigning about four hours a week. But the reasons why teachers and pupils do not cover the full ground and the curriculum is not fully implemented are much more complex. The time for teaching and learning allotted in schools is often much less than the ideal time required by the official curriculum. Actual instructional time is very short. The time allotted per class period (maximum 40-45 minutes) adds up to only 26 hours of instructional time a week (about four and a half hours a day in a six-day week), even though the official time for a full school day is six hours (10 am - 4 pm). Time-on-task is minimal in a system where the official days of school opening are 180 a year and include examination time and teachers' official leave. Time-on-task is further reduced because of irregular attendance by pupils and frequent absences of teachers and even school principals.

Examinations

2.17 The School Leaving Certificate Examination. Examination results are used as the measure of student achievement in lower secondary and secondary schools in Nepal. The academic

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[22] Awasthi, Lava D., ELT in Nepal, Annual Educational Journal SHIKSHA, CTSDC, MOEC 1991/92.

year runs from January to December; and schools have three internal examinations. However, the examination which everyone cares about is the SLC held at the end of Grade 10. The SLC examination serves two functions. One is to provide a graduation certificate, giving evidence that students have covered school programs to the end of Grade 10. However, the certification function is minor and the certificate itself has little credibility with employers that school leavers are well prepared for entry to the work force. Its primary function is selection, as its results are used to determine which students will be admitted into the much coveted public campuses of Tribhuvan University. A good pass in the examination is the only means by which students can continue on the formal education ladder.

2.18 Eighteen subjects are on the SLC examination among which Nepali, English, "compulsory" Mathematics (the subject "optional" Mathematics is an elective), and vocational study are core subjects. Most of the subjects have a full mark of 100 and a passing mark of 32. Passing scores are categorized into three divisions: first division for scores 60 and above, second division for scores between 45 and 59, and third division for scores between 32 and 44. A student has to take the four core subjects plus three optional subjects. The student has to pass all seven subjects in order to be awarded a pass in the SLC examination. A student who fails the examination may take all seven subjects or the failed subjects again the following year. In 1992/93, science became a core subject.

2.19 The SLC examination results are not standardized. A study of the examination by the University of Cambridge Local Examination Syndicate stated that examination "papers are seriously restricted in the range of skills tested, concentrating mainly on the factual recall of textbook information and sometimes encouraging the repetition of learned model answers based on textbook exercises".[23] Since the SLC examination is taken to be the single measure of success for the school system, teaching in school is geared heavily towards the examination. Thus teachers emphasize rote learning and discourage independent thinking and creativity. In Grades 9 and 10, the official curriculum is mostly swept aside by the syllabus for the SLC examination when teachers use examination questions to coach and students prefer to cram. The backwash effect of the examinations is high and dominates the instructional process.

2.20 Prior to registering as candidates for the SLC, pupils need to pass the "send-up" examination which is a non-standardized test set at district level and administered by schools. This procedure is meant to screen pupils and bar poorly performing candidates from entry to the SLC examination. Teachers coach for the "send up" examination and students memorize answers to questions from past SLC papers. In recent years about 50% of the candidates who appear in the SLC examination are first time (regular) candidates, and the rest are those re-taking one or two subjects only (compartmental) and candidates re-taking the entire examination (exempted). Many, but not all the re-take candidates, repeat a school year in Grade 10.

2.21 Table 2.3 indicates that over the four-year period 1988/89- 1991/92 the number of candidates appearing for the SLC examination rose from over 125,000 to more than 160,000. The number of regular candidates fluctuated from over 64,000 in 1988/89, to 100,382 in 1989/90 and to

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23/ IEES (1988) Nepal: Education and Human Resources Sector Assessment, Florida State University, Tallahassee, Florida.

over 76,000 in 1991/92. During the same period the overall pass rate fluctuated from 41% to 52% and down to 26%.

Table 2.3: SLC Appearance And Pass Rates (1988/89-1991/92)

	1988/89	1989/90	1990/91	1991/92
Regular Appeared	64,166	100,382	94,534	76,982
% Appeared	62%	90%	84%	
Exempted Appeared	61,436	58,484	65,100	84,535
(One year lag)		79%	86%	
Total Appeared	125,602	158,866	159,634	161,517
Total Pass	51,232	83,403	53,200	41,155
Regular	28,319	48,656	23,200	24,370
Exempted	22,913	34,747	30,000	16,785
Pass Percentage	41%	52%	33%	26%
Regular	44%	48%	24%	32%
Exempted	37%	59%	46%	20%
Total Failed	74,370	75,463	106,434	120,362

Source: Office of Controller of Examinations

2.22 Deficiencies of the SLC Examination. The administration of the SLC and the validity, reliability and fairness of the examinations have been the subject of a number of recent reports.[24] The main conclusions of these studies reveal that the technical quality of the SLC examination is not high. The test items are not standardized and raw scores are used. Test reliability is low and the tests do not provide a basis for judgments comparing the performance of candidates from one school to another or from one year to another. The construction of test items is often deficient. Wording is often ambiguous, confusing candidates, teachers and markers. The validity of the test items is also weak; items do not cover all aspects of the subject matter and questions asked do not always tap the full range of knowledge and skills as prescribed in the curriculum.

2.23 The capabilities tested overemphasize recall, to the neglect of items requiring candidates to exhibit comprehension and problem-solving skills. Theoretical items predominate over items requiring practical application. There is only a small pool of good items available. Marking standards are low. Markers are usually teachers but their training is minimal and cross-checking of marks for consistency is uneven. This reduces the fairness of the examinations. Ideally, subject matter experts, specialists in curriculum and pedagogy, as well as testing experts, need to work together to develop and mark high quality examinations.

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[24] University of Cambridge Local Examinations Syndicate (UCLES), A Strategy for Development: A Report to the Office of Controller of Examinations, Cambridge, nd.; UCLES, Educational Assessment in Nepal: A Report on the Education and Examination Systems in Nepal, Vols. I (report) and II (appendices), Cambridge, 1989; Tribhuvan University, Causes of Failure in English in SLC Examination, Research Center for Education, Innovation and Development, Kathmandu 1989; British Council, Nepal: Secondary Education Development: With Special Reference to Science, Mathematics and English, Vol. 2, for HMG and Asian Development Bank, pp. 50-55 and pp. 193-195, May 1991.

2.24 Finally, the central administration and marking of the SLC examination is a massive and costly task.[25] It is done through the Office of the Controller of Examinations in Kathmandu. The institutional capacity of the OCE is not sufficient to ensure that the administration is fair and efficient. In accordance with Educational Rule 31 of the 1992 Education Regulations, a Board of Examination has been formed under the chairmanship of the Secretary of the Ministry of Education, Culture and Social Welfare. This Board will be responsible for policy formulation and control of the SLC examination.

2.25 Unfortunately, the general public is largely unaware of the technical limitations of the SLC examination as a measure of learners' competencies. Rather, its overriding significance to teachers, students and parents is as a gateway to post-secondary education. This has a detrimental effect on teaching and learning in secondary education, it produces more "failures" than "successes" amongst students and it has serious implications for the preparedness of intakes into Grades 11 and 12 to undertake advanced level studies.

Educational Materials

2.26 Surprisingly, in a country with such difficult communications, textbook availability in primary schools does not appear to be a major problem. Unlike for primary, secondary books are not supplied free through the schools but are, instead, sold to students and teachers. Book availability at this level is reported to be fair. It has been suggested that books probably are available near urban centers where there are book stores and where agents are active in carrying secondary texts for sale to stores and to teachers and students in schools. But where the market is small (i.e. in areas where populations are sparse and scattered and where few secondary schools exist), it is said that textbooks are harder to come by.

2.27 Recently, the main emphasis on textbook development has been at the primary level because this is where curricula reform is underway. A new Curriculum Development Center (CDC) has replaced MOEC's Curriculum, Textbook, Supervision Development Center. A Textbook Committee oversees the commissioning of authors and textbook content. There are subject sub-committees comprising university teachers, school teachers and subject specialists. These meet irregularly and personnel who combine publishing expertise with skills in subject matter and pedagogy are scarce. Sub-committees meet when a curriculum revision requires textbook changes.

2.28 Textbook Publishing, Printing and Distribution. The Janak Educational Materials Center (JEMC), a parastatal institution, publishes and prints textbooks. It currently produces about eight million primary and four million secondary books a year with no subsidy from government. It thrives on its monopoly of large print runs for textbooks for government schools, but its print costs are high. The physical quality of books is poor, due mainly to the uneven quality of paper (now nearly 70% of the total book production cost) and poor ink, covers and binding. JEMC's sole distribution agent is Sajha Prakashan, also a parastatal, which operates bus fleets throughout Nepal. Books for sale (which include some primary, all secondary and a few higher education titles) go to Sajha's own district offices and thence to its own depots, to agents and to retailers. JEMC pays Sajha a commission for the distribution of books. CDC, JEMC and Sajha are all based in Kathmandu and

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[25] OCE estimates show that the administration cost per candidate is Nrs 97 and revenue from registration and examination fees is NRs 120. Rechecking marks brings (NRs 50 per candidate), issuance of provisional certificates (NRs 25) and mark sheet duplicates (NRs 20), answer book sales NRs 5 and migration certificates (Nrs 25). (Figures are from 1992.)

so the cycle of textbook development, from selection of authors to printing and distribution, are centralized and virtually monopolize textbook development and printing for government schools. Because the private publishing, book printing and book-selling industry is small, there is little competitive pressure to improve book quality and little piloting and field trialling of new titles occurs, which might help improve quality and relevance.

2.29 Other Educational Materials. The parastatal organizations produce virtually no other printed materials such as curriculum and teachers' guides, reference and library books. The JEMC has a mandate to provide visual aids and equipment but this has not recently been a major priority. It is important to note that printed materials supplementary to textbooks are essential to enhance learning. The more advanced the subject matter, the more important becomes the ready availability of a variety of sources of reference material for independent enquiry and for practice in comprehension of different reading styles (e.g. documents, narrative, exposition). For students whose home language is not the medium of instruction, who lack reading materials at home and who begin school late, a resource-rich school environment is even more vital to reading literacy. A recent international study indicated that 14-year olds who, amongst other things, had larger school libraries, were given more homework and had more resources for reading apart from the textbook, achieved better in reading literacy than those who did not.[26]

Teachers

2.30 Teacher effectiveness is a critical element in providing quality education. Teachers are responsible for translating the official (intended) curriculum into classroom teaching practices which enable students to learn (the actual) curriculum. To do this, teachers must themselves have a higher level of understanding of the curriculum content than the content they are teaching, an understanding of how to simplify, organize and communicate that content to immature learners, an understanding of how learning takes place and how to stimulate students to learn. In addition, they must manage and use effectively the material inputs available (e.g. books and science equipment), and maintain a task-oriented, disciplined environment.

2.31 In 1991, there were 24,632 teachers in post-primary schools. Of these, 13,005 (53%) were at lower secondary and 11,627 (47%) were at secondary level.[27] This indicates a national average student-teacher ratio of 29.3 at lower secondary and 34.0 at secondary. These are higher ratios than in the mid-1980s when ratios were at an over-generous 24:1, but they are acceptable by international norms. However, more significant ratios to take into account are the student-school and teacher-school and the average class size. Average student-school ratios for Grades 6-10 was found to be is 190:1. The average number of teachers per school is only three at lower secondary and five

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[26] Elley, Warwick B., How in the World do Students Read? International Association for the Evaluation of Educational Achievement (IEA), 1992.

[27] For planning purposes official teacher positions are utilized (according to formulae long established for teacher-pupil ratios and class sizes). Annual data collection from schools and District Education Offices is reportedly often based on teacher "positions", rather than on actual teachers in post. The "ghost" teacher phenomenon exists but its extent is not known.

at secondary. Average number of students per class is as much as 39 at lower secondary and a high 75 at secondary. These data mean that, either teachers are attempting to cover subjects in which they are not specialized. or the official curriculum is not fully covered, or both. The large average class size also suggests that a great deal of multi-class and multi-grade teaching occurs, for which teachers are ill-equipped.

2.32 The existence of so many very small schools also means that these schools lack a critical mass of teachers through which professionalism can be nurtured. Of course, these aggregated nationwide data conceal wide variations in the conditions under which teachers work, with very small schools being more typical of rural areas and the western regions of the country and large schools typical of urban areas. The authorities have been attempting to deal with the problem of small schools by clustering contiguous primary schools. However, detailed mapping of the secondary level is needed in order that there can be rational planning for school consolidation and teacher deployment.

2.33 Educational Levels of Teachers. To teach subject matter in Grades 6-7, lower secondary teachers are only minimally equipped to get by with Grades 11-12 education. However, 70% of teachers have this level of educational qualification and only 20% have a bachelor or master degree (Table 2.4). Nearly 1,300 (10%) of the lower secondary teachers are very much under-qualified, having only SLC examination pass, or lower, educational qualifications. Grades 11 and 12 are definitely not an adequate educational level for lower secondary teachers and a Bachelor's degree needs to become the minimum qualification in actuality as well as in principle. Moreover, the degree needs to be in the subject specializations that teachers teach. Data are not collected on this, though it is known that there are severe shortages of teachers specialized in science and English, with the result that science is rarely taught and English is taught by nonspecialists. If, today, a first degree or above were to become the minimum acceptable qualification level, the national average ratio of qualified teachers to pupils would be 1:144, with the three western regions being by far the worst off, having only 16% of teachers with degrees.

Table 2.4: Lower Secondary Teachers By Qualification, Training and Region, 1991

	Under SLC	SLC	CL	BA	Master	Total	
	Total	Total	Total	Total	Total	Total	% Trained
Eastern	10	238	2,193	418	5	2,864	34
Central	24	425	2,760	1,256	104	4,569	39
Western	26	317	2,148	560	18	3,069	34
Mid-West	2	125	1,160	133	8	1,428	26
Far West	12	130	793	129	11	1,075	28
Nepal	74	1,235	9,054	2,496	146	13,005	34

Source: MOEC, Planning Division, Manpower and Statistics Section.

2.34 To teach subject matter in Grades 8-10 secondary teachers need to have at least a first degree-level education themselves. Depending on the difficulty of the subject matter and the quality

of the degree courses, some authorities argue that a master degree would be more appropriate.[28] About 89% of secondary teachers have a bachelor or master degree and just over 10% have Grade 11 and 12 education or below (Table 2.5). In this respect, secondary teachers are better qualified on educational grounds than lower secondary teachers. Also, former B.Ed. students were not required to study English, Science and Mathematics, as these subjects were included in the list of optional subjects. Considering the shortage of teachers in these critical subjects in secondary schools, B.Ed. students are now required to take at least one of these subjects.

Table 2.5: Secondary Teachers, By Qualification, Training And Region, 1991

	Under SLC	SLC	CL	BA	Master	Total	
	Total	Total	Total	Total	Total	Total	% Trained
Eastern	4	25	196	2,160	126	2,511	42
Central	6	37	234	3,410	594	4,281	49
Western	20	85	411	2,155	178	2,849	44
Mid-West	9	55	95	877	53	1,089	35
Far West	5	59	76	650	107	897	35
Nepal	44	261	1,012	9,252	1,058	11,627	44

Source: MOEC, Planning Division, Manpower and Statistics Section.

2.35 The Teacher Training System. Available data show that 34% of lower secondary teachers in 1991 had training. The level of training of secondary teachers is better than at lower secondary, with 44% trained. Pre-service training is undertaken by the Faculty of Education (FOE) for primary and secondary levels. As a constituent institution of Tribhuvan University, FOE has twelve campuses throughout the country, the central campus being at Kirtipur, Kathmandu. The FOE enrolled over 6,000 new students nationwide in 1990/91. With a staff of about 500 dispersed over its twelve campuses, it has limited capacity and the staff themselves need upgrading and updating. Regrettably, the cooperation between subject specialists in other TU faculties such as science and languages and the counterpart education specialists in the FOE is minimal. This deprives students of education and access to the most up-to-date subject specialist knowledge available in the country. In-service programs are provided to meet special needs or under projects by MOEC agencies. Secondary in-service training is still mainly done through short crash courses from two weeks to three months. The agencies involved recruit practicing teachers and university staff to run them. The formal, short course format is recognized worldwide to have minimal positive impact on teachers' classroom performance. There is a serious risk, therefore, that scarce training resources are being wasted.

2.36 Female Teachers. Although in many countries teaching is often a preferred employment for females, in Nepal, an opportunity is being lost. The presence of female teachers can attract girls into classrooms and good female teachers can provide role models for girls aspiring to

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28/ Ware, Sylvia A., The Education of Secondary Science Teachers in Developing Countries, unpublished ms., Education and Employment Division, Population and Human Resources Department, World Bank, October 1992.

modern sector employment. At primary level the authorities are making efforts to attract more women into teaching and to provide special training for them. However, figures for 1992 (preliminary) for post-primary level, show that only 13% of teachers were female at lower secondary level and at secondary level 10% were females.

The Status of Teachers

2.37 Teachers' Pay and Conditions of Service. The four official pay scales for teachers in government service range from a starting rate of only NRs. 1,350 a month for under-qualified non-SLC teachers to a maximum of NRs. 5,500 for teachers with a bachelor degree on the top rate of their scales (1992). The four scales provide between 15 and 20 annual increments, with an efficiency bar after seven to ten years. Teachers qualify for retirement after 20 years of service but may continue longer. It is acknowledged that the official salaries for qualified teachers are low, do not cover rising costs of living and fail to attract well-qualified candidates into teaching. The MOEC data on teachers given above includes "permanent" teachers with tenure in MOEC-approved positions, teachers in recognized private schools and community schools. "Permanence" is a sought-after status because pay, tenure and pension is assured, whereas non-permanent teachers have to rely on community contributions. In practice, because many post-primary classes have been added onto primary schools to provide continuing lower secondary and secondary education, teachers often hold primary posts but they may teach at higher grades either full-time or part-time. This upward creep is unfortunate in that many teachers manage classes at much higher levels than those for which they are qualified or trained. Thus, the lower grades are deprived of teachers and the credibility of teaching as a profession is damaged in the eyes of the public.

2.38 Other factors also contribute to the low status of teachers. Teachers seem to be sometimes appointed on political grounds without proper qualifications. Teaching today in the country can hardly be called an attractive profession. Salaries are the main problem but a poor physical work environment also acts as a deterrent to recruitment. Also, the secondary teaching force is fairly young and inexperienced, with rapid turnover and high wastage, particularly for males with marketable skills. Job-seekers with qualifications in education often use teaching as a bridge to more attractive employment elsewhere. Teachers, without other opportunities for employment and who value the security that tenure permanent teaching posts offer, tend to stay in the profession. In urban areas, where the jobs are available, they often work two or three other jobs, in order to supplement meager salaries. This widespread moonlighting and frequent absenteeism is officially tolerated but it has detrimental effects on the time teachers devote to the classroom.

2.39 Teacher Management and Supervision. Better rewards for performance, better education and training and better physical working conditions would all contribute to improving the status of teaching and hence, it is logical to anticipate, the quality of those available for recruitment. But, arguably, one other factor affecting the low status, poor morale, isolation and uneven performance of teachers is the weakness of the system of teacher management and supervision. One important symptom of this is the debate in the profession about who actually is the teacher's employer, the District Education Officer (DEO), who approves public school grants and registers private schools, the school principal who co-signs the salary authorization with the DEO, the School Managing Committee (SMC), or the community which pays a variety of formal and informal school fees, supplements salaries or provides non-monetary benefits such as lodging and food. Whoever is the paymaster, the teacher is caught in a web of local influences which lowers morale and detracts from

job performance. The professionalism of the District Education Officers needs to be enhanced through training and increased accountability.

2.40 SMCs they are largely under the direction of the Regional Directorate of Education for the post-primary level or local community pressure groups. They seem to be in disarray and continue to be politicized. There are plans to strengthen the SMCs under the current decentralization strategy and, properly constituted with strong professional and parental representation, they should play a critical role locally in ensuring that school principals operate schools efficiently and professionally.

2.41 Concomitantly with this reform, the strengthening of the cadre of school principals is needed, to provide administrative and educational leadership. Experience elsewhere, as well as in Nepal, indicates that the principal is the key figure in how well a school performs. Currently, adequate training, selection procedures, performance incentives and support structures are lacking for principals who must undertake heavy and complex responsibilities, often in harsh and isolated conditions, sometimes under the scrutiny of parents and community. Training support and accountability for principals need to be enhanced. Localized supervision, technical support, professional development and training for teachers and principals are all major needs which are largely unmet.

C. Components of a Quality Improvement Reform Package

2.42 Worldwide experience shows that there are no sure prescriptions for curing the ills of low educational quality. But research on effective schools and school restructuring does indicate that quick fixes and single-focus efforts rarely succeed. Educational quality enhancement involves changes in human beings and institutions. It must be planned for the long haul and implemented holistically, taking account of the repercussions of change in one set of people or institutions on others. For example, any plan to effect improvement throughout a school by providing one teacher with in-service training is doomed to failure because the new ideas, skills and inspiration of one teacher alone cannot overcome institutional resistances to new ways of doing things. Similarly, efforts to develop practical science curricula will not lead to better science education unless a system is in place to supply schools with equipment and materials with which to experiment and unless teachers are trained to teach practical science.

2.43 In order for reforms in quality to be planned and phased appropriately, it is essential for accurate data to be available. This is a major deficiency in the country today. Data needed include, at a minimum, the accurate age and enrollment status of the secondary school cohort, the location and status of school facilities, equipment, books and materials, and the correspondence of teachers' qualifications and training with the level at which they teach. In addition, data are needed about the affordability of secondary education to various population groups so that efficient and equitable pricing policies for tuition, for books and for subsistence can be worked out. Similarly, data are needed on the salary and incentives required to establish effective and equitable teacher recruitment and deployment policies. A first priority would be for central government to develop a strategy requiring the relevant data to be collected and analyzed at district level and to mount training exercises for participants. The next step would be to develop district proposals, based on needs assessments, identifying what major deficiencies need to be addressed as a priority. A national plan for secondary education development could then be developed which would be grounded in reality.

2.44 Major policy decisions are needed on certain fundamentals in order for rational planning for curriculum, facilities and teacher training to go ahead. These are, for example, the official introduction of English as a second language, the date by which practical science, needing laboratories, will be introduced and when teacher training will again be made compulsory after a two decade deterioration in the status of the teaching profession. Though the guidelines on these decisions need to come from central government, in the decentralized system, different decisions may be required for the various regions of the country depending on needs and context.

2.45 Central authorities have some complex and difficult major commitments to make. One is to consolidate and streamline central institutional capacities and to strengthen local capacities in planning, management, supervision and in technical fields such as teacher training and curriculum development. A second is to clarify the regulatory environment for schools, teachers and School Management Committees. Examples would be that quality standards for school facilities, school size, specialist teacher requirements, classroom environment and the number of reference books per pupil would be issued for community schools to obtain permission to register as examination centers. The required classroom contact hours for teachers should be revised and enforced and teachers should be allowed to opt for contract payment by the hour for less than full-time service.

Specific Proposals

2.46 Based on the above discussion on secondary education inputs, priority areas and measures to improve quality in the physical environment for learning (curriculum and examinations, books and materials, teachers and supervisors) are highlighted. The order in which they are listed does not indicate an order of priority. Indeed, many of these measures would need to be undertaken simultaneously because they are complementary. The recent Secondary Education Development Project financed by ADB is aimed at addressing some of the curriculum and textbook development issues, enhancing teachers' effectiveness and improving the examination system. This assistance is a continuation of ADB's earlier involvement which aimed at strengthening science in secondary education.

2.47 Curriculum Reform. A detailed curriculum plan for the entire secondary education subsector (Grades 6-12) is essential and should include plans for curriculum design, trials, implementation, dissemination and evaluation. Weak and fragmented institutional capacity is at the heart of the problem of curriculum development and dissemination. Technical capacity to develop curricula systematically is weak and the processes, such as teacher training, which are essential to translate curriculum on paper into teaching and learning in the classroom, are not planned in detail. There are a number of institutions involved. The CDC is responsible for developing and monitoring curricula, preparing dissemination materials, textbooks, audio-visual aids and extra-curricula programs, as well as training teachers and supervisors in these fields. Until recently it has concentrated mainly on primary level because this has been and continues to be the Government's priority. CDC has recently developed curricular specifications and learning objectives for the primary curriculum and this work will continue till 1997. In the mid-1980s the Science Education Development Center (SEDEC) was set up to pioneer science curriculum development at secondary

level, to coordinate training for science master teachers and to develop a Science Education Development Unit in one school in 25 districts.[29]

2.48 The Council for Higher Secondary Education is another recently set up institution which is already involved in curriculum development for Grades 11 and 12. The CHSE is not institutionalized within the MOEC's structure, but is responsible directly to the Minister of Education. This practice of curriculum development by two-to-three institutions creates fragmentation of and does not ensure sequencing of contents, coherence and integration of the curriculum development process for the secondary subsector.

2.49 With the target of enrolling 45% of the age group in secondary education, the Eighth Plan period is ideal for the development of a curriculum plan for the entire secondary subsector, taking into account the deficiencies of current curricula and paying particular attention to the science and language needs of secondary students. Lower secondary education needs to be based on the planned learning outcomes of the new primary curriculum, and secondary, on standards of achievement expected of secondary graduates in countries which have modernized specific curricular areas (for example, Malaysia, the Philippines, Singapore and Sri Lanka). The five-year plan period is too short for the entire curriculum to be revised and introduced into schools. A more realistic target would be to implement a first phase in Grades 6 and 7 and build upwards in later phases. Another emphasis should be to consolidate institutional capacity in curriculum development at central level and training of curriculum experts.

2.50 Examination Reform. Development of the secondary curriculum needs to be conducted alongside development of the Grade 10 examinations so that curriculum and examinations are coherent and test the same competencies. One suggestion is to convert the present "send up" examination into a district or regional Secondary School Graduation Diploma (SSGD) which would test mastery of knowledge and skills prescribed in the curriculum. Candidates would be provided with a diploma describing what they knew and could do, rather than a pass or fail level. The graduation report could also include a list of their non-examined activities and accomplishments in co-curricular programs, such as voluntary work. If secondary graduates proved well prepared for productive employment, the Diploma would gain in credibility with employers and Grade 10 graduates would become a cheaper and attractive source of educated and trainable workers.

2.51 The current SLC examination could remain a pass/fail test specifically geared to selection for higher secondary education. It could be renamed the Higher Secondary Selection Examination and it could be devised as a more difficult extension of the proposed SSGD. Candidates would only sit if they were informed by their teachers that they were capable of a high level of achievement and a chance of being selected for one of a known number of available places in HSE. Candidates' competencies would need to be especially high in communication skills and problem-solving across the curriculum, skills required at higher secondary level. The requirement that candidates should reach specific levels in all of seven subjects could be replaced by requirements that they should perform well in communication skills, science and mathematics and a specialist subject to be studied in HSE.

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[29] With Asian Development Bank assistance.

2.52 Whether or not the above proposals were adopted, training of test item writers and teachers is needed alongside the development of curriculum learning objectives and content. Test item banks need to be further developed. Teachers need to be trained in how to help learners communicate in various modes, how to undertake critical, rational thinking and how to teach for mastery of knowledge and skills to be attained by the end of lower secondary and secondary education.

2.53 Textbooks and Educational Materials. There is a need for reviews and action plans to remedy deficiencies in the content, design, affordability and availability of textbooks. The other main instructional materials element of the reform package that needs a great deal of development is the reference and reading materials and libraries to support the exploratory, problem-solving approach of the revised curriculum. These are needed for pupils as much as teachers. Without them, all the efforts in developing new curricula and changing the way teachers teach and pupils learn will fail. A national strategy must be put in place to develop private sector initiative so that the recurrent costs do not fall entirely on the education budget.

2.54 Textbooks and other printed materials are critical inputs to secondary education in order to help reduce dropout, increase grade promotion rates and enhance quality. Detailed study is needed on many complex aspects of secondary level books and materials, such as design, coverage, availability and affordability. In Grades 9 and 10, only one book per subject is published by JEMC and is meant to cover both grades. This practice needs investigating for its educational usefulness, its cost efficiency and its implications for student retention. Where the book provides two full years' study content, this may be a useful means, for say Grades 6 and 7, for reducing unit costs and even encouraging pupils who have invested in the books to remain in school for the second year. A book-mapping study, school by school, is needed to ascertain how readily available and affordable secondary textbooks are to students in government-aided and community secondary schools, especially outside main urban centers.

2.55 Textbook prices, according to JEMC have risen from paisa 7 a page over the last three years to paisa 10 or 11. Studies done for the BPEP project revealed substantial opportunities for more efficient production and it is important that these efficiencies are realized so that the price of books for secondary level does not become prohibitive for poorer students. In this regard, the development of local commercial textbook publishing is desirable. The CDC's role should be to provide guidelines to private publishers on curriculum revisions and curriculum and pedagogical advise to authors, thus acting as a catalyst to increase private sector capacity to produce high quality and diverse secondary titles for sale to schools and teachers.

2.56 A cautionary note is needed on science development. If the lessons of recent experience with the science education initiative are not fully taken on board, there is a real risk that the proposed re-introduction of compulsory secondary science education will remain limited to a few financially well-endowed schools able to afford implementation of a curriculum that calls for sophisticated science equipment and materials. One among a number of shortcomings is that the curriculum developed assumes far wider accessibility to science equipment and materials than is feasible for most secondary schools in the near future. In any follow-up program, the possibilities of teaching science to a fairly advanced level with inexpensive items and local environmental resources need to be investigated as real alternatives to high-tech science.

2.57 Teacher Development and Training Reform. At the heart of quality improvement are the teachers. A comprehensive 10-year teacher development and teacher training plan is needed to systematically provide upgrading and career opportunities for teacher trainers, serving teachers and new teachers. A diversified, promotional career structure should be developed to provide incentives to attract well qualified recruits into classroom teaching and related fields such as career counselling, curriculum development, testing and assessment and teacher training. Contract teaching could be considered as a way of attracting skilled personnel from other fields to serve as teachers for specific periods of time. The previous volunteer scheme for qualified graduates could be redeveloped. Special schemes to assist female teachers would be required. The development of a countrywide network of secondary education professionals is critically important and the plan should include a deployment policy to ensure teachers are available.

2.58 Training the trainers should be the first priority. About 200 teacher trainers should be selected from amongst the best secondary and university teachers and be trained in specific subject methodologies. They should be trained in subject groups, ideally alongside curriculum and examinations experts, and existing teacher trainers, so as to build up a critical mass of expertise and collegiality. Training outside the country would be preferable because that would provide opportunities for the teacher trainers to become acquainted with the best international practice. But the programs need also to be geared closely to the country's new curriculum.

2.59 In the meantime the lower secondary teachers with only a Certificate Level qualification need to gain a bachelor degree in the subjects they teach and the secondary teachers with only a bachelor or Certificate Level qualification need to gain master level qualifications.

2.60 Once the new teacher trainers have been trained, they would need to develop teacher training curriculum modules and materials. They would need to work in collaboration with subject specialist experts, health and nutrition experts, environmentalists and representatives of industry, agriculture, commerce and the various Nepali cultures. The process of developing and refining curricula and materials is bound to be protracted. When the training programs are developed, in-service training in the new curriculum needs to begin for all serving secondary teachers, initially for lower secondary teachers (if this is where curriculum implementation is to start). The first priority needs to be for those teachers in lower secondary and secondary who have had no training at all.

2.61 Over the decade, the teaching force will need to double in size just to cope with enrollment expansion. Therefore, a plan for the pre-service training of qualified graduates is also needed. To ensure graduates have the appropriate teaching and communication skills and to restore the credibility of the profession, pre-service training should be made compulsory within five years. One-year full-time or two-year part-time programs for postgraduates, with extended practicums in schools, is the international norm towards which the country should move. Or, as an acceptable alternative, four-year bachelor or three-year master degrees in education could be mounted for teacher candidates willing to commit themselves to teaching for a period of years. Ideally, capacity to provide pre-service training would be built up regionally so that graduates could expect to train near their homes and return to teach there. In particular, this would benefit female graduates and married people.

2.62 Regarding teacher training curricula, the plan for teacher training has to be visionary to cope with the new learning needs of the next century. The new secondary teacher training would be

very different from the conventional lecture-based mode. It would use modelling and coaching techniques on how to encourage learners in thinking skills, problem solving, self-directed study and collaborative learning, as related to specific topics in the curriculum. Award of a teaching qualification might be delayed after the completion of formal training, until a new teacher had served for one year in school under the supervision of an experienced teacher-tutor. Teacher trainers in the Faculty of Education, District Education Officers, supervisors/inspectors and school and community leaders need to collaborate in devising training programs that keep the trainees as close to the schools as possible. Ideally, each secondary school in each district would have a teacher training and school improvement development plan that combined pre-service training, in-service training and ongoing technical support.

2.63 Management and Supervision. The new decentralization policy affords an opportunity for the management of secondary schools and supervision of teachers to be localized, within a national regulatory framework. SMCs need to be established where they are not functioning. To enhance their accountability key members should be elected by the parents. Public awareness campaigns should be launched to inform parents of the proper role and functions of SMCs and school principals. The campaign should also inform parents what knowledge and skills their children should acquire by the end of lower secondary and secondary education. Supervisory guidelines need to be reviewed and developed. Leadership training is essential for school principals and supervisors because experience worldwide shows that they are critical change agents.

2.64 Improving the Quality of Private Education. The key issue in the quality of private education is the low-quality of community schools. In light of the future increasing role of community schools in meeting the projected demand for secondary education, the improvement of the quality of these schools (and of government schools) should have a high priority in the overall development of secondary education. Two general approaches to quality improvement can be considered: improving educational input and process, providing incentives for improved performance.

2.65 Teachers should be once again at the center of the approach to improving educational inputs and processes. In-service training to improve the pedagogical skill of teachers and gender awareness is necessary. In addition, due to the serious problem of teacher absenteeism, improved educational management with proper incentives and sanctions against teacher absenteeism is also needed. Two other strategies may contribute to quality improvement in private schools. One strategy is to reduce government influence over the school management committee so that more decision power is vested in community/private control and that the school is less politicized. The other strategy is to update tax exemption on education items purchased by private schools (see further discussion in Chapter III).

2.66 Incentives should also be provided for improved performance. In the Eighth Plan period MOEC would be providing some salary support to teachers in community schools. Nepalese educators point out that this grants-in-aid method provides no incentive for improved performance on the part of the teachers. They suggest that, instead of distributing available funds to a school based on teacher characteristics (such as, the number, qualification, and training of such teachers in the school), the distribution should be based on some mechanism that takes into account both, teacher characteristics and school outcomes. For example, if the government has a grant that can support 50% of teacher salary, then a portion (say 20%) will be distributed to teachers according to teacher

characteristics, and the rest (30%) will be distributed to the school (and subsequently to teachers in the school) based on its improvement over time on a set of school outcomes. There should be a significant difference between high-performing schools and low-performing schools in the amount of aid they receive from the government. As there are technical difficulties regarding the identification, evaluation, and comparison of school outcomes, as well as potential problems of subjectivity and favoritism in implementation, cautious and careful experimentation of outcome-based proposals are absolutely essential.

D. Recommendations

2.67 The following presents a summary of the recommendations which would achieve improvement of quality in secondary schools:

(a) Strengthen the quality and accuracy of the educational and financial data needed for planning the development of secondary education;

(b) Finalize major current policy decisions regarding secondary education. Consolidate the capacities of the central institutions and strengthen local capacities in planning and technical fields. Empower local management (school management committees);

(c) Formulate a national secondary development plan. This should include reform of the curriculum, examinations and textbooks and other reading materials, as well as a teacher development and training plan and a management and supervision program;

(d) Begin the process of reforming the curriculum. A detailed curriculum plan for the entire secondary education subsector (Grades 6-12) is essential and should include plans for curriculum design, trials, implementation, dissemination and evaluation. The practice of developing curriculum and textbook materials for Grades 6-10 by the Curriculum Development Council and for Grades 11-12 by the Council for Higher Secondary Education should be discouraged. Curriculum reform should be done by the same agency to ensure sequencing of contents. Phase I work can begin during the Eighth Plan in the lower secondary grades and build upwards in later phases. The emphasis in the Eighth Plan period should be to consolidate institutional capacity in curriculum development at central level and the training of curriculum experts;

(e) Development of the secondary curriculum needs to be conducted alongside development of the Grade 10 examinations so that curriculum and examinations are coherent and test the same competencies. The "send up" examination would test mastery of knowledge and skills prescribed in the curriculum. The current SLC examination could remain a pass/fail exam specifically geared to selection for higher secondary education. Training of test item writers and test item banks are needed alongside the development of curriculum learning objectives and content;

(f) There is a need for reviews and action plans to remedy deficiencies in the content, design, affordability and availability of textbooks. Reference and reading materials and libraries to support the approach of the revised curriculum are needed. Accessible science equipment and materials should be introduced;

(g) A comprehensive 10-year teacher development and teacher training plan is needed to systematically provide upgrading and career opportunities for teacher trainers, serving teachers and new teachers;

(h) The new decentralization policy affords an opportunity for the management of secondary schools and supervision of teachers to be localized and many SMCs need to be established. Supervisory guidelines need to be reviewed and developed. Leadership training is essential for school principals and supervisors; and

(i) High priority should be assigned to strengthening quality of private schools, focussing on community schools, and providing for the training of teachers. Community accountability should be increased. Outcome based methods for distribution of financial assistance to community schools should be established.

Chapter III: ACCESS TO EDUCATIONAL OPPORTUNITIES

A. Access and Equity

3.1 Analysis of official educational data indicates that rapid development and aggregate growth of secondary education have contributed little to reducing inequalities in educational opportunities. High and increasing inequalities in access to secondary education, unequal distribution of higher secondary schools and major differences in female participation have been observed. In addition, low participation of poor and disadvantaged groups, differences in the quality of schooling in economically backward communities and a thriving PBS sector are all integral part of the process for preparing elites, effecting social selection, and perpetuating social inequality in Nepal.

3.2 Regional Inequalities in Participation Rates. Nepal is divided into 75 districts under three ecological belts (Mountains, Hills, Terai) and five development regions (Eastern, Central, Western, Mid-Western and Far-Western). There are 16 development and ecological regions including the Kathmandu/Central Valley. The Mountain region which has 16 districts occupies 35% of the country's area and about 8% of the total population. The Government of Nepal has recognized these Mountain districts and two underdeveloped Hill districts (Dahding and Gorkha) as the remote districts of the country. The density of population per sq km is the lowest in the Mountains followed by Hills and Terai. The average density was 125 persons per sq km in 1991.

3.3 There is a wide range in lower secondary and secondary gross enrollment ratios (GER) by region indicating high inequalities in educational participation from region to region and from rural to urban areas. For example, in 1990-91 the GER was 40.2% and 32.4% in lower secondary and secondary levels respectively. In both lower secondary and secondary levels, the GER was the highest for the Kathmandu Valley followed by Western Hill. Of the 16 regions, only 5 regions achieved a GER above the average. The Mid Western Mountain is the most disadvantaged region of the country. The GER in the Western Hill region was 2.8 times higher than that of Mid-Western Mountain in the lower secondary level and 3.5 times in the secondary level (Table 3.1).

3.4 Regional inequalities increase with higher levels of education. In primary education, total enrollment in 1990-91 was more equally distributed across regions. The distribution of enrollment, however, became progressively uneven in lower secondary, secondary and higher secondary levels. For example, Kathmandu Valley which comprised 6% of total population in 1990-91 had 6.7% of total primary enrollment. The proportion of enrollment in the Kathmandu Valley increased to 11% in lower secondary level, 13% in secondary level and 36.6% in the certificate level. Western Hill dominated in the distribution of enrollment in all three school levels with almost a constant share of 20%, despite the fact that this region is occupied by only 13.1% of the total population. The regional share of enrollment decreased with the increase in school levels in all Mountains and Hills, except in the Western Region (Table 3.2).

Table 3.1: Gross Enrollment Ratio By Region, 1990-91
(Percentage)

	Lower Secondary Level			Secondary Level		
	Total	Girls	Boys	Total	Girls	Boys
Average	40.2	26.9	52.1	32.4	19.5	44.3
EM	46.5	32.6	59.1	35.2	20.6	48.9
EH	43.3	29.1	56.4	36.0	20.3	50.8
ET	43.0	33.7	51.1	41.1	28.0	52.8
CM	26.5	12.8	38.7	16.9	6.7	26.3
CH	30.0	18.3	40.6	22.2	11.6	31.9
CT	29.8	17.2	40.3	24.5	12.6	34.8
CV	73.9	66.6	80.0	71.6	61.3	80.5
WM	33.2	35.8	31.0	20.4	16.3	23.8
WH	61.9	45.4	78.4	49.6	30.4	69.1
WT	33.8	22.3	43.7	21.4	13.5	28.4
MWM	21.6	4.1	36.7	14.0	2.4	24.1
MWH	29.4	11.7	45.7	19.7	7.6	31.2
MWT	37.1	22.5	49.7	19.7	13.5	36.4
FWT	29.5	5.7	51.7	18.9	3.5	33.5
FWH	24.3	4.4	43.3	15.9	2.2	29.4
FWT	30.9	16.2	43.7	18.7	8.1	28.1

E: Eastern; C: Central; W: Western; MW: MidWestern; FW: FarWestern
M: Mountain; H: Hill; T: Terai; V: Valley.
Source : MOEC

Table 3.2: Enrollment Distribution By Region, 1990-91
(Percentage)

	Primary (1-5)	Lower Secondary (6-7)	Secondary (8-10)	CL (11-12)	Total Population	6-10 Schools Per 100 Primary Schools
Nepal	100.0	100.0	100.0	100.0	100.0	22
EM	2.5	2.2	2.1	0.7	2.0	22
EH	9.5	8.3	8.6	5.0	7.7	19
ET	12.6	15.4	18.3	15.9	14.4	30
CM	2.8	1.7	1.3	0.2	2.6	15
CH	8.8	6.4	5.8	2.3	8.5	17
CT	11.4	12.1	12.4	11.0	16.4	24
CV	6.7	11.0	13.1	36.6	6.0	39
WM	0.1	0.1	0.1	-	0.1	28
WH	19.6	20.2	20.0	14.2	13.1	21
WT	5.9	6.0	4.7	4.7	7.1	22
MWM	1.1	0.8	0.6	0.1	1.4	23
MWH	6.9	4.8	4.0	2.2	6.2	15
MWT	4.3	4.6	4.0	4.5	5.0	26
FWM	1.7	1.3	1.0	0.3	1.8	18
FWH	3.2	2.2	1.8	0.4	3.6	22
FWT	2.9	2.8	2.1	1.8	3.7	21

E: Eastern; C: Central; W: Western; MW: MidWestern; FW: FarWestern
M: Mountain; H: Hill; T: Terai; V: Valley.
Source: MOEC

3.5 In order to find out the extent of regional equality in access, the ratio of secondary schools (Grades 6-10) per 100 primary schools has been computed for all the regions (access ratio). It shows that on average there were 22 secondary schools in the country for every 100 primary schools. The access ratio however, was a high 39 for Kathmandu Valley and 30 for Eastern Terai and a low 21 for Western Hills and 15 for Mid-Western Hills.

3.6 Regional distribution of certificate level education facilities shows that access to education by region is most unequal in the case of Grades 11 and 12. In 1990/91, there were altogether 65 Tribhuvan University campuses, of which only 56 offered certificate level (technical as well as general subjects). Most of these campuses are concentrated in Kathmandu Valley and Eastern Terai. Of the 75 districts of the country, 48 had no TU campuses offering Certificate level courses in general subjects. To fulfill the growing demand for higher secondary education, private campuses have been established with community initiative and support. Most of the private campuses are located in Kathmandu Valley, followed by Western Hills and Eastern Terai. The number of private campuses reached 45 in the Hills and 43 in Terai. Private campuses have also reached districts not covered by TU campuses. There are 14 districts, however, without any campuses offering Grades 11 and 12 classes.

3.7 During the 1992/93 academic year, the Council for Higher Secondary Education approved 36 secondary schools to run Grades 11 on an experimental basis. These higher secondary schools have been distributed over all regions except Eastern and Central Mountain. Of the 14 districts having neither TU nor private campuses, seven districts were covered by these new higher secondary schools. There remain seven districts with no facility to study certificate level.

3.8 Gender Differences in Educational Participation. Gender is one of the most important factors determining educational participation in Nepal. Although female enrollment in lower secondary, secondary and higher secondary levels is increasing rapidly, the gender gap in participation is very wide. In 1990-91, the GER for girls was 26.9% and 19.5% for lower secondary and secondary levels respectively. The GER for boys was almost double that of girls in both lower secondary (52.1%) and secondary (44.3%) levels. Region wise, Kathmandu Valley had the highest GER for girls (73.9% in lower secondary and 71.6% in secondary). Regions that had girls' GER above average were Western Hills, and Eastern Mountain, Hills and Terai. Far-Western and Mid-Western regions performed poorly in terms of female GER (Table 3.3).

3.9 The proportion of females in total enrollment decreases with the increase in the levels of education. This ratio was 37.2% in primary level and decreased to 31.5% in lower secondary, 28.7% in secondary and 24.6% in certificate level. The same pattern has been observed for all 16 regions. The proportion of female enrollment was the highest in Kathmandu Valley, followed by Western Mountain, Western Hill and Eastern Terai for all levels. The lowest proportion was 9% in lower secondary level (Far Western Hills), 6.7% in secondary level (Far Western Hills) and 6.4% in certificate Level (Far Western Mountain).

Table 3.3: Female Participation Ratio By Region, 1990-91

	Lower Sec GER		Secondary GER		Proportion of Female Enrollment		
	Boys	Girls	Boys	Girls	LS	Sec	CL
Total	52.1	26.9	44.3	19.5	31.5	28.7	24.6
EM	59.1	32.6	48.9	20.6	33.6	28.4	18.4
EH	56.4	29.1	50.8	20.3	32.1	27.3	18.0
ET	51.1	33.7	52.8	28.0	36.3	32.0	23.6
CM	38.7	12.8	26.3	6.7	22.9	19.0	16.4
CH	40.6	18.3	31.9	11.6	28.8	25.2	25.0
CT	40.3	17.2	34.8	12.6	26.2	23.7	22.7
CV	80.0	66.6	80.5	61.3	41.1	39.5	30.8
WM	31.0	35.8	23.8	16.3	48.3	36.2	-
WM	78.4	45.4	69.1	30.4	36.6	31.1	-
WH	43.7	22.3	28.4	13.5	30.5	29.4	24.4
MWM	36.7	4.1	24.1	2.4	8.7	8.2	16.3
MWH	45.7	11.7	31.2	7.6	19.0	18.6	12.3
MWT	49.7	22.5	36.8	13.6	28.0	24.6	15.8
FWM	51.7	5.7	33.5	3.5	9.3	9.1	6.4
FWH	43.3	4.4	29.4	2.2	9.0	6.7	8.5
FWT	43.7	16.2	28.1	8.1	24.5	20.6	8.2
Urban Area					41.0	39.1	-

Source: MOEC

3.10 Many studies have shown that dropout rates, non-enrollment ratios and irregularity in school attendance were higher for girls than for boys. The high opportunity cost to parents and poor economic condition of the family were identified as the two most important reasons for low female participation in education. As an example, the personal cost of secondary education (school fees, tuition, books, stationary, uniforms and shoes, and kerosene for lamps to study at night) was also identified as one of the main out-of-school factors responsible for low secondary education levels for girls in Bangladesh. As a result, the Government of Bangladesh has recently started to provide stipends to girls encouraging them to enter and continue in secondary school. Urbanization has also a positive impact on female participation in education. In 1990-91, female students constituted 44%, 41% and 39% in primary, lower secondary and secondary level enrollments in the urban areas of Nepal.

3.11 There is low female participation in technical fields. In 1990-91, 19,768 females studied in TU and private campuses. This represented 24.6% of total enrollment in Certificate Level studies. The proportion of female enrollment was 65.1% in medicine, but less than 12% in engineering and forestry. In the general subjects, the proportion of female enrollment was highest in Humanities (31.7%), followed by Education (24.9%) and Management (18.8%).

3.12 Contributing to the low participation of females in secondary education is the lack of female teachers in the schools. Of the total stock of 24,632 secondary school (6-10) teachers in 1990-91, female teachers accounted for only 9.8%. This means that for every 1.7 schools, there was on average only one female teacher. Evidence in other Asian countries suggests that a shortage of female teachers can inhibit girls school attendance, especially at the secondary level. In Kerala, for example, which has the highest female literacy and enrollment rates of all states in India, over 60% of

the teachers are women, compared with fewer than 20% in the states of Bihar and Uttar Pradesh, which have the lowest female enrollment rates. [30]

3.13 Secondary schools in Kathmandu Valley employed 1,438 female teachers, i.e. 59% of total female teachers of the country were in schools in the Valley and the ratio of schools and female teachers was 3.5 in average. There is a wide range of female teacher participation from region to region. The lowest proportion of female teachers was in Far Western Mountain (0.6%). The proportion of female teachers was below average in all regions except in the Kathmandu Valley (Table 3.4). This means that many secondary schools, especially in the rural areas, did not have any female teachers at the secondary level.

Table 3.4: Distribution Of Secondary Schools (6-10) Teachers By Sex, Qualification And Region, 1990-91

	Total	Female %	Qualified %	Female Qualified %
Total	24,632	9.8	93.3	89.5
EM	654	2.9	87.8	94.7
EH	1,996	4.6	86.9	63.7
ET	2,725	7.0	95.2	91.7
CM	481	2.1	80.9	90.0
CH	1,730	6.6	81.3	76.3
CT	2,533	4.4	94.6	84.8
CV	4,106	35.0	95.8	96.2
WM	124	1.6	96.0	100.0
WH	4,852	4.3	83.3	69.3
WT	942	6.8	95.3	98.4
MWM	440	2.3	99.5	100.0
MWH	1,247	3.6	80.5	60.0
MWT	830	6.9	95.1	89.4
FWM	504	0.6	96.4	100.0
FWH	918	2.3	72.9	23 8
FWT	550	6.6	97.3	100.0

Source: MOEC

3.14 Low Participation of the Poor and Disadvantaged Ethnic Groups. The National Planning Commission (NPC) has defined the poverty line on the basis of income needed to provide for the minimum caloric requirements. According to this definition, a person needs a monthly income of NRs. 210 (in the Hills) and NRs. 197 (in Terai) in 1988/89 prices to meet the minimum caloric requirements. Using the above measure of poverty, NPC estimated that 40% of the population is in absolute poverty. A World Bank Study [31] referred to the NPC estimates as conservative and concluded that the incidence of absolute poverty is in the neighborhood of 50-60%.[32]

30/ Herz, Barbara et al., Letting Girls Learn - Promising Approaches in Primary and Secondary Education, World Bank Discussion Paper, 1991.

31/ World Bank (1991), Nepal: Poverty and Incomes, a World Bank Country Study, Washington, D.C.

32/ The present analysis uses the NPC definition as information on educational participation is available only for the NPC measure.

3.15 MOEC does not collect educational data by economic status. Available information from sample studies shows that the gap in educational participation between the poor and the non-poor is very wide. A study carried out by Nepal Rastra Bank (1989) indicated that only about 11% of the secondary school age children from the poor families in the rural Hills are enrolled in secondary schools. This ratio was about 30% for the non-poor. Table 3.5 shows gross enrollment ratios for the poor and the non-poor by ecological regions and urban/rural areas.

Table 3.5: Enrollment Ratios By Economic Status (%)

	Rural Mountain	Hill		Terai	
		Rural	Urban	Rural	Urban
Primary					
Poor	37.1	49.2	64.9	30.1	37.2
Non-poor	55.1	64.5	79.0	53.0	63.4
Secondary					
Poor	17.8	10.9	23.9	13.0	22.0
Non-poor	21.3	29.8	48.5	29.7	42.0

Source : World Bank

3.16 Although Urban Hills and Terai performed better in terms of participation rate, no improvement was observed in the disparity between the poor and the non-poor. The poor are less able to pay the direct costs such as fees, uniforms and stationary. The poor are also less able to bear the indirect costs of labor foregone. The opportunity cost is higher for girls as they are more involved in domestic works than boys. Similarly, the demand for children's labor is very high during the peak agricultural seasons (transplanting and harvesting). Finally, long and rigid schools hours limit educational participation of the poor.

3.17 Ethnic Groups. Data on population and education by ethnicity is not available. Brahmins, Chhetris and Newars have been commonly noted as educationally advantaged ethnic groups, whereas minor ethnic groups living in remote and isolated places such as the Chepang, Tamang, Darai, Dura, Jirel, Thami, Surel, Satar, Rajbansi, Lepcha, Pahari, Jhangar are known as educationally disadvantaged groups. Other educationally disadvantaged groups include ethnic and/or racial minorities namely, Sunnwars, Sherpas, Limbus, Hayus, Lowas, Chhantels and Gaines.[33] These groups participate less, not only because they cannot afford direct and indirect costs but also because of social reasons. Almost all the teachers in schools are generally from the socially advantaged community. A recent study [34] collected information on students who appeared in the SLC in 1988 from selected schools noting that, of the 208 SLC sitters, only 3 students (1.4%) were from the disadvantaged groups. Another study observed a secondary school gross enrollment ratio of

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33/ MOEC (1990), Promotion of Primary Education for Girls and Disadvantaged Groups, Kathmandu.

34/ Op. cit.

10% and 21.7% for Tharu (Dang) and Chepang (Makawanpur) boys respectively. No girls were found enrolled in the sample households of these communities.[35]

3.18 Regional Differences in the Quality of Schooling. Factors that affect the quality of schooling in Nepal include the quantity and quality of schools, the availability of qualified teachers, the relevance of the curriculum, the hostel facilities and the availability of textbooks and educational materials. MOEC does not collect information on physical facilities of the schools and hostels. Local communities are responsible to develop, improve and maintain physical facilities of the schools. This means that economically backward communities may not have been able to contribute to improving the school physical facilities, except with voluntary labor.

3.19 Regarding the availability of qualified teachers, MOEC data indicate that Mountain regions had more qualified teachers, because the Government supports 100% of teachers salaries of secondary teacher in most of these districts. MOEC data, however, relates to the stock of teachers and does not show whether or not the schools have been able to get the required teachers in subjects like English, Science and Mathematics. Accounts from the rural areas reveal that most of the rural schools lack qualified teachers in these subjects. Also, teachers in lower levels are known to teach in higher levels due to lack of teachers in critical subjects.

3.20 To analyze the regional differences in the quality of schooling, the SLC results of 1990 (a high pass year) were examined. The overall pass rate of regular students in 1990 was 48.5%. The pass rate was around 37% even in backwards regions (Far Western Hills and Mountains). The proportion of SLC pass students obtaining First Division has also been analyzed to see the differences in the quality of schooling on the assumption that schools that provide quality teaching also perform better in SLC results (Table 3.6). A comparison of the proportion of SLC pass students obtaining First Division in the 1990 SLC, shows a wide difference in performance. This proportion was the highest in Kathmandu Valley (39.1%) followed by Central Terai (20.5%). Very few students obtained First Division in backward regions such as Far Western Mountain (1.6%) and Western Mountain (1.3%). The performance of the private and boarding schools was noteworthy and most of these schools are located in Kathmandu Valley and Urban areas. [36]

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[35] RIDA/UNICEF (1991), Status of the Girl Child in Nepal: A Survey Report, Kathmandu.

[36] In 1991, the overall SLC pass rate of regular students fell sharply (24%) and most of the students (37,000 out of 94,000) failed in English with less than 15 marks. Many schools in rural and remote areas performed very badly and in several cases the pass rate was zero.

Table 3.6: SLC Results By Region, 1990 (Regular Candidates)

	Grade 10 Enrollment	SLC Appeared	SLC Pass	Pass Rate	1st Division	% of 1st Division
Nepal	-	100,382	48,656	48.5	7,595	15.6
EM	2,491	2,159	982	45.5	51	5.2
EH	9,085	7,814	3,134	40.1	169	5.4
ET	21,203	19,802	7,839	39.6	1,150	14.7
CM	1,828	1,500	653	43.5	28	4.3
CH	6,421	5,887	2,870	48.8	358	12.5
CT	14,996	12,790	7,870	61.5	1,616	20.5
CV	14,398	12,666	6,394	50.5	2,503	39.1
WM	65	103	78	75.7	1	1.3
WH	21,607	19,741	10,804	54.7	1,003	9.3
WT	5,441	5,025	2,289	45.6	260	11.4
MWM	619	637	397	62.3	14	3.5
MWH	3,818	3,677	1,593	43.3	125	7.8
MWT	4,611	4,267	1,824	42.7	201	11.0
FWM	1,366	1,170	431	36.8	7	1.6
FWH	1,798	1,403	514	36.6	26	5.0
FWT	2,225	1,713	956	55.8	60	6.2

Source: MOEC

B. Private Secondary Education

3.21 The poor quality of government-aided schools has pushed some parents to look for alternative schooling opportunities. PBS schools offer a much higher quality, serving children primarily from the upper echelons of Nepalese society. Even though PBS schools provide some freeships to "poor" students (about 2.5% of the total secondary enrollment in these schools), most of these "poor" students are from the relatively poor families in Kathmandu Valley and other urban areas and are not the "real" poor in the Nepalese context. In addition, as the current level of government expenditure on lower-secondary and secondary education is insufficient to provide enough government-aided schools to accommodate all students, community schools have emerged to meet the shortage in government-aided schools. PBS schools have also a role, albeit small, in meeting this shortage.

3.22 Private Enrollments Table 3.7 shows secondary enrollments for the period 1989-91. For Grades 6-10, private schools accounted for 19.0%, 20.5%, and 21.7% respectively of total enrollment in this period. Private enrollment increased at a faster rate than government enrollment so that the private share of total enrollment in Grades 6-10 has been increasing in recent years. However, the private share varied significantly between lower-secondary and secondary grades: it was about 11% for both Grade 6 and Grade 7, but it increased sharply to about 30% in Grade 8. It averaged 29.4% in Grade 9 and 26.5% in Grade 10. In other words, private education has a much larger presence at the secondary level than in the lower-secondary level.

3.23 Private enrollments are distributed very unevenly across the 16 regions. In particular, private enrollment is concentrated in the Kathmandu Valley area (see Table 3.8). In terms of development region, private-school students are mostly found in the eastern, central, and western regions. In general, enrollments in government-aided schools have a similar geographical distribution to that for PBS and community schools enrollment, reflecting the underlying geographical distribution of school-going children. The major difference is that government enrollment is not as concentrated in the Kathmandu Valley area; this area has only 8.4% of government enrollment compared to 25% of private enrollment. PBS schools have less than one third of the total enrollment in private schools, accounting for 4-7% of the total enrollment in Grades 6-10.

Table 3.7: Student Enrollment In Grades 6-10, 1989-91

		1989	1990	1991
Grade 6	All	174,339	183,593	208,749
	Private	18,620	20,192	23,102
	% Private	10.68	10.99	11.0
Grade 7	All	150,898	160,545	169,729
	Private	15,681	17,083	19,392
	% Private	10.39	10.64	11.4
Grade 8	All	125,793	133,188	152,344
	Private	37,693	42,845	50,463
	% Private	29.96	32.16	33.1
Grade 9	All	110,018	119,365	131,048
	Private	29,810	35,105	42,732
	% Private	27.09	29.40	32.6
Grade 10	All	102,968	111,972	111,938
	Private	24,346	29,937	32,603
	% Private	23.64	26.78	29.1
Grade 6-10	All	664,016	708,663	773,808
	Private	126,150	145,222	168,392
	% Private	18.99	20.49	21.7

Source: Enrollment data from Ministry of Education and Culture, Nepal.

Table 3.8: Private Secondary Education Enrollment By Region And Zone, 1991

	Mountain	Hill	Terai	Valley	Sub-Total
A. Enrollment					
Eastern	2,323	8,218	27,042		37,583
Central	2,356	7,700	13,797	42,599	66,452
Western	27	35,393	10,896		46,316
Mid-Western	170	3,916	7,040		11,126
Far Western	994	1,106	4,715		6,815
Sub-Total	5,870	56,333	63,490	42,599	168,292 (Total)
B. Percentage Distribution					
Eastern	1.38	4.89	15.56		21.83
Central	1.40	4.58	8.21	25.35	39.54
Western	0.02	21.00	6.48		27.50
Mid-Western	0.10	2.33	4.19		6.62
Far Western	0.59	0.66	3.26		4.51
Sub-Total	3.49	33.46	37.70	25.35	100.00 (Total)

Source: Enrollment data from Ministry of Education and Culture, Nepal.

3.24 In Nepal, Grades 6-10 can be found in different schools offering different grade levels (Grades 1-6, 1-7, 1-8, 1-9, 1-10, 4-10, 6-10, and 8-10). MOEC has recently estimated the number of schools for each of the three types of schools. In 1991, among schools with one or more grades in 6-10, 2,695 (66.1%) were government-aided schools, 293 (7.2%) were PBS schools, and 1,089 (26.7%) were community schools. Thus 79% of the private schools were community schools. In 1992, PBSO identified 314 PBS schools with Grades 6-10 in the country. Over half of the schools were located in the Kathmandu Valley alone; no such schools were found in the mountain zones and very few schools were located in the mid-western and far-western regions.

3.25 Teachers. The distribution of teachers in private schools is quite different from that for government-aided schools. For both the lower-secondary and secondary levels, government-aided schools have a much higher percentage of trained teachers. On the other hand, private schools have a higher percentage of teachers with education qualifications above the minimum ones. At the same time, private schools also have a higher percentage of teachers with education qualifications below the minimum ones. Available data are inconclusive with respect to the relative teacher quality between private schools and government-aided schools.

3.26 Revenue and Expenditure of PBS Schools. Up to now, very little information was known about PBS schools in Nepal. As part of the present study, a survey was conducted in 1992 of 75 secondary PBS schools. The data collection was undertaken by representatives from the national PBSO office and its affiliated district offices. The 75 schools represent about one-quarter of the total number of PBS schools with Grades 6-10. The sampling was based on a geographical distribution of

PBS schools with Grades 6-10 by zone and region; the distribution of the sample generally resembles that of the national sample space.[37]

3.27 Table 3.9 shows the average revenue of non-boarding and boarding PBS schools in the survey. Obviously, the revenue of a school depends on its enrollment and fees. For a non-boarding PBS school, the revenue comes almost exclusively from school fees (96% of total). For boarding PBS schools, revenue comes mostly from school fees (55%) and boarding fees (43%). The other sources bring in very little revenue.

Table 3.9: Sources Of Revenue For Grades 6-10 In Private And Boarding Schools, 1991

	PBS Schools	
	Non-Boarding	Boarding
Average revenue per school (NRs.)	631,562	1,099,968
% Distribution by Source:		
Fees	96.4	55.3
Transportation	2.4	1.4
Deposits	0.8	0.5
Others	0.4	0.2
Boarding	--	42.6
Total	100.0	100.0

Source: Survey of PBS Schools

3.28 In addition to tuition fee, secondary PBS schools collect about a dozen other school fees from their students. The amounts and the number of other school fees vary by school. Table 3.10 shows how much a student, on average, has to pay in each of the 14 fee categories. For a non-boarding student, the total annual fee is 4,251 rupees (1992), and tuition fee accounts for two-thirds of the total. In a boarding school, the total boarding fee is as high as 10 times of the total non-boarding fee.

3.29 The fees charged by PBS schools are high compared to those in other schools.[38] Table 3.11 shows that, in 1992, the total (non-boarding) fee for the average PBS student is about five times that for a student in a government-aided school or a community-school student. It is instructive to note that a university student pays only one-fourth of the fee of a secondary student in a PBS school.

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[37] The survey instrument was designed and field-tested by a local consultant and a representative from PBSO. Data were collected to allow an estimation of the revenue and expenditure of secondary PBS schools. Given a limitation in time, the question of access to school records, and the physical difficulty of reaching some of these schools, no effort was made to randomly select a number of surveyed schools to check the accuracy of the reported data. In particular, one cannot determine the degree of under-reporting of school revenue or over-reporting of school expenditure. Nevertheless, the results are generally consistent with one another so that they probably give the right "order of magnitude" for revenue and expenditure in PBS schools. Bajracharya, R.B., A Report on Private and Boarding Lower Secondary and Secondary Schools in Nepal, Kathmandu, 1992.

[38] To provide a rough comparison, the school fees charged by government-aided schools and community schools were estimated from data obtained from school visits.

Table 3.10: Average School Fees In Private And Boarding Schools, 1991-92

Type of Fees	Amount Per Year (NRs.) 1991	1992
Tuition	2,301	2,733
Admission a/	79	90
Deposit a/	71	179
Games	87	97
Library	52	59
First Aid	39	47
Poor Student Fund	10	12
Educational Materials	23	28
Laboratory	15	18
Maintenance	55	61
School Magazine	5	
Examination	101	119
Stationery	3	
Transportation b/	700	800
Total for Non-Boarders	3,541	4,251
Boarding Fee c/	34,764	40,951
Total for Boarders	38,305	45,202

a/ Prorated to obtain fee per year.
b/ Estimated based on information supplied by the Private and Boarding Schools Organization.
c/ Include room, food and other boarding items.

Table 3.11: Comparison Of Fees, 1992 (Rupees Per Year)

	Tuition Fee	Other Fees	Total Fee	As of PBS Total
Secondary PBS Schools a/	2,733	1,518	4,251	100
Secondary Government Schools b/	600	140	740	17
Secondary Community Schools b/	640	250	890	21
Tribhuvan University: c/				
Certificate Level (Grades 11-12)	500	500	1,000	24
Bachelors Level (Grades 13-14)	600	590	1,190	28
Masters Levels (Grades 15-16)	700	450	1,150	27

Sources: a/ From survey of PBS schools.
b/ From visit of schools (based on a very small sample, large error possible).
c/ From fee schedule of university.

3.30 Table 3.12 shows the average recurrent expenditure of a PBS school (excluding boarding expenditures). It shows that personnel expenditures accounted for 53% of total recurrent expenditure in 1991. For non-personnel expenditures, rent and transportation amounted to 27% of total recurrent expenditure. It is interesting to note that, in 1991, the average school revenue was 631,562 rupees (Table 3.9) while the average recurrent expenditure was 514,447 rupees (see Table 3.12); the difference between the two figures would be a measure of the sum of the development expenditure and profit of the average PBS school. If no development expenditure had been made in 1991, the maximum profit would have been equal to 23% of the recurrent expenditure. In reality, the rate of profit will be somewhat lower since some PBS schools are likely to engage in some capital

investment. But running a PBS school can be a very profitable and attractive "business" compared to other alternatives (e.g., Nepalese banks pay 12-14% interest to PBS schools for their deposits).

3.31 The per-student recurrent expenditure of PBS schools was 3,113 rupees in 1991 and was about six times that of government-aided schools (542 rupees/student by the government) in 1990/91!

Table 3.12: Average Recurrent Expenditure Per Private And Boarding School, 1991 (NRs. per year)

Expenditure Items	Amount	% Total
Personnel Expenditures:		
Salary, Teaching Staff	225,637	43.86
Salary, Non-Teaching Staff	34,927	6.79
Administrative Cost	10,448	2.03
Sub-Total	271,012	52.68
Non-Personnel Expenditures:		
Rent	45,377	8.82
Regular Maintenance	22,493	4.37
Stationery	13,683	2.66
Books	12,457	2.42
Examination	20,458	3.98
Educational Materials	8,338	1.62
Scholarships	7,524	1.46
Co-Curricular Activities	7,554	1.47
Transportation	96,593	18.78
Water	2,016	0.39
Electricity	4,107	0.80
Telephone	2,835	0.55
Sub-Total	243,435	47.32
Total Non-Boarding Expenditure	514,447	100.00
Per-Student Recurrent Expenditure	3,113	

3.32 School fees are not the only direct costs of education for parents. Other direct costs for parents (known as "direct private costs of education") include spending on uniform and shoes, textbooks and reference books, writing pads and pencils and other similar items, transportation, and other schooling-related items. No survey was conducted to determine precisely the magnitude of these costs and their economic burden on families (defined as the ratio of total direct private cost to total household income). Teachers in a secondary PBS school in Kathmandu estimated that, in 1992, parents would spend about 1,500 rupees a year on uniform and shoes and other clothing, 500 rupees per year on textbooks and reference books in Grade 6 and up to 1,000 rupees in Grade 10, and about 1,100 rupees per year on school supplies. In other words, the sum of these other direct costs for parents (at least 3,100 to 3,600 rupees per year) would be at least as large as the sum of school fees. The total direct private cost of secondary schooling would be at least 7,500 to 8,000 rupees per year per child in 1992 in the Kathmandu area. Note that in 1991/1992, per-capita GDP of Nepal was about 7,650 rupees, very close to the direct private cost of secondary schooling. In Nepal, as it is in

other developing countries, parental expenditures on education constitute a significant proportion of the total cost of education.[39]

3.33 The economic burden of direct private cost of secondary schooling in Nepal can be assessed as follows. According to a recent study, the per-capita income of the top 10% of Nepalese households in the urban areas ranges between 19,140 to 22,300 rupees.[40] Assuming a family size of 6 [41] for these household, the household income would be 114,840 to 133,800 rupees. Thus, the direct private cost of secondary schooling would account for 6-7% of the income of these top urban households; it is clear that these households can afford a secondary education at least for some of their children. On the other hand, the average household income is estimated to be 24,960 rupees.[42] The direct private cost of secondary schooling per child is equal to 32% of the average household income, a very heavy burden indeed (note that, because of the low level of income, a large percentage of household income has to be devoted to physical subsistence). For the poorest 10% of rural households, the average direct private cost of secondary schooling would amount to about 95% of household income! Cross-national data show that households in low-income countries typically spend less than 5% of their income on education.[43]

3.34 Although no study has been conducted on the family backgrounds of students enrolled in secondary PBS schools, it can be inferred from the above discussion that such schools are affordable only to the top income/asset groups of Nepalese society. Discussion with Nepalese educators as well as the visit to PBS schools indicate that, as a rough approximation, PBS families consist mostly of three groups: government officials and industrialists/businessmen, professional and other technical workers, as well as individuals who own land in high-price areas (such as Kathmandu).

3.35 In 1992, the PBS schools in the survey provided an average of about 10 freeships (awards to students by which students do not have to pay any school fee) per school, or about 5% of the secondary student enrollment in these schools. About one-quarter of the freeships were given to students on a meritorious basis and another one-quarter to students who are children of the school staff. The remaining half of the freeships were given to poor and deprived children. According to PBSO, freeships to the poor are usually awarded in two ways, one based on recommendations from a committee in the local ward, and the other through direct application by students to the school.

3.36 Student Achievement. Available data definitely support the overwhelming superiority of PBS schools in the SLC examination. In 1991, the total passing rate for PBS schools was 79.1%, compared to 17.5% for community schools and 22.4% for government schools. PBS schools also

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39/ Tsang, M. and Taoklam, W. (1992), The costs of Government and Private Primary Education in Thailand. International Journal of Educational Development, 12 (3), 177-190.

40/ Estimated from World Bank (1991), Nepal: Poverty and Incomes, Table 2.1 (1992/92 prices), Washington, D.C.

41/ Op. cit.

42/ Computed from World Bank (1991), Nepal: Poverty and Incomes, Washington, D.C.

43/ Estimated from World Bank (1990), World Development Report, Washington, D.C.

have the highest percentage of first division pass. The two types of private schools are radically different from each other in terms of performance. PBS schools perform much better than government-aided schools which in turn perform better than community schools. In fact, PBS schools have consistently performed well above the national average and that the top scorers have come almost exclusively from PBS schools.

3.37 A number of factors can be taken into account for understanding differences in student achievement among schools and between the sexes. First, the backgrounds of students in PBS schools are very different from those in the other two types of schools. PBS schools are urban schools; their high fees are affordable to only a small minority of households. Second, PBS schools have some degree of autonomy in school-management which is not available to government-aided schools. Two aspects of such autonomy are important: student selection, and personnel practices. PBS schools can have admissions tests to select their students; such a practice is especially common among the top PBS schools. PBS schools can select and fire their teachers; in fact PBS schools often fire their low-performing teachers or teachers who are consistently absent from their classes. In government-aided schools, teacher management is a major problem and many teachers are absent from their classes. Third, the large difference in SLC examination results is actually the accumulation of differences in educational opportunities in previous grades. A great majority of PBS schools offer classes from nursery and/or kindergarten to Grade 10. There is also a private sector in pre-primary education which feeds students into PBS schools.

3.38 Control and Incentives. Through the regulations specified in the various Amendments to the NESP, the government seeks both to control the operation of private schools and provide incentives for their development (a summary of the current regulations is given in Annex 3). The control-related regulations concern the issuance of permit and registration, minimum physical facilities, teacher pay, the school curriculum and examination, supervision and inspection, and school management. They are meant to ensure minimum quality in terms of education inputs, promote national unity through a common curriculum, and to protect the interests of participants in private education. In particular, they require that private schools should: (1) meet certain conditions in order to obtain a permit, (2) provide certain minimum physical facility, (3) follow the government curriculum and be subject to the SLC examination, and (4) have teachers whose qualifications and compensation are at least comparable to those of teachers in government-aided schools. They also specify the composition of the school management committee such that the government has a strong influence on the membership of the committee.

3.39 The incentive-related regulations specify conditions for stimulating the establishment of private schools. In particular, private schools are exempted from sales tax and customs duty on a number of education-related materials, equipment, and other items. Private schools do not have to pay house tax and their earnings will not be taxed. However, private schools will not receive grants from the government.

3.40 The enforcement of the current regulations is actually quite lax. Because of financial constraints, the government does not have the necessary personnel to conduct regular supervision or inspection and to determine whether or not private schools are complying with the regulations that concern physical facilities, and teacher qualification and compensation. School permits are issued not necessarily according to the specified conditions. Private schools complain that the government does not have a published list of tax-exempt education items and that the regulations are not comprehensive

enough; uncertainties about the appropriate course of action governing private schools may encourage corruptive behavior among the concerned government staff or officials. On the other hand, some PBS schools were reported to have abused their tax exempt privileges. These schools bought tax-exempt items and then sold them in the market at mark-up prices.

3.41 However, private secondary schools are registered with the government and they do follow the government curriculum closely, particularly because their students sit in the same SLC examination as government students, and only students from registered schools are allowed to take the examination. PBS schools usually adopt additional reference books from a list approved by MOEC.

3.42 PBSO has been discussing with MOEC two control-related issues. The first issue concerns the extent of autonomy of private schools. The management of a private school is undertaken by a school management committee. But the government has a large say in the composition of the nine-member committee. For example, the chairman of the committee is nominated by the concerned district education officer; and the officer (or his/her representative) is also a member of the committee. Two other members of the committee are nominated by local government units. PBSO wants more control over the membership of the committee (nomination of the chairman and the majority of other members) so that school-related members have more decision-making power. It contends that since the government does not provide direct financial support to the school, the school should be given autonomy in its operation.

3.43 PBSO is also urging the government to provide additional incentives to private sector involvement in education. Its proposal concerns the ownership of private schools and the government's assistance in securing loans for construction of school building. PBSO maintains that if individuals (or groups of individuals) establish and invest their resources in private schools, they should be the owners; this practice is analogous to that of investment and ownership in the economic sector. The private proprietary school is like a private firm. Without private ownership, PBSO asks, why would individuals invest in private schools? On the other hand, individuals, groups, and other non-profit organizations can operate non-profit schools for educational purposes; the annual surplus of such schools will be plowed back to the schools for further development. For these non-profit schools, ownership will belong to a trust.

3.44 According to PBSO, 95% of the PBS schools that were established after 1980 are operated on rented property. The rented school buildings were constructed for residential purposes, not for running a school. Some PBS schools are occasionally forced to move to another site when they cannot afford a large and unexpected increase in building rent. The lack of a permanent school building and uncertainty about rent increase create a sense of insecurity for private schools. Opponents to the PBSO argue that the school should be a community or government property. Education should not be a profit-making sector. Individuals cannot extract resources from the community (through charging large school fees) and claim such resources to be theirs. They also point out that many PBS schools are making substantial profits which can be accumulated for building construction; they draw attention to some private schools with own buildings constructed that way.

3.45 The recent Education Act (Fifth Amendment) indicates that the property of the school shall be considered as public property, not the property of any individual. Educational rule 120 also states that the ownership of a private school shall be with the concerned school "as long as it is in smooth operation". In case the school is closed or not found in operation condition, the property of

such school shall be considered as public property. This provision has renewed the debate and the PBSO has filed its case in the Supreme Court. In fact, the 1992 Education Regulations failed to classify private schools in terms of profit making and non-profit making trusts and therefore could not resolve the issue.

C. Provision of Equitable Educational Opportunities

3.46 Promotion of Regional Equity. As shown above, one of the major challenges facing Nepalese policymakers in the development of secondary education, is associated with the highly unequal educational opportunities for children from different backgrounds. In order to improve equity across regions, the Government should give priority to remote and rural areas while providing assistance to community schools. As noted above, most of the community schools are located in economically advanced regions. These relatively better-off communities are anticipating that, under the free secondary education policy, already established community schools are likely to be converted into Government schools. The Government should, instead, give priority to remote and rural areas in this process.

3.47 In the early 1980s, the Government initiated a plan to establish model "quality schools" in regions, as well as a national school in the Kathmandu Valley. Based on this policy, Budhanilkantha school was established as a national school and Gandaki Boarding school, in Kaski, as a regional school. Both schools are located in educationally advanced regions and, until recently both schools were boys-only schools. The Budhanilkantha School enrolls talented students from all over the country and provides some scholarships to promote equal opportunity of quality education. There is a need to establish such model secondary and higher secondary schools in backward areas where private sector involvement is non-existent.

3.48 Female teachers and teachers of critical subjects, serving in remote areas, should receive extra allowances. The Government has been providing Grants-in-aid to lower secondary and secondary schools in remote districts to meet 100% of teachers salaries. This policy has a positive impact on increasing the number of qualified teachers in these districts. However, schools in remote districts still lack qualified teachers in critical subjects such as English, Science and Mathematics. Female teachers are also scarce in remote areas.

3.49 Tribhuvan University has recently proposed a policy of reserving 25% of the seats at the Certificate Level programs in its best campuses and in the technical institutes, to students from the five development regions on an equal basis. The proposed policy may not contribute to reduce regional disparities as it treats equally all regions. From an equity point of view, it would be appropriate to reserve 25% of seats to students from backward regions only, or preferentially. Also, the University should set the requirement that students seeking admission to these "reserved seats" should have studied and completed their secondary schooling in the remote and rural regions, so that there would not be a misuse of the reserved seats.

3.50 At present, educations facilities to study in Grades 11 and 12 are concentrated in Kathmandu Valley, Eastern Terai and Western Hill regions, which are considered by the Government as educationally advanced regions. The Council of Higher Secondary Education requires that the schools deposit a fixed amount of money equivalent to NRs. 650,000 (approximately US$13,000 at the current exchange rate) to run Grades 11 and 12. This policy could further increase regional

disparities as it discourages the establishment of higher secondary schools in economic backward regions and rural and remote areas. The Council should carry out feasibility studies with a view of supporting the establishment of higher secondary schools with community participation in rural and economically poor areas.

3.51 Promotion of Gender Equity. The major task of reducing gender disparity is in primary education. However, one of the reasons for low female enrolment in secondary schools, especially in rural and backward areas, is also the lack of female teachers in secondary schools. The Government has recently adopted the policy of employing at least one female teacher in each primary school. This policy needs to be extended to the secondary schools, with additional support for the remote and poor areas. Similarly, the representation of ethnic groups and disadvantaged communities as teachers in the secondary schools, is necessary to increase the participation of children from these communities.

3.52 Participation of the poor and disadvantaged groups, especially girls, is also hindered by the high opportunity cost to parents of schooling in general and secondary schooling in particular. The rigid school hours of 10 a.m. to 4 p.m. are not suitable for many of these children. Schools that open in the morning and in the evening for 2-3 hours are needed to attract these students to secondary schools. There are experiences in Nepal which show that if flexible arrangements are made, older age children can complete two grades in one year with schooling of only 2-3 hours daily. The Non-Formal Unit under the Basic and Primary Education Project (Cr. 2537-NEP) has been implementing an Out-of-School program (OSP) for 8-14 year old children deprived of schooling opportunities. It is expected that participants who complete OSP I (nine months) and OSP II (another nine months), will achieve the knowledge and skills required from a primary education graduate. The project staff are also trying to develop OSP III, to provide income generating skills to OSP II graduates.

3.53 Another way to increase girls enrollment is to establish girls-only schools in areas where there is low enrollment of girls. There are also social barriers for parents to send the girls to co-educational schools, especially in some communities in Terai. Separate girls schools are more important at the secondary school level, as the social barriers increase with the increase in the age of the girls.

3.54 MOEC has recently announced that about 40,000 girls students in all school levels will be provided scholarships of various kinds under the Government's Women Education Program. Close to 32,000 girls in primary school will receive NRs. 250 per annum. In lower secondary and secondary level, 8,000 girls students will get NRs. 70 (Grade 7) to NRs. 100 (Grade 10) as a monthly stipend for ten months. Scholarships are also provided to female students participating in teacher training programs. In the past, MOEC provided scholarships based on the number of girls enrolled. This failed to promote girls education in rural areas because there were scarcely any girls enrolled. The scholarship policy could be made more equitable by providing more scholarships to girls studying in remote areas. Studies have shown that parents find it difficult to provide school uniforms and stationery such as notebooks to girls. As a result, many girls do not want to attend school. Support to parents to buy school uniforms and stationery is even more important in secondary than in primary level, as the female students are older and conscious of their poverty status.

3.55 It has been shown that female participation in Grades 11 and 12 is low, especially in technical subjects like Forestry and Engineering. Currently, Tribhuvan University has reserved 10% of the seats for female students in technical fields. The Institute of Agriculture and Animal Science

and Institute of Forestry have also set special requirements for females. Tribhuvan University intends to extend this policy to other institutes and faculties to promote female education. This is a positive step and the University should monitor the implementation of this policy.

3.56 The Role of the Private Sector. One way to mitigate inequality in secondary education is to enlist the assistance of PBS schools in the education of students from poor and remote backgrounds. PBS schools at the secondary level currently provide freeships to 5% of their students, some 600 students. But half of the freeships are not designated for poor students and the other half are not necessarily given to the poor students in the Nepalese context. In fact, some freeships may be given to children of influential people instead.

3.57 As part of its policy on private ownership, the government may require that a portion of the total freeships be designated for students from poor backgrounds and remote areas and that such freeships will be allocated by the government. The exact proportion is a matter of negotiation between the government and PBS schools. The key requirements are: (i) that a higher percentage of freeships be designated for students from poor and remote backgrounds; and (ii) that the government has control over the allocation of the majority of such freeships.

3.58 In this regard, gender and regional differences in educational opportunities should also be seriously considered. Although freeships from girls schools will naturally go to female students, a conscious effort has to be made to ensure that poor female students get a fair share of the total number of freeships (at least 30% according to female enrollment, and more desirably 50%). Also, an effort has to be made to award freeships with boarding provision to students from remote areas. The survey of PBS schools shows that 14% of Grades 6-10 students are boarders.

D. Recommendations

3.59 Recommendations that would improve the access to educational opportunities can be summarized as follows:

(a) Promote regional equity by giving priority assistance to community schools in remote areas, increase incentives for qualified teachers to go and teach in remote areas, establish model schools, reserve Grades 11 and 12 "seats" for SLC pass students from backward regions and encourage the establishment of community higher secondary schools in rural and remote areas;

(b) Promote gender equity by extending the primary teachers policy of "one female teacher per primary school" to the secondary levels, establishing single sex schools where low enrollment of girls exist, improving the scholarships policy, providing uniforms and stationery and reserving Grades 11 and 12 "seats" for females who cannot get into higher education through the general procedures; and

(c) Secure agreement with PBS schools on the total quantity and distribution of freeships to be provided by these schools. MOEC would coordinate the allocation of freeships on a national basis and would ensure that students from remote areas which do not have PBS schools will obtain freeships from PBS schools with boarding facilities. More than 600 students would be benefitting from this approach.

Chapter IV: EXPENDITURE OPTIONS AND PRIORITIES

A. Trends in Government Expenditures in Education

4.1 The government education budget is part of the budget of the central government. Government budgets are divided into regular budgets and development budgets. The distinction between regular budgets and development budgets is not a meaningful one because development budgets contain many items which should have been put under the regular budgets (such as salaries, subsidies and transfers) under the conventional accounting framework.[44] The budget is financed by tax and non-tax revenues of the government and by external aid to the government. Nepal has a centralized system for mobilizing public resources to support public (or government-aided) education.

4.2 The majority of the total allocation to secondary education is found in the regular budget. For the other subsectors, the total budgetary allocation is found almost entirely in the development budget. For example, allocations to primary education, higher education, and vocational/technical education, adult education, curriculum and textbook, teacher training, female education, scholarship and grants, and other items are put under the development budget. The development budget for primary education and higher education, however, contain allocations for both recurrent and capital items in these subsectors.

4.3 Table 4.1 gives the budgetary allocation by subsectors of education for the FY88-FY92 period. During this period, the budget for education (development and regular) increased from NRs. 1599.5 million to NRs. 3,205.0 million. Primary education had a steady increase in its share of the education budget, from 42.9% in FY88 to almost 50.0% in FY92. Secondary education's share remained constant at about 13.7%. Higher (university) education dropped from 23.8% in FY88 to 21.8% in FY90 and then returned to a 28.1% level in FY92. Vocational and technical education and adult (non-formal) education maintained their small shares of the total education budget at about 1.7% and 0.4% respectively during the period.

44/ World Bank (1992), Nepal: Public Resource Management in a Resource-Scarce Economy, SA1CO.

Table 4.1: Nepal Education Sector Budgets
Allocations By Subsector (Development And Regular)
(In NRs. Million)

	FY88 Budget Allocat.	%	FY89 Allocat.	%	FY90 Allocat.	%	FY91 Allocat.	%	FY92 Allocat.	%	Average (FY88-92) Allocat.	%
Primary	686.0	42.9	779.0	44.8	967.0	45.3	1,003.0	48.2	1,592.0	49.7	1,005.4	46.2
Secondary	219.0	13.7	235.0	13.5	289.0	13.5	293.0	14.1	443.0	13.8	295.8	13.7
Higher	380.0	23.8	381.0	21.9	466.0	21.8	485.0	23.3	902.0	28.1	522.8	23.8
Voc/Tech	29.0	1.8	32.0	1.8	33.0	1.5	34.0	1.6	54.0	1.7	36.4	1.7
Adult	4.5	0.3	8.0	0.5	8.0	0.4	8.0	0.4	20.0	0.6	9.7	0.4
Other	281.0	17.6	305.0	17.5	371.0	17.4	256.0	12.3	194.0	6.1	281.4	14.2
Total	1,599.5	100.0	1,740.0	100.0	2,134.0	100.0	2,079.0	100.0	3,205.0	100.0	2,151.5	100.0

Source: MOF

4.4 In view of the high illiteracy levels and the low enrollment rates the education sector is underfunded. Table 4.2 presents the total allocations and expenditures during the period FY88-FY92. It shows that the total education expenditures ranged between 2.0% to 2.3% (average 2.1%) of GDP, a low level compared to the average 3.0% for Asian countries and about 4% for developing countries during the period FY88-FY92. The education expenditures also averaged close to 10% of the total government expenditures during this period; this level is somewhat lower than the 12.5% average for Asian countries and much lower than the 15-16% average for developing countries.[45] FY92 estimates indicate that total education expenditures increased to 11.4% of total Government expenditure.

Table 4.2: Nepal Education Sector
Total Allocations And Expenditures To Education
(In NRs. Million)

	FY88		FY89		FY90		FY91		FY92		Average (FY88-FY92)	
	Allocat.	Expend.	Allocat.	Expend.	Allocat.	Expend.	Allocat.	Expend.	Allocat.	Expend.	Allocat.	Expend.
Regular	271.2	262.0	286.0	275.0	398.0	311.8	350.0	392.1	471.0	472.8	355.2	342.7
Develop	1,328.3	1,227.0	1,454.0	1,248.7	1,736.0	1,474.6	1,729.0	1,708.1	2,734.0	2,330.4	1,796.3	1,597.8
Total	1,599.5	1,489.0	1,740.0	1,523.7	2,134.0	1,786.5	2,079.0	2,100.5	3,205.0	2,803.2	,151.5	1,940.6
% Educ.Exp/ Total Exp		10.6		9.7		9.1		8.9		11.4		9.94
% Educ.Exp/ GDP		2.1		2.3		2.1		2.0		2.1		2.1
% Educ.Exp/ Educ. Alloc.		0.93		0.88		0.84		1.01		0.87		0.91

Note: Average rates of growth FY89-FY92 only.
Source: MOF and Mission Estimates.

[45] See Tan, J. and Mingat, A. (1989), Educational Development in Asia: A Comparative Study Focussing on Cost and Financing Issues, Washington, D.C.: The World Bank .

4.5 Expenditure Shares. The percentage of total education budget allocated to primary education (46.2%) during the period FY88-FY92 was somewhat lower than the average for Asian countries (48%) and was near the high end of the expenditure range (40-50%) for developing countries. About eighty six percent of the development budget for the primary subsector corresponds to primary teachers' salaries.

4.6 As has been pointed out, most of the total expenditure on secondary education is found in the regular account, not the development account (the reverse is true for most of the other sectors). During the FY88-FY92, an average 13.7% of total education budget was allocated to secondary education (Table 4.1). Information from an earlier study by the British Council [46] suggests that there has been a long-term decline in the share of the total education expenditure devoted to secondary education. According to this study, the share averaged 22.3% between 1978 and 1980 and 16.9% between 1981 and 1985. The 13.7% level was significantly lower than the average of 31% for Asian countries in 1985.[47] A total of about NRs. 1,500 million (in current prices) was spent on secondary education by the government during the past five years (FY88-FY92). Data from the Ministry of Finance indicate that about 88% was provided to secondary government-aided schools as salary support for teachers; 10% was spent on the ADB-financed secondary science education project, directed at government-aided schools.

4.7 The decline in the shares of secondary and higher education subsectors seem to reflect an increased commitment to primary education development by the government over the past years. The long-term decline in the share for secondary education was also accompanied by a similar decline in the share for higher education until FY90. Allocations to the higher education subsector have increased during FY91 and FY92. However, development expenditures in higher education have decreased during the past four years.

4.8 Compared to other sectors, education receives relatively little external aid. For example, in 1990/91, external aid to education amounted to 12.5% of total education development expenditure, while the corresponding share was 32.9% for health, 45.3% for agriculture, and up to 86.3% for communications and 98.6% for power. Education has had a relatively low share of external aid over time.

B. Financing of Secondary Education

4.9 Financing of Secondary Education. For secondary education as a whole, one can distinguish between four financing sources: government allocation to secondary education, external aid, parents and the local community. Government-aided schools and community schools are underfinanced in Nepal, especially those schools in the rural areas. Although about 78% of the students in Grades 6-10 attend Government-aided schools, the Government has a minor role in the financing of secondary education. The major external donor to-date for secondary education has been

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46/ British Council (1991) Nepal- Secondary Education Development with Special Reference to Science, Mathematics and English, Kathmandu.

47/ Tsang, M. (1988) Cost Analysis and Policy Making in Education: A Review of Cost Studies in Education in Developing Countries, Review of Educational Research, 58 (2).

the Asian Development Bank, through the implementation of a secondary science education project. Data from the Ministry of Finance indicates that the expenditure on this project was 43.2 NRs. million in 1988/89, 29.76 NRs. million in 1989/90, and 17.3 NRs. million in 1990/91, corresponding to 16.5%, 10.6%, and 4.8% of total expenditure on secondary education in the three years respectively. In other words, external aid averaged about 10.6% of total secondary expenditure during 1988-1991.

4.10 Parents are a significant financing source through their spending on their children' secondary schooling, such as expenditures on school fees (fees for tuition, games, library, educational materials, stationery, examination, transportation, and others), textbooks, writing supplies, and uniforms and shoes. The amounts and types of school fees levied on students vary across the three types of secondary schools and among schools in each type. A survey of secondary PBS schools in 1992 indicates that the total school fee averages NRs. 4,251 (NRs. 2,733 for tuition fee, and NRs. 1,518 for other school fees) per year in 1992 for a non-boarding student and NRs. 45,202 for a boarding student in PBS schools (Table 3.10). School fees are used to finance all kinds of recurrent and capital expenditures in PBS schools. On the other hand, preliminary estimates put the total cost of the other parental spending (on textbooks, writing supplies, uniform, etc.) between NRs. 3,100 to NRs. 3,600 per year per student in 1992 for PBS schools. Thus the total direct private cost of secondary schooling amounts to about NRs. 7,500 per year for a non-boarding student in PBS schools.

4.11 A survey of several government-aided and community schools in Kathmandu Valley and MOEC data yield some rough estimates of school fees in this area. The total school fee is about NRs. 330 per student per year for Grade 6 students and NRs. 880 per student per year for Grades 7-10 students in government-aided schools. It is about NRs. 1,100 per year per student for Grades 6-10 students in community schools. According to MOEC data, textbooks in Grades 6-10 in these two types of schools cost parents an average of NRs. 120 per year per student in 1992.

4.12 The local community (including parents) is important for secondary education because it contributes (in cash and in kind) to the construction of government-aided and community schools. The community financing of secondary education is not a recent phenomenon; between 1950 and 1970, schools founded by the community grew rapidly, with little support from the government. But the 1971 government policy for a national system of education dramatically increased the financing and administrative role of the government in secondary education. Since 1980, the government has allowed communities to establish new schools with virtually no financial support from the government. No data exist on community expenditure on school construction.

Table 4.3: National Expenditure On Secondary Education, 1990-91 (NRs. Million)

	Types of Secondary Schools			
	Government-Aided	Community	PBS	Subtotal
Sources				
Government (includes external aid)	360.0	.0	.0	360.0 (26%)
Parents (direct private costs)	579.5	157.7	229.7	966.9 (69%)
Community	58.0	15.8	0.0	73.7 (5%)
Subtotal	997.5 (71%)	173.4 (12%)	229.7 (17%)	
Total from all sources				1,400.6

Assumptions: National expenditures on secondary education in 1990/1991 were estimated as follows:

(1) Government expenditure on government-aided school was based on expenditure data reported by MOF.

(2) Parental expenditure on government-aided schools: this equals per-student direct private cost (DPC) times number of students in government aided schools. There were 608,097 such students in 1991 (data from MOEC). The per-student DPC was estimated to be NRs. 953 per year for 1990/1991; it was equal to .81 (90% times 90%) of the value NRs. 1,176 for 1992/93. The figure 90% was based on price changes in the 1988/89-1990/91 period (from CBS data). All parental spending was assumed to be used on such schools.

(3) Parental expenditure on community schools: this equals per-student DPC times the number of students in community schools. The number of students was estimated to be 75% of total private enrollment in 1991 (168,053, from MOEC). Per-student DPC for 1990/91 was estimated to be NRs. 1,251 (which was calculated to be 81% of the value of NRs. 1,545 for 1992/93). All parental spending was assumed to be used on such schools.

(4) Parental expenditure on PBS schools: this equals per-student DPC times the number of students in PBS schools. The number of students (42,013) was estimated to be 25% of total private enrollment in 1991. Among these students, 14% (5,882) were boarding students and 86% (36,131) were non-boarding students. In 1990/91, DPC for non-boarding students averaged NRs. 3,187 and NRs. 34,475 for boarding students (as 90% of the corresponding figures of NRs. 3,541 and NRs. 38,305 in 1991/92 from survey of PBS schools). However, not all parental spending was used on PBS schools; school owners were assumed to pocket 15% of such spending as profit. Thus actual expenditure was estimated to be NRs. 2,709 for non-boarders and NRs. 29,303 for boarders.

(5) Community contribution to government-aided schools (for physical facilities): this is assumed to be 10% of parental spending on government-aided schools.

(6) Community contribution to community schools (for physical facilities): this is assumed to be 10% of parental spending on community schools.

Source: MOF, MOEC, CBS, PBS Survey.

4.13 Table 4.3 provides rough estimates of total national expenditure on secondary education by financial source and type of school in 1990/1991. It shows that total national expenditure amounted to about NRs. 1,400 million (or 1.4% of GDP). However, the Government's share (including external aid given to the Government) was only 26% (0.37% of GDP) while parents' share was 69% (0.98% of GDP) and the community share was 5% (0.071% of GDP). Thus private financing (parents and community) accounted for 74% of total national resources devoted to secondary education in 1990/1991, i.e., the Government only had a minor role in the financing of secondary education.

C. Unit Costs

4.14 Per-Student Recurrent Cost of Secondary Education. In 1992 government-aided schools have a per-student total recurrent cost of NRs. 2,098, 43.9% of which was financed by the government (see Annex 4: Unit Costs of Secondary Education in Nepal). The unit recurrent cost of community schools is NRs. 1,545 and is only 74% of that for government-aided schools. In contrast, PBS schools have a unit recurrent cost of NRs. 6,008 which is 2.86 times that of government-aided schools. PBS schools have more resources devoted to students in terms of both school-related resources and student-related resources.

4.15 It is important to understand the magnitude of public and private costs in the planning of secondary education. Even for government-aided schools, the government pays for less than half of the total recurrent cost of secondary education. Poor parents may not be able to send their children to government-aided schools even if the government can supply student places for their children. As pointed out before, PBS schools are accessible only to a small minority of the secondary students who come primarily from the top echelons of Nepalese society. The relatively low per-student recurrent cost for community schools does not mean that they are efficient and inexpensive, it mostly reflects their low educational quality and the inability of the government to provide financial support to such schools.

4.16 Per-Student Capital Cost of Secondary Education. There is a lack of data on expenditure on capital inputs such as land, school buildings, furniture, equipment, laboratories, and other school facilities at the secondary level. There is also no information on the current stock of capital inputs to secondary education. There is no unit within MOEC that deals with the design and construction of secondary schools; and thus there is no estimate of standard capital cost per student place. Some estimates of the capital cost per student place for secondary education may be obtained by drawing upon the experience of some externally funded projects. School buildings in the Kathmandu area built with concrete typically cost US$20 per sq ft (1992). The construction cost would be US$30 per sq ft in hill areas and US$40 per sq ft in mountain areas if the same construction materials were used. However, for hill and mountain areas, the use of more locally available construction materials can reduce the construction cost to US$15-20 dollars per sq ft. Using a standard of 16 sq ft per student (excluding laboratories) in gross construction area (equivalent to 10 sq ft per student in actual construction area), the construction cost will be about US$320 per student in 1992. Furniture (desks and chairs) costs about US$15 per student.

4.17 Information from the Secondary Science Education Project indicates that a typical laboratory for demonstration purposes costs NRs. 800,000 in space, NRs. 50,000 in furniture, and NRs. 100,000 in equipment in 1992. The laboratory has a capacity of 30 students. Assuming that

there is an average of one laboratory for every 150 secondary students (about one laboratory per school), then the laboratory cost is NRs. 6,333 per student. Excluding land, the total capital cost for buildings, furniture, and laboratory is about NRs. 23,100 per student place. Assuming that school buildings last for 30 years and other capital inputs last for five years, the annualized capital cost is NRs. 3,566 per student place per year (at a discount rate of 10%).

4.18 Per-Student Total Public Expenditure by Subsectors of Education. Another way to compare unit costs across levels of education is to consider per-student total (regular plus development) public expenditure by level. Table 4.4 gives per-student public expenditures on primary education, secondary education, and university education, as well as unit-cost ratios between these three sub-sectors, for the period 1988/89-1990/91. It shows that per-student government expenditure on secondary education averaged 1.5 times of that on primary education, but the per-student public expenditure ratio of university education to primary education averaged 12.4. The unit-cost ratio between university education and primary education was declining over time in this period.

Table 4.4: Per-student Public Expenditure By Levels, 1988/89-1990/91

	1988/89	1989/90	1990/91	Average 1988-90
A. Per-student Expenditure in Current Prices				
Public Primary Education	301	350	404	352
Government-Aided Secondary Education	485	498	592	525
University, Public Campuses	4,336	4,351	4,439	4,375
B. Ratio of Per-student Expenditure				
Secondary/Primary	1.6	1.4	1.5	1.5
University/Primary	14.4	12.4	11.0	12.4

Sources: Expenditure and enrollment data are from MOEC and MOF.

D. Financing Strategies

4.19 Nepalese policymakers are faced with major challenges in the development of secondary education, most significantly: (i) improving the internal efficiency and the quality of inputs and process of secondary education so that a desired level of learning is attained, (ii) promoting equity in secondary education, and (iii) properly addressing and financing the growing demand for secondary education to meet social and production needs. In view of these challenges, the Government would need to formulate a set of strategies for financing current and planned developments in the secondary subsector. Financing options would involve both government (including external resources through the government) and private resources.

4.20 In this regard, there is scope for reallocating existing Government resources, using them more efficiently, targeting Government programs at specific population groups and mobilizing additional resources. For example, as highlighted below, Government resources flowing to the free secondary education policy could be reallocated to programs to improve the quality and equity in the

subsector. Similarly, improvements in the quality of school inputs contributing to reduce repetitions and dropouts, or measures to achieve cost savings in the sector, such as the Higher Secondary Education reform, would allow for more efficient use of available resources. Greater equity in access to educational opportunities could be achieved by targeting programs at female, poor and minority ethnic groups. Mobilization of additional Government resources may involve increasing the share of education in total government expenditure or increasing the share of secondary education in government education expenditure. Financing approaches related to private resources would include increasing parental spending and community involvement in the secondary sector.

The Free Secondary Education Policy

4.21 As we have seen, existing resources in the secondary sector are not efficiently utilized due to low internal efficiency and poor quality. Repetition and dropout rates are very high and educational quality, as proxied by student achievements in the School Leaving Certificate examination, is very low for government-aided schools and community schools. Education inputs are very inadequate for government-aided schools and community schools, as reflected by poor physical facilities, lack of instructional materials, teaching aids, equipment, and laboratory, as well as a significant number of untrained teachers. In addition, there are highly unequal educational opportunities for children from different backgrounds. A large number of school-age children are not in secondary schools. Access to secondary education favors children living in urban areas and the more developed regions of the country.

4.22 Although secondary education suffers from these major problems of quality, efficiency and equity which are not being adequately addressed, the Government is further compounding these difficulties with the free secondary education policy in the face of continuing resource constraints. The Government is exempting secondary students in government-aided schools from paying tuition and providing additional resources to such schools to compensate for the foregone tuition revenue. The implementation of this policy started in 1992 and the government-aided schools are not charging tuition on Grades 6 and 7 students across Nepal. The additional government resources are being allocated mainly to salary subventions.

4.23 The policy creates a significant challenge to the Government to search for additional public resources. Estimates of financial requirements of different scenarios for the development of secondary education shown in Annex 5 for the period 1992/93-2001/02 are high. They depend on a number of factors such as the magnitude of per-student recurrent costs and per-student capital costs (reflecting some measure of school quality), the government's decision regarding the implementation of the free secondary-education policy, projected enrollments of secondary education, and the share of projected enrollments among the three types of secondary schools.

4.24 Comparing the case where no free secondary education is presumed to prevail with other possible scenarios involving free secondary education, it is clear that if the Government continues with the current practice of not charging tuition to Grades 6 and 7 students, the total recurrent cost of secondary education to the Government will be about NRs. 3,956 million in the Eighth Plan period and about NRs. 5,761 million in the Ninth Plan period. In other words, it will increase the Government's financial commitment to the secondary subsector by about 38% (some US$54 million) in the ten-year period to fully compensate government-aided schools for the loss in tuition revenue from Grades 6 and 7 students, as compared to the case where no free secondary education policy

existed. Another possible scenario, a free-tuition policy for Grades 6-10 in government-aided schools phased over the ten-year period, would add 50% to the Government financial commitment to the secondary subsector. This case would require a very high average annual growth rate (in real terms) in Government expenditure on secondary education: 12.0% during 1993-1997 and 11.5% during 1998-2002.

4.25 The difficulties would be compounded if the Government honors its commitments in the primary and higher education subsectors. Projected expenditures in primary teachers' salaries and the basic and primary education program during the Eighth Plan period are close to NRs. 12 billion (1992 prices). Also, requirements for Tribhuvan University for the same period reach another NRs. 6 billion (1992 prices). A large proportion of these expenditures represents investments in quality improvements which will have important pay-offs in the medium- and long-term and without which the education system would continue to deteriorate and call for much larger investments in later years.

4.26 While this policy reduces the economic burden for poor families with children in secondary schools, it also reduces private financing of secondary education, even from families who can afford the tuition fee. The free secondary education policy should be discontinued. If this is not politically feasible, the scope of the policy should be limited and the pace of implementation should be slowed down as much as possible. Instead, the Government resources should be reallocated to improve the quality of government-aided schools (or even community schools), to promote equity in secondary education, or to provide additional student places in government-aided schools.

The Higher Secondary Education Reform

4.27 Increased efficiency in the utilization of available resources could be achieved by interventions to improve the quality of school inputs, thereby reducing repetitions and dropouts as discussed in Chapter II. In view of the high per-student public expenditure in the university (Table 4.4), efficiency in the education sector would also be improved with measures that would achieve cost savings, such as the Higher Secondary Education reform. The reform is envisaged as extending by two years the secondary education offered in schools beyond the SLC in Grade 10 to "higher" secondary level in Grades 11 and 12. SLC pass students would continue to study within the school system rather than switch to university campuses which currently accommodate them. Concomitantly, the Certificate Level courses, which cater to the equivalent student cohorts, would be dropped from the campuses.

4.28 Background. Certificate Level courses are run by Tribhuvan University in its own 65 campuses and in 133 of the affiliated, private campuses. Certificate Level students comprise 65% of total enrollments (Table 4.5). Though there are more than twice as many private campuses, they enroll only one quarter of students in higher education and one third of Certificate Level students.[48] Many private campuses have very small enrollments (under 100 students), they are often close to one another in towns and tend to concentrate on offering courses in management (commerce), humanities and social sciences, but not science, nor bachelor and master degree programs. TU campuses generally enjoy a higher status than private ones and, within TU, some campuses enjoy a higher reputation for certain courses than others.

48/ Pradhan, Panna Lal, Policy Paper: Enrollment Control in TU, unpublished ms. (n.d. 1992).

Table 4.5: Tribhuvan University And Private Campuses
Total And Certificate Level Enrollment

	1989-1990 TOTAL	CL	% CL	1990-1991 Total	CL	% CL
TU	78,768	48,768	62	94,130	54,510	58
Private	22,638	20,094	89	29,656	25,785	87
Total	101,406	68,862	68	123,786	80,295	65

Source: Tribhuvan University

4.29 The Higher Secondary Education reform is mainly aimed at mitigating the impact of the large projected enrollment increases in Grades 11 and 12 on Tribhuvan University campuses. A number of other rationales for the reform have been suggested. For example, the addition of two years to secondary education in Grades 11 and 12 and upgraded bachelor degrees will enable Nepalese graduates to claim international comparability for their qualifications and increase their status and mobility. The South Asian Association for Regional Cooperation (SAARC) countries are the main reference group, especially India. Also, the rationale for enhancing the quality of education and the academic achievement of learners has been top priority amongst the objectives envisaged by the reform studies. Finally, the reform is related to concerns about youth migration and social unrest. Assuming that Grades 11 and 12 would be added to existing schools with Grade 10 and that there would not be stand-alone two-year Higher Secondary Schools, secondary teachers could provide continuity of attention to the learning needs of Grades 11 and 12 students with whom they are already familiar and discipline would be tighter in schools than on campuses.

4.30 The various rationales for implementing the restructuring of secondary and higher secondary education all have justification. However, an implementation plan with measurable targets needs to be put in place. Otherwise, rapid and large-scale changeovers could exacerbate the very quality, equity and efficiency issues that the reform is intended to remedy. The mere relabelling of Grades 11 and 12 education as secondary rather than higher education will not address the issues. Nor will this reform succeed if isolated from other financing and educational reforms needed in the secondary subsector. If the restructuring fails, potential unrest on the part of pupils and parents can be anticipated and the social costs may be high.

4.31 Can the secondary subsector cope with the additional enrollments? It is clear that without more resources, private and public, to develop the higher secondary schools and to operate them effectively, a wholesale changeover is unlikely to lead to an improved quality of education in Grades 11 and 12, in terms of inputs, teaching-learning processes or learner outcomes. The Eighth Plan aims to establish HSE in 125 schools to cater to a projected enrollment of over 136,000. This would mean that by the end of the plan period in 1997, these schools would need about 4,500 qualified specialist teachers, the schools would each need to have on average enough capacity to enroll over 1,000 pupils and recruit something in the order of 40 teachers, assuming a pupil-teacher ratio of 30.

4.32 First and foremost is the issue of who is to teach in the HSE schools. Master degree holders are required under current plans for HSE. These teachers would already be qualified to teach at secondary level, and would be expected to have the necessary depth of subject matter specialist

expertise and the potential to teach at a more advanced level. But in 1991 there were about 1,000 master degree holders (about 9%) teaching in Government-aided and private secondary schools (Grades 8-10). This means an overall secondary pupil-(master degree) teacher ratio of 395. Secondary level teaching-learning quality would be further weakened if these teachers were to "teach up" to Grades 11 and 12 instead. The 9,252 bachelor degree holders in secondary schools have only the minimal subject specialist depth to teach secondary level and are not immediately a source of teachers for HSE.

4.33 Tribhuvan University has for the time being ruled out transferring its own teachers to schools, except on a voluntary basis. The university points out that a majority of its own teachers have only bachelor degrees and need upgrading. If Tribhuvan University teachers were to teach Grades 11-12, they would certainly need training in pedagogical methods and would need to conform to school timetables as school managements required. In fact, Tribhuvan University and private campus teachers already moonlight in secondary schools. They could presumably do the same in HSE schools, where they are accessible to them. But this would mean that they would devote minimal time to their school responsibilities and the objective of providing a better supervised educational environment for HSE students may not be attained. Unemployed master degree holders may possibly be a source of recruitment into teaching at this level, if trained and offered incentives, and especially as jobs in government service are retrenched, but their availability in the areas where the HSE schools need to be developed is not known. Whatever pool of teachers is tapped, it is clear that subject matter and pedagogical training would be required and a workable deployment policy would be needed to ensure the upgraded personnel remained in the HSE schools to which they were assigned for a useful period of two to three years.

4.34 If, as Tribhuvan University envisages, the transfer of the Certificate Level were to release its facilities for bachelor programs, the secondary school system would need to take over the influx of some 98,000 Grades 11 and 12 students in 1993/94 (as per projections in Annex 6). There are few data, (except from a recent survey in an earthquake area in the east of the country), on whether government-aided, community and private schools have adequate capacity for current enrollments, let alone whether they are suitable for advanced education, with the essential libraries and science laboratories, electricity and water, as well as hostels and teachers' accommodation in remote areas. However, it is known that there is an inequitable distribution and shortage of adequate facilities, equipment and materials across school types and even within school districts. Double and triple shifts are a possibility and these occur already where university campuses utilize the early mornings in government-aided lower secondary and in community schools. But where there is no lighting, shifts would have to be accommodated in daytime and there is a risk that the school day would be reduced for all pupils using the schools affected.

4.35 If the HSE schools are to cater to the less advantaged populations, it is very likely that the community schools are the best located and would be intensively utilized for HSE. But these are the least well maintained and equipped of all school types. The poor state of their facilities, together with more intensive use, would adversely affect the teaching-learning process for all pupils and teachers who use the schools. If repetition were substantially reduced in lower grades, space would become available for some additional HSE enrollments. The Center for Educational Research, Innovation and Development (CERID) is currently conducting a secondary schools space survey, a teachers' availability study and a feeder schools survey which will provide data for the reform plan.

4.36 Management of the Reform Process. The CHSE is to implement the reform program for HSE. It is a "semi-autonomous" body, like TU, responsible directly to the Minister of Education and is not an integral part of the structure of the MOEC. The current organizational setup is shown below (Table 4.6). Its proposed functions would be to affiliate HSE schools, develop curricula and textbooks and manage examinations.

Table 4.6: CHSE ORGANIZATION STRUCTURE (REVISED)

Minister Education, Culture and Social Welfare

|

Higher Secondary Education Assembly

|

Council

|

Member Secretary

|

Administration and Affiliation Division	**Curriculum and Textbook Division**	**Examination Division**
Affiliation Committee **Post-filling Committee**	**Curriculum Committee**	**Examination Committee**
Administrative Section **Account Section** **Affiliation & Planning Section**	**Curriculum Section** **Textbook Section**	**Examination Section** **Registration and Records**

Total Staff: 28
Source: CHSE

4.37 Status of Implementation. Several schools have been given permission by the CHSE to introduce HSE. In 1992, 36 schools were selected from among interested schools across the country to start Grades 11 and 12 during the daytime shift. Most are community schools and the regional distribution is fairly wide. As an interim measure the curriculum offered is modified from the Certificate Level course, adjusted to regional standards and with more topics and local content. Nearly half the schools are offering humanities and only four science. All schools except one are offering only one track. The main selection criterion for 31 of the schools was that they should deposit NRs. 400,000 the first year and NRs. 250,000 the second year in a fixed three-year bank deposit account in the name of the school. The deposit is to ensure teachers' salaries can be paid. Only the interest may be used. Other criteria were adequate facilities, including the additional classrooms needed, five qualified (Master's degree) teachers, 2-10 sets of prescribed textbooks per subject and an established School Management Committee. Five more schools were selected later which did not satisfy all criteria. Formal monitoring and evaluation of educational outcomes would need to be done in order to provide feedback into policy for expansion of the scheme.

4.38 Higher Secondary Education Reform Costs Annex 6 introduces physical and financial projections for a possible plan of the Higher Secondary Education Reform (or Phase-out/Phase-in Plan). There are four types of institutions which would need to participate in a plan for a phased

changeover, the TU campuses, the private campuses, the community higher secondary schools and the PBS schools. Under the assumption that Tribhuvan University campuses will be completely phased-out by the year 2002, projections of the number of students, schools and teachers are as follows:

(a) Students: the number of students in higher secondary schools (commerce, humanities, science and education) will reach 166,700.

(b) Schools: to enroll 166,700 students in Grades 11 and 12, 991 higher secondary schools will be required by the year 2002. The number of secondary schools projected for that year is 4,134. The distribution of the estimated higher secondary schools indicates that there will be 74 higher secondary schools in the Mountains, 426 in the Hills, 169 in the Kathmandu Valley and 322 in the Terai. Based on the assumption that the PBS schools participate in the Higher Secondary Education reform program, the projection estimates that there will be 310 private higher secondary schools and 681 community higher secondary schools. The number of higher secondary schools with science programs would be 176, of which 79 will be private. Finally, the number of higher secondary schools by the end of the Eighth Plan (1996/97) is estimated at 419.

(c) Teachers: 8,475 teachers will be required to teach Grades 11 and 12 in private (2,885 teachers) and community (5,590 teachers) higher secondary schools. The sources of teacher supply will be teacher transfers from Tribhuvan University, existing teachers with Master Level degrees in secondary schools, upgraded teachers through in-service programs and fresh entrants to the teacher profession. It is estimated that 1,817 Tribhuvan University teachers could be transferred to teach in higher secondary schools during 1992/93-2001/02. Finally, a total of 4,300 teachers will have to be trained to upgrade their qualifications during the ten-year period.

4.39 Financial projections (see Annex 6) indicate that the total cost of the Higher Secondary Education Reform for the 1992/93-2000/02 period would be NRs. 8.6 billion of which 73% would be met from Government grants. The reform would cost the Government a total of about NRs. 6.3 billion during the ten-year period. About half of this estimated cost (NRs. 3.1 billion) will be used for the improvement of physical facilities of community and private higher secondary schools. However, not all of these costs are incremental, since investments in additional facilities and improvements would also need to be made if the Certificate-level remain at Tribhuvan University.

4.40 Annex 6 compares the Government's regular costs that would be incurred during FY1993-FY2002 "with" and "without" the implementation of the higher secondary education reform. Assuming that in the "without" case 70% of the Certificate-Level students continue to enroll in Tribhuvan University and the remaining 30% in private campuses, the net regular costs to HMG would almost double, from about NRs. 120 million in 1992/93 to NRs. 235 million in 2001/02 in the absence of the reform. With the introduction of the higher secondary education reform, the regular costs to Government would increase from about NRs. 153 million to NRs. 184 million over the same period. Thus while there would be an increased burden on the Government's budget in the initial years, once the reform is in place, it would result in significant savings in regular costs to the Government, e.g., about NRs. 51 million in 2001/02, which is equivalent to about 22% of the projected regular Government costs in the absence of the reform in that year.

Increased Private Sector Role

4.41 As indicated in Chapter I, enrollments in secondary education will increase from about 800,000 in 1991/92 to about 1,560,000 in 2001/02, due to both demographic factors and increased participation in primary education. The government's resources to the education sector are highly limited and secondary education has a low priority in intra-sectoral allocation in education. At the same time, the quality of secondary education remains very low overall. Therefore, the private sector has an increased role to play in the development of secondary education in Nepal.

4.42 There are three prominent objectives in secondary education that concern the private sector: (1) improving the quality of private education; (2) stimulating private provision of secondary education; and (3) promoting equity in education. As examined in Chapter II, one of the key issues in the overall development of secondary education in Nepal is the low quality of the community schools (and of Government-aided schools). Chapter III explored the role of the private sector in general and in promoting equity. The discussion in this chapter will concentrate on the Government's role in stimulating the provision of private education in order to compensate for the low public investment.

4.43 The government's stimulation of private education may consist of two approaches: (1) providing incentives to the establishment and operation of private schools, and (2) reducing barriers to private education. In the first approach, three options may be considered: private ownership of private schools, assistance to private schools to secure loans for construction of school buildings, and indirect subsidies. The second approach may consist of streamlining the regulatory framework for private education.

4.44 Private ownership of private schools may take different forms, such as individual ownership, group ownership, or ownership under a non-profit oriented trust. Private schools may also be operated under different modes: proprietary, or non-profit making. Proponents of private ownership of private schools are putting forward two supportive arguments: (1) private production of education is likened to private production in the economic sector, individuals or groups that invest in a private school should have a claim on the ownership of the school, and (2) individuals or groups that have ownership of a school are more willing to invest resources in the school for the further development of the school.

4.45 The first argument is predicated on private ownership (proprietary private schools) and it is consistent with the government's intended policy of privatization of economic production and reduction of subsidies to public enterprises. The profit of the proprietary school could be subjected to Government taxation. Individuals, groups, and organizations who wish to operate private schools for education purposes could also register their schools as non-profit private schools. These schools have to plough back their surplus into their further development. Their tax-exempt status is meant to encourage private production motivated by genuine interest in education service.

4.46 Experience in other countries has shown that profit-motivated individuals, groups, and organizations may cheat by registering their schools as non-profit schools and benefiting themselves in less explicit ways, such as paying themselves excessively high salaries, buying school equipment and

other items for personal uses, and employing their friends and relatives.[49] With strict regulations and strong enforcement, such practices may be reduced to some extent. But one must carefully assess the administrative and enforcement capacity of the government in terms of its effectiveness in dealing with this potential problem.

4.47 Profit-motivated individuals will more likely invest in their schools if they own their school. One should, however, recognize that whether or not they will actually do so will depend on the conditions of the private education "market". Such individuals will only do so if they are driven by the forces of the market; in particular, when the market is more competitive in nature and there is an effective indicator (such as examination results) for assessing the performance of the proprietary schools.

4.48 One can distinguish between three types of private investment in private education in the Nepalese context. The first type is investment for meeting quantitative expansion (by opening up new private schools, and/or hiring more teachers and adding new classes). For profit-motivated operators, the key factor is the profit rate. Given the profitable nature of PBS schools today, there is substantial incentive to invest in quantitative expansion even without private ownership of private schools. Private ownership will add to this incentive. The limiting factor is not the private sector's willingness to supply, but parents' ability to pay. The second type is investment in school buildings. As discussed below, private ownership will encourage private investment in school buildings. The third type is investment in school quality, such as expenditure on upgrading the teaching staff, instructional materials, teaching aids, and equipment. Here, private ownership is likely to encourage private investment on school quality to some extent, but it is doubtful that it is the determining factor. A relevant factor is the relative quality between PBS schools and other schools. Since government-aided schools and community schools are relatively poor, operators of PBS schools do not have to invest a lot in quality to make themselves look good to parents. Parents (who can afford high fees) have no choice but to send their children to PBS schools. Some investment of the third type may be encouraged by promoting quality-based (instead of price-based) competition among PBS schools. For example, information on the performance of PBS schools in the SLC examination should be made more easily accessible to parents.

4.49 In sum, if the government continues to pursue the policy of economic and education privatization, the pressure for private ownership of private schools will continue to mount; and private ownership of such schools could be inevitable. Private ownership will have a facilitating effect on private investment in private education; however its effect will not be as strong as the proponents of private ownership think it will be. Other relevant factors that affect private investment are the profit rate, households' income/asset level, and the structure of the private education market. As seen in Chapter III, given the profitable nature of PBS schools, serious attention should be given to indirect methods for redistributing part of the profit of private education to promote equity.

4.50 Loans to private school for school construction. As mentioned previously, the Private and Boarding Schools Organization has approached the government for loans to private schools for construction of school buildings. With respect to the objective of stimulating private education, it is

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[49] James, E.(1987). Public policies toward private education. Washington, D.C.: Education and Training Series, Report No. EDT84, The World Bank.

highly doubtful that there exists a significant relationship between school buildings and private enrollment. In the twelve years since 1980, in the absence of a government loan program, PBS schools have increased rather rapidly to meet the demand of urban families and have performed very well compared to government schools. In fact, there are several reasons for not having a government loan program for school construction. First, the construction cost involved is large compared to available resources. For example, assuming an actual area of 10 sq ft per student (equivalent to a gross area of 16 sq ft per student) and a construction cost of US$20 per sq ft (MOEC estimate for Kathmandu and other urban areas), the total construction cost for 38,800 Grades 6-10 students in PBS schools will be equal to US$12.6 million or about NRs. 630 million (equivalent to 1.8 times the total government expenditure on secondary education in 1991). Second, a government loan program can present challenging administrative problems. A badly run program can exacerbate existing corruption, and a huge loss for the government. Third, experience in Nepal has shown that well run PBS schools can accumulate enough surplus to construct their own buildings. Fourth, from an equity viewpoint, it is highly problematic for the government to lend money to education institutions that primarily serve children from the most advantaged families while the children in government and community schools are receiving a low-quality education. And fifth, if PBS schools compare their operation to that in the private economic sector, then they should be subject to similar financing practices governing private enterprises.

4.51 Actually, the issue of private ownership is closely tied to the construction of school buildings. In 1991, PBS schools spent over NRs. 45,000 per school on rent, or 9% of their total recurrent expenditure (see Table 3.12). Some of these schools have complained about the fast rising rents charged by owners of school buildings. A barrier to investment in school buildings is uncertainty about ownership of school buildings. If private ownership is granted, individuals and groups will more likely invest their resources in school construction.

4.52 There are other ways for the government to provide incentives for private production of education. For example, the government may consider providing unused government land at below-market prices for constructing a new school. The government may even consider a lower land price for non-profit schools (e.g., 25% of market value for non-profit schools and 50% for proprietary schools). And for community schools, the government may provide free land for school construction. In general, community schools and non-profit private schools may receive more favorable indirect subsidies from the government than proprietary schools.

4.53 Despite abuses by some private schools, the tax exemption on education items purchased by private schools should be continued. Tax exemption reduces the total cost of operating a school and encourages expenditure on quality-related inputs. Sanctions can be imposed on those schools which are found guilty of profiting from exempted items.

4.54 The second approach to the stimulation of private education consists in improving the regulatory framework for private education. Within a basic framework agreeable to both the government and the private sector, excessive control should be avoided; but rules and regulations governing private education should be explicit and comprehensive. From a policy viewpoint, there is a dilemma in exercising control over private education. On the one hand, certain amount of control is desirable for ensuring quality, equity and protecting the interests of students and parents. On the other hand, MOEC has an extremely limited capacity to enforce such control, and such control may unintentionally lead to more corruption. It is not surprising to find that, in some countries, formal

rules exist that control certain aspects of private education while the government has been lax in enforcing these rules.

Education Expenditure Requirements

4.55 The level of education expenditures that would be needed during the Eighth Five-year Plan will be substantial. A large proportion of these expenditures represents investments in quality improvements which will have important pay-offs in the medium and long term, and without which the education system would continue to deteriorate and call for much larger investments in later years. For example, the sustainability of recent efforts and achievements towards primary education goals need to be ensured. In this regard, the Government is committed to the Basic and Primary Education Project which, added to the primary teachers' salaries, represents virtually the complete primary education program. In higher education, Tribhuvan University is also involved in policy changes which could bring about significant savings in budgetary support for the sub-sector.

4.56 Tentative estimates of the education sector expenditures given in Table 4.7 below provide a sense of the magnitude of the resources that are needed for the sector. In the case of secondary education, the estimates are based on assumptions of continuation of the current free secondary education policy for Grades 6 and 7 and the beginning of the Higher Secondary Education reform in FY94. According to these estimates, total public spending on education will need to grow by an average 10% per year during the plan period.

Table 4.7: NEPAL - Estimates Of Education Public Expenditures (NRs. million)

	FY93	FY94	FY95	FY96	FY97	FY93-97
Total Education Sector	4,051	4,614	5,175	5,535	5,900	25,275
(rate of growth)		13.9%	12.2%	7.0%	7.0%	
of which:						
Primary Education/a	1,821	2,056	2,291	2,527	2,870	11,565
Secondary Education/b	610	661	837	900	948	3,956
Higher Secondary Education/c		335	552	647	657	2,191
Higher Education/d	1,336	1,256	1,164	1,103	1,039	5,898
Other (VTE, etc.)/e	284	306	331	358	386	1,665

/a Includes teachers' salaries
/b Assumes current Government policy of no tuition for Grades 6 and 7.
/c As per Annex 6 projections.
/d EFYP requirements for Tribhuvan University.
/e Growing at 8%.

4.57 Although the Government has taken some steps to increase education's share in sectoral expenditures in the early 1990s, e.g. education's share increased from 9.8% of total Government spending in the late 1980s to 13.6% in FY93, it is doubtful that it can continue to do so at the rate required by all sector objectives. In fact, the sector allocation under the Eighth Plan (NRs. 17,290 million) only allows for an 8 percent real increase per annum. Given this resource situation, the Government will need to select the combination of programs within secondary education which will

best contribute to improving the quality of government-aided schools (and community schools), promoting equity and financing the growing demand for secondary places.

4.58 The Government needs to confront some hard choices in the secondary education subsector. If fully implemented, the free secondary education policy will exacerbate the resource shortage even further, neither allowing for the reform in the higher secondary grades to proceed, nor improving the quality of secondary education. Even if the free secondary education policy continues to be implemented in Grades 6 and 7 only, the higher secondary education reform will need to proceed at a slower pace. The Government will need to review the free secondary education policy substantially however, if it intends to support the proposed improvements in learning achievements and the quality of schools and to promote more equitable opportunities for the secondary school age population.

E. Recommendations

4.59 All major issues of low internal efficiency, poor quality, inequitable educational opportunities and expanding demand have direct and indirect implications on key decisions regarding the mobilization, allocation and utilization of education resources. Key recommendations on expenditures in secondary education can be summarized as follows:

(a) Discontinue the free secondary-education policy. If this is not politically feasible, limit the scope and slow the pace of implementation as much as possible. Consider reallocating Government resources to improve the quality of government-aided schools and community schools, to promote equity in secondary education, or to provide additional student places in government-aided schools.

(b) Introduce the Higher Secondary Education Reform with the help of a Master Plan and in the context of a national plan for secondary education development. Ensure adequate contributions in terms of teachers and facilities from Tribhuvan University, increased cost recovery from the higher secondary students and a plan based on the results of the present introductory phase.

(c) The projected increase in secondary enrollments has to be accommodated by both the government and private sectors, with the private sector playing a larger role over time. The provision of private secondary education should be stimulated by granting private ownership of private schools, providing indirect subsidies, and streamlining regulations. The Government should allow private ownership of private schools, distinguishing between proprietary schools and non-profit schools. Giving loans to private schools for school construction is not recommended; the granting of private ownership should encourage individuals, groups, and non-profit organizations to participate in private education.

(d) The establishment of community schools should be encouraged and a sense of community ownership of such schools should be promoted. Providing indirect subsidies (such as free land and tax exemption on education items) and increasing community control of the SMC should be encouraged. If additional Government resources are available, tying direct assistance to some measure of school quality

or outcome (such as teacher attendance or time on task and improvements in SLC results) is recommended.

(e) The sector allocation under the Eighth Plan (NRs. 17,290 million) allows for an 8 percent real increase per annum. Given this resource situation, the Government will need to select the combination of programs within secondary education which will best contribute to improving the quality of government-aided schools (and community schools), promoting equity and financing the growing demand for secondary places. In this context, a review of the free secondary education policy should be the priority choice. Savings could then be allocated to the quality and equity improvements recommended above. Initial reforms in the higher secondary grades should proceed concurrently.

ANNEXES

NEPAL
Enrollment Projections

Projection Period

The enrollment projection period covers the two national development plan periods of the Eighth Plan (FY1993-FY1997) and the Ninth Plan (FY1998-FY2002). A description of the assumptions used in the model (Table 7 of this Annex) follows:

Physical Projections (Primary: Grades 1-5)

The 1991 Population Census[1] estimated a population growth rate of 2.1% during the 1981-91 period, much lower than the 2.7% growth rate calculated for the 1971-81 period.[2] The population projections are therefore based on the assumption that the population will grow at the rate of 2.6% for 1992/93-1996/97 and that improved family planning will lower the rate to 2.5% for 1997/98-2001/02. The findings of a ten percent sample of the 1991 Census were used for age-group projections. The demographic bulge in the population aged 10 and below will not have an effect on the fertility rate or on school enrollment until the next century after the two plan periods.

Primary education enrollments were projected because of their impact on secondary school enrollments. Table I provides the gross enrollment ratios for 1988/89 to 1990/91.

Table I. Primary Enrollment Ratios

	1988/89	1988/90	1990/91
Primary Enrollment('000)	2,526	2,789	2,883
Males	1,651	1,785	1,809
Females	875	1,004	1,074
Population (6-10) ('000)	2,586	2,654	2,723
Males	1,322	1,359	1,392
Females	1,264	1,297	1,331
Gross Enrollment Ratio(GER) (%)	98	105	106
Males	125	132	130
Females	69	77	81

The gross enrollment ratio (GER) relates total enrollment at a given level of education to the population which, according to national regulations, should be enrolled at this level. The GER provides a useful indicator of available enrollment capacity as compared to the size of the relevant age group. The GER can exceed 100% because of repetition and because of admission of children below

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1/ HMG, Central Bureau of Statistics (1992) Population Census - 1991 (Advance Tables), Vol I: Nepal, Kathmandu, Nepal.

2/ The mission was told that the discrepancies were related to the way Census workers were rewarded, which contributed to over-counting in the 1981 Census, while the corrections undertaken may have contributed to under-counting in the 1991 Census.

or above the official admission age. A reduction of repetition and admission of over- or under-age children will move GER closer to 100% By contrast, the net enrollment ratio (NER) includes only those pupils who are within the prescribed age for the level of education considered. It has 100% as its maximum value. The difference between the gross and net ratios for a given level is an indicator of the importance of under- and over-age pupils enrolled.

In Nepal, data is not available on the age-specific school population, and therefore it is not possible to calculate the NER. However, it is possible to calculate the total GER, as well as the GER by gender. As reported by MOEC[3], the GER for males has already exceeded 130% due to enrollment of over- and under-aged children and the result of high repetition, dropout and re-entry rates. The projections set a target for primary school GER for the year 2002, and then works backwards by changing the rates during the two plan periods. The projections were done for three scenarios, with different assumptions about the GER and the rates of decline in repetition and dropout: (i) No Improvement; (ii) Slow Improvement; and (iii) Improvement. The scenarios are presented in Table II.

Table II. Scenarios with Different Assumptions about GER and Repetition and Dropout Rates

	No Improvement	Slow Improvement		Improvement	
1. GER in year 2002					
Males	133	125		120	
Females	90	100		110	
2. Dropout rates		93-97	98-02	93-97	98-02
Grades 1-3	-	-3%	-5%	-5%	-10%
Grades 4-5	-	-2%	-4%	-4%	-8%
Grades 6-7	-	-1.5%	-3%	-3%	-6%
Grades 8-10	-	-1%	-2%	-2%	-4%
Grades 11-12	-	-0%	-1%	-1%	-2%
3. Repetition Rates					
Grades 1-3	-	-3%	-5%	-5%	-10%
Grades 4-5	-	-2%	-4%	-4%	-8%
Grades 6-7	-	-1.5%	-3%	-3%	-6%
Grades 8-10	-	-1%	-2%	-2%	-4%
Grades 11-12	-	-0%	-1%	-1%	-2%

The first scenario (No Improvement) assumes the present trend will continue with 133% of GER for boys by the year 2002. However, the GER for girls will grow gradually to reach 90% by the year 2002. The second scenario (Slow Improvement) assumes the GER for boys will be 125% by 2002, while that for girls will be 100%. It also assumes gradual decline in repetition and dropout rates for Grades 1-3, Grades 4-5, Grades 6-7, Grades 8-10, and Grades 11-12.[4] The

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[3] HMG, Ministry of Education (several years) Educational Statistics of Nepal, Kathmandu, Nepal.

[4] Current Certificate Level students.

momentum of decline is assumed to be faster in the 1998-2002 period than in the 1993-1997 period due to the Government's commitment to basic and primary education. The third scenario (Improvement) assumes that the GER for boys will decline to 120 by 2002 and the ratio for girls will reach 110 by 2002. It also assumes a steady decline in dropout and repetition rates for 1993-97, and a more rapid decline for 1998-02. Again, faster decline is expected in lower grades because of the Government's commitment to basic and primary education. The number of over- and under-age children would decline.

Given the gross enrollment ratio for 2002 and the size of population aged 6-10, enrollment for the year 2002 by gender was calculated.[5] The preliminary enrollment by grade for 1991 was provided by the MOEC. Based on the enrollment for 1991 and 2002, a constant geometric growth rate was used to project enrollment from 1993-2002. The projection was done for both males and females.

Flow Model / Efficiency (Boys) and (Girls)

Estimation of the student flow requires using promotion, repetition and dropout rates as system parameters. The MOEC has estimates of these rates for 1987/88, 1988/89, and 1989/90. The 1989/90 estimates were available only for Grades 1-5. The 1990/91 estimates did not have information on four districts (Kathmandu, Morang, Kailali, and Banke). Because these rates fluctuate from year to year and also because of incomplete information on the more recent years, a judgement was made after comparing the estimated rates for these years to arrive at the best estimates for use as base year information for 1991/92. These rates were also applied to 1989 and 1990 because of the incomplete information for these years.

Gender-specific rates for the entire primary and secondary cycle were not available. Although the Staff Appraisal Report of IDA's Basic and Primary Education Project (March 27, 1992) cited promotion, repetition and dropout rates separately for girls and boys, there was no information on these rates at the secondary level. Therefore, the same rates were applied to both males and females in the projection (Table III). Using these system parameters, the internal efficiency of the system was estimated for different years.

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[5] The formula is GER x Population = Enrollment

Table III. MOEC Estimates of Repetition & Dropout Rates

	Grades									
	1	2	3	4	5	6	7	8	9	10
Repetition										
1987/88	.39	.18	.12	.13	.15	.09	.11	.10	.10	.19
1988/89	.49	.19	.14	.15	.16	.09	.11	.09	.10	.21
1989/90	.40	.20	.14	.15	.15	-	-	-	-	-
1990/91	.42	.19	.14	.14	.12	.09	.07	.08	.08	.21
Judgement	.40	.19	.13	.14	.14	.09	.11	.10	.10	.20
Promotion										
1987/88	.38	.73	.80	.76	.62	.83	.73	.83	.82	0.0
1988/89	.40	.78	.85	.80	.65	.82	.78	.87	.86	0.0
1989/90	.38	.76	.84	.78	-	-	-	-	-	0.0
1990/91	.35	.71	.79	.76	.67	1.0	.88	.93	.88	0.0
Judgement	.36	.75	.82	.78	.63	.82	.75	.85	.84	0.0
Dropout										
1987/88	.24	.06	.05	.08	.23	.09	.14	.05	.06	0.0
1988/89	.11	.03	.01	.05	.19	.09	.11	.04	.04	0.0
1989/90	.22	.04	.02	.07	-	-	-	-	-	0.0
1990/91	.22	.08	.06	.08	.20	-.09	.05	-.1	.05	0.0
Judgement	.24	.06	.05	.08	.23	.09	.14	.05	.06	0.0

The input-output ratios and efficiency rates result the same as those calculated from the reconstructed cohort analysis (Annex 1).

Secondary Education/Enrollment (Boys) and (Girls)

The population growth rates of 2.6% for 1993-97 and 2.5% for 1998-2002 were used to project growth of the population of 6-year old children. Primary enrollment and Grade 1 enrollment for 1988/89, 1989/90 and 1990/91 were actual data. The new entrants in Grade 1 were obtained as residuals of Grade 1 enrollment less the repeaters from the previous year. The gross ratio of new entrants as a percentage of the six-year-old population was estimated to indicate how many children of under- and over-age had to be enrolled in Grade 1. This ratio will indicate the feasibility of achieving the primary gross enrollment ratio as targeted.

Enrollment projections in Grades 2-10 are based on the promotion and repetition rates described above. The present systems parameters are assumed to take account of the new entrants in these grades. The promotion rate for Grade 10 is the SLC appear rate which was 62% in 1988/89, 90% in 1989/90, and 84% in 1990/91.

Higher Secondary Education Enrollment (Boys) and (Girls)

Three types of students take/sit for the School Leaving Certificate (SLC) examination: (i) regular (those who take the exam for the first time), (ii) exempted (those who failed in all subjects in the previous years and retake the exam again) and (iii) compartmental (those who failed in less than two subjects in the previous year). Both the exempted and compartmental types have been aggregated into the exempted heading in the projection exercise. About 79% of those who failed in the previous year appeared as exempted and compartmental students in 1989/90. This rate was 86% for 1990/91. The pass rates of regular students for 1988/89 and 1989/90 were 44% and 48% respectively (Table IV). Due to the fact that in 1990/91, regular students' SLC pass rate was 24%, an assumption of 40% SLC pass rate was used as the basis for the projections(Medium scenario). From the three years' SLC appearance rate, an assumption of 80% school leaving rate is made under the same Medium scenario.

Table IV. SLC Appearance and Pass Rates

	1988/89	1989/90	1990/91
Grade 10 Enrollment	102,968	111,972	112,125
Regular Appeared	64,166	100,382	94,534
% Appeared	62%	90%	84%
Exempted Appeared	61,436	58,484	65,100
(One year lag)		79%	86%
Total Appeared	125,602	158,866	159,634
Total Pass	51,232	83,403	53,200
Regular	28,319	48,656	23,200
Exempted	22,913	34,747	30,000
Pass Percentage	41%	52%	33%
Regular	44%	48%	24%
Exempted	37%	59%	46%
Total Failed	74,370	75,463	106,434
Appeared (one year lag)		79%	86%

The projection of enrollments in Grades 11 and 12 is based on three assumptions of high, medium, and low SLC appearance and pass rates. The scenarios are presented in Table V.

Table V. Scenarios of High, Medium and Low SLC Appearance and Pass Rates

	High	Medium	Low
SLC Appearance rate			
Exempted	85	80	75
SLC pass rate			
Regular	48	40	35
Exempted	60	45	35

The regular SLC appearance rate, however, depends on the dropout, repetition and promotion rates of Grade 10. The proportion of SLC-pass students who enrolled in Certificate Level courses (CL) in Tribhuvan University (TU) and private campuses was 79% in 1988/89, 78% in 1989/90, and 57% 1990/91. The projection under the Medium scenario assumes therefore that 70% of SLC-pass students will enroll in Grade 11 in higher secondary schools in the future. The projections under higher and low scenarios however, assume the enrollment rates of 80% and 55% respectively. Table VI presents the historical figures.

Table VI. Enrollment in Certificate Level Courses in TU and Private Campuses

	1987/88	1988/89	1989/90	1990/91
SLC Pass	43,709	51,232	83,403	53,204
Fresh CL Students	39,247	34,734	40,217	47,878
TU	29,297	23,907	27,662	32,003
Private	9,950	10,827	12,555	15,875
% Fresh Enrollment (one year lag)		79%	78%	57%

Table VII shows the flow model used to project enrollments under the Slow Improvement Scenario. Table VIII summarizes the projections of secondary enrollment (Grades 6-10), lower secondary and secondary teachers and lower secondary and secondary schools by region.

Table VII: NEPAL - ENROLLMENT PROJECTIONS (Slow Improvement Scenario)

PHYSICAL PROJECTIONS (Primary: Grades 1-5)

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	93-97	98-02
1. Population '000	17536	17992	18462	18942	19435	19940	20458	20990	21536	22074	22626	23192	23772	24366	2.60%	2.50%
2. Pop. (6-10 yrs)	2586	2654	2723	2794	2866	2941	3017	3096	3176	3256	3337	3421	3506	3594	2.60%	2.50%
Male ('000)	1322	1357	1392	1428	1465	1503	1543	1583	1624	1664	1706	1749	1792	1837	2.60%	2.50%
Female ('000)	1264	1297	1331	1366	1401	1438	1475	1513	1553	1591	1631	1672	1714	1757	2.60%	2.50%
3. Enrollment ('000)	2526	2789	2884	2973	3065	3160	3258	3360	3465	3575	3688	3805	3927	4053	3.12%	3.18%
Male	1651	1785	1811	1851	1891	1932	1974	2017	2061	2106	2152	2199	2247	2296	2.18%	2.18%
Female	875	1004	1073	1122	1174	1227	1284	1342	1404	1468	1536	1606	1680	1757	4.58%	4.58%
4. GER %	98	105	106	106	107	107	108	109	109	110	111	111	112	113	0.50%	0.67%
Male	125	132	130	130	129	129	128	127	127	127	126	126	125	125	-0.41%	-0.31%
Female	69	77	81	82	84	85	87	89	90	92	94	96	98	100	1.93%	2.03%

FLOW MODEL / EFFICIENCY (BOYS) and (GIRLS)

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	Growth Rate(-) % 93-97	98-02
1. System Parameters																
Grade I																
D	0.11	0.24	0.24	0.24	0.23	0.23	0.22	0.21	0.21	0.20	0.19	0.18	0.17	0.16	3.0	5.0
R	0.49	0.40	0.40	0.40	0.39	0.38	0.37	0.35	0.34	0.33	0.31	0.29	0.28	0.27	3.0	5.0
P	0.40	0.36	0.36	0.36	0.38	0.40	0.42	0.43	0.43	0.48	0.50	0.53	0.55	0.57		
Grade II																
D	0.04	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	3.0	5.0
R	0.19	0.19	0.19	0.19	0.18	0.18	0.17	0.17	0.16	0.16	0.15	0.14	0.13	0.13	3.0	5.0
P	0.77	0.75	0.75	0.75	0.76	0.76	0.77	0.78	0.78	0.80	0.81	0.82	0.83	0.83		
Grade III																
D	0.01	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.03	3.0	5.0
R	0.14	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.09	0.09	3.0	5.0
P	0.85	0.82	0.82	0.82	0.83	0.83	0.84	0.84	0.84	0.85	0.86	0.87	0.87	0.88		
Grade IV																
D	0.05	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.06	2.0	4.0
R	0.15	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.12	0.12	0.11	0.11	0.10	2.0	4.0
P	0.80	0.78	0.78	0.78	0.78	0.79	0.79	0.80	0.80	0.81	0.82	0.82	0.83	0.84		

FLOW MODEL / EFFICIENCY (BOYS) and (GIRLS)

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	Growth Rate(-) % 93-97	98-02
Grade V																
D	0.19	0.23	0.23	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.19	0.18	0.18	0.17	2.0	4.0
R	0.16	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.12	0.12	0.11	0.11	0.10	2.0	4.0
P	0.65	0.63	0.63	0.63	0.64	0.64	0.65	0.66	0.66	0.68	0.69	0.70	0.72	0.73		
Grade VI																
D	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.07	0.07	1.5	3.0
R	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.07	0.07	1.5	3.0
P	0.82	0.82	0.82	0.82	0.82	0.83	0.83	0.83	0.83	0.84	0.84	0.85	0.85	0.86		
Grade VII																
D	0.11	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.12	0.12	0.11	0.11	1.5	3.0
R	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.09	0.09	0.09	1.5	3.0
P	0.78	0.75	0.75	0.75	0.75	0.76	0.76	0.76	0.76	0.78	0.78	0.79	0.79	0.80		
Grade VIII																
D	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	1.0	2.0
R	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	1.0	2.0
P	0.87	0.85	0.85	0.85	0.85	0.85	0.85	0.86	0.86	0.86	0.86	0.87	0.87	0.87		
Grade IX																
D	0.04	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	1.0	2.0
R	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	1.0	2.0
P	0.86	0.84	0.84	0.84	0.84	0.84	0.84	0.85	0.85	0.85	0.85	0.86	0.86	0.86		
Grade X																
D	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	2.0
R	0.21	0.20	0.20	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.18	0.18	0.18	0.17	1.0	2.0
P	0.76	0.80	0.80	0.80	0.80	0.80	0.81	0.81	0.81	0.81	0.82	0.82	0.82	0.83		
Grade XI																
D	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.0	1.0
R	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.0	1.0
P	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.74	0.74	0.74	0.74		
Grade XII																
D	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.0	0.0
R	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.0	0.0
P	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29		

EFFICIENCY

Efficiency %	46.4	40.1	40.1	40.1	41.4	42.7	43.9	45.1	44.5	48.2	50.1	51.9	53.6	55.2
I Pupil-years	1960.8	1666.7	1666.7	1666.7	1634.0	1603.5	1575.0	1548.3	1523.2	1484.4	1449.3	1417.4	1388.5	1362.0
II Pupil-years	968.3	740.7	740.7	740.7	759.6	776.8	792.4	806.7	788.9	839.5	856.6	871.4	884.5	895.9
III Pupil-years	867.0	638.6	638.6	638.6	658.4	676.8	694.0	709.9	691.5	747.6	768.0	786.3	802.8	817.7
IV Pupil-years	867.0	608.9	608.9	608.9	629.9	649.5	668.0	685.3	665.5	726.0	748.1	768.1	786.2	802.7
V Pupil-years	825.7	552.2	552.2	552.2	572.6	591.9	610.0	627.2	607.3	668.6	691.7	712.8	732.1	750.0
VI Pupil-years	589.8	382.3	382.3	382.3	400.5	418.1	435.0	451.4	436.5	493.9	519.2	543.2	566.0	587.6

EFFICIENCY

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	Growth Rate (-) % 93-97	98-02
VII Pupil-years	543.4	352.2	352.2	352.2	369.5	386.3	402.5	418.2	403.7	459.4	484.2	507.7	530.2	551.7		
VIII Pupil-years	465.8	293.5	293.5	293.5	309.1	324.4	339.3	353.8	341.1	392.7	416.6	439.7	461.9	483.4		
IX Pupil-years	450.2	277.2	277.2	277.2	292.2	306.8	321.0	335.0	322.7	372.5	395.7	418.1	439.7	460.7		
X Pupil-years	490.1	291.1	291.1	291.1	306.6	321.7	336.5	350.9	337.2	389.6	413.4	436.3	458.4	479.8		
Efficiency (Grades 6-10)																
Total pupil-years	2539.3	1596.4	1596.4	1596.4	1678.0	1757.2	1834.3	1909.2	1841.2	2108.2	2229.0	2345.0	2456.3	2563.1		
No. of graduates	372.5	232.9	232.9	232.9	245.9	258.7	271.2	283.5	272.4	317.0	337.9	358.2	378.0	397.3		
Graduate years	6.82	6.86	6.86	6.86	6.82	6.79	6.76	6.73	6.76	6.65	6.60	6.55	6.50	6.45		
Input/Output	1.36	1.37	1.37	1.37	1.36	1.36	1.35	1.35	1.35	1.33	1.32	1.31	1.30	1.29		
Efficiency (Grades 1-10)																
Total Pupil-years	8027.9	5803.5	5803.5	5803.5	5932.5	6055.7	6173.6	6286.6	6117.7	6574.2	6742.6	6901.0	7050.4	7191.4		
No. of Graduates	372.5	232.9	232.9	232.9	245.9	258.7	271.2	283.5	272.4	317.0	337.9	358.2	378.0	397.3		
Graduate Years	21.6	24.9	24.9	24.9	24.1	23.4	22.8	22.2	22.5	20.7	20.0	19.3	18.7	18.1		
Input/Output	2.2	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.0	1.9	1.9	1.8		

SECONDARY EDUCATION / ENROLLMENT (BOYS)

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	92-97	97-02
1. 6 Years Population	249	256	262	269	276	283	290	298	306	313	321	329	337	346	2.60	2.50
6 Yrs. % of New		162	170	163	165	167	169	164	158	161	154	152	150	147		
New Entrant '000		414	444	437	455	473	489	490	484	505	494	501	507	507		
Primary enrollment '000	1651	1785	1811	1851	1891	1932	1974	2017	2061	2106	2152	2199	2247	2296		
Total Enrollment	2131	2288	2352	2406	2462	2529	2612	2691	2770	2849	2936	3029	3129	3232		
I	739	776	755	739	751	765	777	773	758	765	744	732	723	710		
II	298	341	352	339	330	346	366	387	400	394	427	438	448	459		
III	228	259	279	300	293	287	299	318	338	349	351	379	393	406		
IV	207	222	236	262	283	281	276	287	304	322	337	341	367	383		
V	179	188	189	211	234	254	256	253	261	276	294	310	316	339		
VI	123	128	142	132	145	162	178	182	182	187	202	219	235	243		
VII	108	113	118	129	122	132	148	163	168	168	174	187	203	218		
VIII	91	95	107	99	107	103	110	123	136	141	144	149	161	176		
IX	81	87	94	100	94	100	98	104	115	128	133	136	141	152		
X	75	81	80	95	103	100	104	103	107	118	131	138	141	146		
2. Repeaters '000		566	524	527	530	527	524	524	519	512	499	484	470	458		
I		362	311	302	296	291	288	284	274	260	250	231	215	202		
II		57	65	67	64	61	62	63	65	65	61	63	61	60		
III		32	34	36	39	37	35	36	37	38	37	35	36	36		
IV		31	31	33	37	39	38	36	37	39	39	39	38	39		
V		29	26	26	29	32	34	34	33	33	33	34	35	34		
VI		11	11	13	12	13	14	15	15	15	15	16	17	17		
VII		12	12	13	14	13	14	16	17	17	17	17	17	18		
VIII		8	9	11	10	11	10	11	12	13	13	13	13	14		

SECONDARY EDUCATION / ENROLLMENT (BOYS)

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	92-97	97-02
IX		8	9	9	10	9	10	9	10	11	12	12	12	12		
X		16	16	16	19	20	20	20	20	20	22	24	25	25		
3. Promoters '000		1393	1446	1507	1553	1612	1679	1762	1850	1919	2039	2150	2264	2383		
I		296	279	272	266	285	304	323	335	329	366	375	387	399		
II		230	255	264	254	250	264	282	301	312	314	344	357	370		
III		194	212	229	246	242	239	250	267	284	298	302	329	344		
IV		166	173	184	204	222	221	219	229	243	261	275	281	305		
V		116	118	119	133	149	164	167	167	172	187	204	218	226		
VI		101	105	116	108	119	134	147	151	151	157	171	186	200		
VII		85	85	89	97	92	100	112	124	128	130	136	148	162		
VIII		79	81	91	84	91	88	94	105	117	122	124	129	140		
IX		70	73	79	84	79	85	82	88	98	109	114	117	121		
X		57	65	64	76	83	80	84	83	87	96	107	113	116		
4. Dropouts '000		172	318	319	323	324	326	326	322	318	311	302	294	287		
I		81	186	181	177	175	173	170	164	156	150	138	129	121		
II		12	20	21	20	19	20	20	21	21	19	20	19	19		
III		2	13	14	15	14	14	14	14	14	14	14	14	14		
IV		10	18	19	21	22	22	21	21	22	22	22	22	23		
V		34	43	43	48	53	56	55	54	54	55	56	57	56		
VI		11	11	13	12	13	14	15	15	15	15	16	17	17		
VII		12	16	17	18	17	18	20	21	22	21	21	22	23		
VIII		4	5	5	5	5	5	5	6	6	7	7	7	7		
IX		3	5	6	6	6	6	6	6	7	7	7	7	7		
X		2	0	0	0	0	0	0	0	0	0	0	0	0		

HSE ENROLLMENT(BOYS) '000

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02		
1. SLC APPEARED	93.4	113.8	116.1	124.2	133.2	144.5	147.2	152.0	153.2	157.5	168.7	184.8	198.7	208.5		
Regular	47.6	72.5	68.8	64.0	76.0	82.8	80.3	84.0	82.9	86.8	96.0	106.7	113.1	116.5		
Exempted	45.8	41.3	47.3	60.2	57.2	61.6	66.9	68.0	70.2	70.7	72.8	78.1	85.6	92.0		
2. EXEMPTED																
Failure Last year		54.2	52.4	75.3	71.5	77.1	83.6	85.0	87.8	88 4	90.9	97.6	107.0	115.0	Low	Med
Appeared rate				0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.75	0.80
No. appeared	46.0	41.3	47.3	60.2	57.2	61.6	66.9	68.0	70.2	70.7	72.8	78.1	85.6	92.0		
3. SLC Pass Rate															Low	Med
Regular				0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.35	0.40
Exempted				0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.35	0.45
4. SLC Pass No.	39.2	61.4	40.8	52.7	56.1	60.9	62.2	64.2	64.8	66.5	71.1	77.8	83.8	88.0		
Regular	22.0	36.9	17.8	25.6	30.4	33.1	32.1	33.6	33.2	34.7	38.4	42.7	45.3	46.6		
Exempted	17.2	24.5	23.0	27.1	25.8	27.7	30.1	30.6	31.6	31.8	32.7	35.1	38.5	41.4	Low	Med
5. Enrollment Rate(XI)	0.79	0.78	0.57	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.55	.70
Fresh Enrollment	31.0	30.6	35.0	28.6	36.9	39.3	42.6	43.5	44.9	45.3	46.6	49.8	54.5	58.6		

SECONDARY EDUCATION / ENROLLMENT (Girls)

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	92-97	97-02
1. 6 Years Pop.	276	283	290	298	305	313	321	330	338	347	355	364	373	383	2.6	2.5
6 Yrs. % of New		95	101	94	96	100	103	104	104	107	105	106	107	107		
New Entrant '000		269	292	280	294	313	332	344	351	373	372	385	399	409		
Primary enrollment '000	875	1004	1073	1122	1174	1227	1284	1342	1404	1468	1536	1606	1680	1757		
Total Enrollment	1060	1209	1306	1374	1445	1528	1622	1720	1818	1916	2022	2134	2254	2381		
I	433	481	484	474	483	501	520	534	540	558	554	556	563	567		
II	151	191	208	214	211	222	239	258	275	279	310	325	340	356		
III	111	132	159	177	183	183	192	207	225	239	247	275	291	307		
IV	98	108	124	148	166	174	175	184	198	214	230	240	265	283		
V	83	92	98	110	131	148	157	160	167	179	195	211	221	244		
VI	51	56	67	68	76	90	103	111	115	120	131	145	159	170		
VII	43	47	52	61	62	69	82	94	102	106	111	121	134	148		
VIII	35	38	45	44	50	52	57	68	78	86	90	95	104	116		
IX	29	33	37	42	41	47	49	54	63	73	80	85	90	98		
X	28	31	32	37	43	43	48	50	55	64	74	82	87	92		
2. Repeaters '000		305	297	311	318	321	327	335	341	345	345	342	339	337		
I		212	192	194	189	187	188	190	189	185	182	172	164	157		
II		29	36	40	41	39	40	41	43	45	43	46	45	45		
III		15	17	21	23	23	22	23	24	25	25	25	26	26		
IV		15	15	17	21	23	23	23	24	25	26	27	27	28		
V		13	13	14	15	18	20	21	21	21	22	23	24	24		
VI		5	5	6	6	7	8	9	9	10	10	10	11	12		
VII		5	5	6	7	7	7	9	10	10	10	11	11	12		
VIII		3	4	5	4	5	5	6	7	7	8	8	8	9		
IX		3	3	4	4	4	5	5	5	6	7	7	8	8		
X		6	6	6	7	8	8	9	10	10	12	14	15	15		
3. Promoters '000		666	733	808	864	928	998	1079	1166	1243	1357	1468	1584	1706		
I		173	173	174	170	183	199	216	231	234	267	279	294	311		
II		117	143	156	160	160	170	184	201	214	222	250	265	280		
III		94	108	130	145	151	152	161	174	189	204	213	238	255		
IV		79	85	97	115	130	137	139	146	158	173	188	197	220		
V		54	58	62	70	83	95	102	105	110	121	135	148	158		
VI		42	46	55	56	62	74	85	92	95	100	111	123	136		
VII		33	35	39	45	47	52	62	72	78	82	87	96	107		
VIII		30	32	38	37	42	44	49	58	67	74	78	82	90		
IX		25	28	31	35	35	39	41	45	53	62	69	73	77		
X		21	25	26	30	34	35	38	41	45	52	61	67	72		
4. Dropouts '000		88	179	187	192	196	203	208	212	214	214	212	211	211		
I		48	115	116	114	112	113	114	113	111	109	103	98	94		
II		6	11	12	13	12	13	13	14	14	14	14	14	14		
III		1	7	8	9	9	9	9	9	10	10	10	10	10		

SECONDARY EDUCATION / ENROLLMENT (Girls)

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
IV		5	9	10	12	13	13	13	14	14	15	15	15	16
V		16	21	23	25	29	33	34	34	35	36	37	39	39
VI		5	5	6	6	7	8	9	9	10	10	10	11	12
VII		5	7	7	8	9	9	11	12	13	13	14	14	15
VIII		1	2	2	2	2	3	3	3	4	4	4	4	5
IX		1	2	2	3	2	3	3	3	4	4	4	5	5
X		1	0	0	0	0	0	0	0	0	0	0	0	0

HSE ENROLLMENT(GIRLS) '000

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. SLC APPEARED	32.0	45.0	43.6	50.5	53.2	58.9	61.9	67.1	71.8	77.8	88.0	101.4	114.5	125.2
Regular	16.6	27.8	25.8	25.6	30.0	34.3	34.7	38.4	40.8	44.6	52.0	60.6	67.5	72.1
Exempted	15.4	17.2	17.8	24.9	23.3	24.6	27.3	28.6	31.0	33.2	36.0	40.8	47.0	53.1
2. EXEMPTED														
Failure Last year		20.0	23.1	31.2	29.1	30.8	34.1	35.8	38.8	41.5	45.0	51.0	58.8	66.4
Appeared rate		0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
No. Appeared	15.4	17.2	17.8	24.9	23.3	24.6	27.3	28.6	31.0	33.2	36.0	40.8	47.0	53.1
3. SLC Pass Rate														
Regular				0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Exempted				0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
4. SLC Pass No.	12.0	21.9	12.4	21.5	22.5	24.8	26.1	28.3	30.3	32.8	37.0	42.6	48.2	52.7
Regular	6.3	11.7	5.4	10.2	12.0	13.7	13.9	15.4	16.3	17.8	20.8	24.2	27.0	28.8
Exempted	5.7	10.2	7.0	11.2	10.5	11.1	12.3	12.9	14.0	15.0	16.2	18.4	21.2	23.9
5. Enrollment Rate(XI)	0.79	0.78	0.57	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Fresh Enrollment	9.5	9.4	12.5	8.7	15.0	15.7	17.4	18.3	19.8	21.2	22.9	25.9	29.8	33.7

HSE EXAMINATION

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Enrollment HSE	60.7	60.3	71.8	78.6	85.0	98.2	107.6	114.0	118.8	122.9	127.6	136.2	150.1	166.1
XI	34.7	35.5	42.8	38.3	51.5	55.8	60.8	62.8	65.5	67.1	69.6	75.4	83.9	92.0
XII	26.0	24.8	29.0	40.4	33.5	42.5	46.8	51.2	53.3	55.9	58.0	60.8	66.2	74.1
1a. HSE Appear Rate	0.29	0.29	0.29	0.29	0.29	0.29	0.30	0.31	0.32	0.33	0.35	0.37	0.40	0.42
2. Regular HSE Appeared	7.5	7.2	8.4	11.7	9.7	12.3	14.1	15.9	17.1	18.6	20.5	22.8	26.3	31.0
3. Exempted (HSE)														
Failure Last Year		5.7	9.0	12.1	16.5	17.8	20.7	23.8	27.2	30.2	33.3	36.7	40.6	45.7
Appeared Rate	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
No. Appeared	0.0	4.5	7.2	9.7	13.2	14.3	16.5	19.0	21.7	24.2	26.6	29.3	32.5	36.5
4. HSE Pass Rate														
Regular	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Exempted	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
5. No. HSE Pass	1.9	2.7	3.5	4.9	5.1	5.9	6.8	7.8	8.6	9.5	10.4	11.6	13.1	15.0

HSE EXAMINATION

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Regular	1.9	1.8	2.1	2.9	2.4	3.1	3.5	4.0	4.3	4.7	5.1	5.7	6.6	7.7
Exempted	0.0	0.9	1.4	1.9	2.6	2.9	3.3	3.8	4.3	4.8	5.3	5.9	6.5	7.3
6. Failure														
Total Appeared	7.5	11.7	15.6	21.4	22.9	26.6	30.6	35.0	38.8	42.8	47.1	52.1	58.7	67.5
Total Fail	5.7	9.0	12.1	16.5	17.8	20.7	23.8	27.2	30.2	33.3	36.7	40.6	45.7	52.5

ENROLLMENT SUMMARY

Years	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Primary	2526.2	2788.7	2884.0	2972.7	3064.5	3159.6	3258.0	3359.9	3465.5	3574.8	3688.1	3805.4	3927.0	4053.1
Boys	1651.0	1784.9	1811.0	1850.5	1890.9	1932.2	1974.3	2017.4	2061.5	2106.4	2152.4	2199.4	2247.4	2296.4
Girls	875.2	1003.8	1073.0	1122.2	1173.6	1227.4	1283.7	1342.5	1404.0	1468.4	1535.7	1606.0	1679.7	1756.6
2. Lower Secondary	325.2	344.0	379.0	389.7	404.8	452.9	510.2	549.8	566.7	580.8	617.7	672.8	731.7	779.6
Boys	231.7	240.8	260.0	261.3	266.9	293.9	325.5	344.6	349.8	355.4	375.8	406.7	438.2	461.8
Girls	93.5	103.2	119.0	128.4	137.9	159.0	184.8	205.2	216.8	225.3	241.8	266.1	293.4	317.8
2. Secondary	338.8	364.5	395.0	417.4	438.4	444.6	465.8	501.2	555.6	609.5	652.0	684.6	724.3	780.3
Boys	248.0	262.5	281.0	294.5	304.6	303.1	312.0	329.3	358.9	386.9	407.6	422.7	443.2	473.9
Girls	90.8	102.0	114.0	122.9	133.7	141.5	153.8	171.9	196.7	222.5	244.4	261.9	281.1	306.4
3. SLC Appeared	125.4	158.8	159.7	174.8	186.4	203.4	209.1	219.1	225.0	235.3	256.8	286.2	313.2	333.7
Boys	93.4	113.8	116.1	124.2	133.2	144.5	147.2	152.0	153.2	157.5	168.7	184.8	198.7	208.5
Girls	32.0	45.0	43.6	50.5	53.2	58.9	61.9	67.1	71.8	77.8	88.0	101.4	114.5	125.2
4. SLC Pass	51.2	83.3	53.2	74.2	78.6	85.7	88.4	92.5	95.1	99.3	108.1	120.4	131.9	140.7
Boys	39.2	61.4	40.8	52.7	56.1	60.9	62.2	64.2	64.8	66.5	71.1	77.8	83.8	88.0
Girls	12.0	21.9	12.4	21.5	22.5	24.8	26.1	28.3	30.3	32.8	37.0	42.6	48.2	52.7
5. Grade 11	34.7	40.2	47.9	38.3	51.5	55.8	60.8	62.8	65.5	67.1	69.6	75.4	83.9	92.0
6. Grade 12	26.0	28.1	32.4	40.4	33.5	42.5	46.8	51.2	53.3	55.9	58.0	60.8	66.2	74.1
7. Grade 11+12	60.7	68.3	80.3	78.6	85.0	98.2	107.6	114.0	118.8	122.9	127.6	136.2	150.1	166.1
8. Technical Enrollment	3.6	2.9	3.0	3.12	3.21	3.31	3.41	3.51	3.61	3.72	3.83	3.95	4.07	4.19
Fresh (35%)	1.3	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5
9. Sanskrit Enrollment	0.3	0.4	0.5	0.47	0.49	0.50	0.52	0.53	0.55	0.57	0.58	0.60	0.62	0.64
Fresh (50%)	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
10. Law Enrollment			6.7	7.17	7.67	8.21	8.78	9.40	10.05	10.76	11.51	12.32	13.18	14.10
Fresh (58%)			3.9	4.2	4.4	4.8	5.1	5.5	5.8	6.2	6.7	7.1	7.6	8.2
11. Fresh Enrollment	40.4	39.9	47.5	37.2	51.9	55.0	60.0	61.8	64.7	66.5	69.5	75.7	84.3	92.3
Boys	31.0	30.6	35.0	28.6	36.9	39.3	42.6	43.5	44.9	45.3	46.6	49.8	54.5	58.6
Girls	9.5	9.4	12.5	8.7	15.0	15.7	17.4	18.3	19.8	21.2	22.9	25.9	29.8	33.7
12. Net HSS Fresh		38.7	42.3	31.8	46.1	48.9	53.4	54.9	57.3	58.7	61.2	66.9	74.9	82.4

Table VIII (SUMMARY)

PROJECTIONS OF SECONDARY (6-10) ENROLLMENT, TEACHERS AND SCHOOLS

6 - 10 ENROLLMENT BY GRADE

	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Total Enrollment	3190	3497	3658	3780	3908	4057	4234	4411	4588	4765	4958	5163	5383	5613
I	1172	1257	1239	1213	1234	1265	1297	1307	1298	1323	1298	1288	1285	1276
II	450	531	560	552	542	568	605	644	675	673	737	762	788	815
III	338	391	438	477	476	470	492	525	562	588	598	654	685	712
IV	305	330	360	410	448	455	452	470	502	536	567	581	632	666
V	261	280	287	321	364	402	413	413	428	454	489	520	537	583
VI	174	184	209	200	220	252	281	293	297	307	333	364	394	413
VII	151	161	170	190	185	201	229	257	270	274	284	308	338	366
VIII	126	133	152	143	157	155	168	191	215	227	233	244	265	292
IX	110	119	131	142	136	147	146	157	178	201	214	221	231	250
X	103	112	112	132	146	143	152	153	163	182	205	220	229	238

LOWER SECONDARY (6-7) ENROLLMENT

	85/86	90/91	GR%	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Total Enrollment No.	272493	378478	0.068	389700	404780	452930	510250	549845	566653	580756	617673	672778	731676	779648
Eastern Mountain	5330	8514	0.098	9015	9364	10775	12483	13833	14660	15451	16899	18929	21169	23197
Eastern Hill	22047	31587	0.075	32726	33992	38273	43384	47042	48782	50307	53838	59006	64571	69233
Eastern Terai	44869	58327	0.054	59266	61560	67976	75571	80364	81731	82662	86760	93257	100087	105245
Central Mountain	4133	6369	0.090	6696	6955	7945	9139	10055	10580	11071	12021	13369	14845	16150
Central Hill	18867	24133	0.050	24443	25388	27944	30966	32824	33274	33545	35095	37601	40225	42161
Central Terai	38165	46003	0.038	46043	47825	52018	56963	59667	59772	59547	61562	65180	68905	71370
Central Valley	29839	41452	0.068	42199	43832	48293	53334	56077	56099	55496	56610	58711	60290	60063
Western Mountain	310	333	0.014	326	338	360	385	394	386	375	379	392	405	410
Western Hill	55476	76347	0.066	78466	81503	91030	102361	110101	113258	115864	123002	133729	145169	154402
Western Terai	14547	22684	0.093	23904	24829	28432	32781	36152	38129	39993	43531	48525	54009	58898
Mid-Western Mountain	1751	2884	0.105	3072	3191	3695	4307	4802	5120	5430	5975	6734	7577	8354
Mid-Western Hill	10983	18299	0.107	19540	20296	23552	27516	30750	32854	34931	38528	43520	49084	54241
Mid-Western Terai	10320	17539	0.112	18803	19530	22754	26689	29944	32131	34287	37968	43059	48757	54093
Far-Western Mountain	3194	5015	0.094	5292	5497	6303	7277	8037	8488	8915	9717	10847	12089	13202
Far-Western Hill	6463	8289	0.051	8400	8725	9608	10653	11298	11459	11559	12099	12970	13883	14559
Far-Western Terai	6199	10703	0.115	11511	11956	13973	16442	18506	19920	21323	23688	26948	30611	34069

LOWER SECONDARY (6-7) ENROLLMENT

	85/86	90/91	GR%	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
2. Total Enrollment %	100.0	100.0	0	100	100	100	100	100	100	100	100	100	100	100
Eastern Mountain	1.96	2.25	0.028	2.31	2.31	2.38	2.45	2.52	2.59	2.66	2.74	2.81	2.89	2.98
Eastern Hill	8.09	8.35	0.006	8.40	8.40	8.45	8.50	8.56	8.61	8.66	8.72	8.77	8.83	8.88
Eastern Terai	16.47	15.41	-0.013	15.21	15.21	15.01	14.81	14.62	14.42	14.23	14.05	13.86	13.68	13.50
Central Mountain	1.52	1.68	0.021	1.72	1.72	1.75	1.79	1.83	1.87	1.91	1.95	1.99	2.03	2.07
Central Hill	6.92	6.38	-0.016	6.27	6.27	6.17	6.07	5.97	5.87	5.78	5.68	5.59	5.50	5.41
Central Terai	14.01	12.15	-0.028	11.81	11.81	11.48	11.16	10.85	10.55	10.25	9.97	9.69	9.42	9.15
Central Valley	10.95	10.95	0.000	10.83	10.83	10.66	10.45	10.20	9.90	9.56	9.16	8.73	8.24	7.70
Western Mountain	0.11	0.09	-0.050	0.08	0.08	0.08	0.08	0.07	0.07	0.06	0.06	0.06	0.06	0.05
Western Hill	20.36	20.17	-0.002	20.14	20.14	20.10	20.06	20.02	19.99	19.95	19.91	19.88	19.84	19.80
Western Terai	5.34	5.99	0.023	6.13	6.13	6.28	6.42	6.57	6.73	6.89	7.05	7.21	7.38	7.55
Mid-Western Mountain	0.64	0.76	0.035	0.79	0.79	0.82	0.84	0.87	0.90	0.93	0.97	1.00	1.04	1.07
Mid-Western Hill	4.03	4.83	0.037	5.01	5.01	5.20	5.39	5.59	5.80	6.01	6.24	6.47	6.71	6.96
Mid-Western Terai	3.79	4.63	0.041	4.82	4.82	5.02	5.23	5.45	5.67	5.90	6.15	6.40	6.66	6.94
Far-Western Mountain	1.17	1.33	0.025	1.36	1.36	1.39	1.43	1.46	1.50	1.54	1.57	1.61	1.65	1.69
Far-Western Hill	2.37	2.19	-0.016	2.16	2.16	2.12	2.09	2.05	2.02	1.99	1.96	1.93	1.90	1.87
Far-Western Terai	2.27	2.83	0.044	2.95	2.95	3.09	3.22	3.37	3.52	3.67	3.83	4.01	4.18	4.37

LOWER SECONDARY (6-7) TEACHERS

	85/86	90/91	TS RATIO	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Total Teacher No.	12493	12903	29	13282	13796	15429	17370	18701	19252	19706	20927	22754	24698	26259
Eastern Mountain	359	376	23	398	414	476	551	611	647	682	746	836	935	1024
Eastern Hill	1126	1128	28	1169	1214	1367	1549	1680	1742	1797	1923	2107	2306	2472
Eastern Terai	1331	1361	43	1383	1436	1586	1763	1875	1907	1929	2024	2176	2335	2456
Central Mountain	138	255	25	268	278	318	366	403	424	443	481	535	594	647
Central Hill	1237	980	25	993	1031	1135	1257	1333	1351	1362	1425	1527	1633	1712
Central Terai	1368	1320	35	1321	1372	1493	1634	1712	1715	1709	1766	1870	1977	2048
Central Valley	1339	1989	21	2025	2103	2317	2559	2691	2692	2663	2716	2817	2893	2882
Western Mountain	69	73	5	71	74	79	84	86	85	82	83	86	89	90
Western Hill	2778	2501	31	2570	2670	2982	3353	3607	3710	3795	4029	4381	4755	5058
Western Terai	469	495	46	522	542	620	715	789	832	873	950	1059	1179	1285
Mid-Western Mountain	336	212	14	226	235	272	317	353	376	399	439	495	557	614
Mid-Western Hill	604	704	26	752	781	906	1059	1183	1264	1344	1482	1674	1888	2087

LOWER SECONDARY (6-7) TEACHERS

	85/86	90/91	TS RATIO	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Mid-Western Terai	431	464	38	497	517	602	706	792	850	907	1004	1139	1290	1431
Far-Western Mountain	255	283	18	299	310	356	411	454	479	503	548	612	682	745
Far-Western Hill	416	503	16	510	529	583	646	686	695	701	734	787	842	883
Far-Western Terai	237	259	41	279	289	338	398	448	482	516	573	652	741	824

LOWER SECONDARY (6-7) SCHOOLS

	85/86	90/91	SS RATIO	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Total Schools	3731	4045	94	4171	4332	4854	5477	5911	6102	6265	6675	7284	7936	8473
Eastern Mountain	120	129	66	137	142	163	189	210	222	234	256	287	321	351
Eastern Hill	386	371	85	384	399	450	510	553	573	591	632	693	758	813
Eastern Terai	412	426	137	433	450	496	552	587	597	604	634	681	731	769
Central Mountain	48	105	61	110	115	131	151	166	174	183	198	220	245	266
Central Hill	368	337	72	341	355	390	432	458	465	468	490	525	562	589
Central Terai	389	409	112	409	425	462	506	530	531	529	547	579	613	635
Central Valley	241	401	103	408	424	467	516	542	543	537	548	568	583	581
Western Mountain	24	25	13	24	25	27	29	30	29	28	28	29	30	31
Western Hill	722	806	95	828	860	961	1081	1162	1196	1223	1299	1412	1533	1630
Western Terai	150	172	132	181	188	216	249	274	289	303	330	368	410	447
Mid-Western Mountain	96	99	29	105	110	127	148	165	176	186	205	231	260	287
Mid-Western Hill	254	252	73	269	280	324	379	423	453	481	531	599	676	747
Mid-Western Terai	165	169	104	181	188	219	257	289	310	330	366	415	470	521
Far-Western Mountain	105	98	51	103	107	123	142	157	166	174	190	212	236	258
Far-Western Hill	166	164	51	166	173	190	211	224	227	229	239	257	275	288
Far-Western Terai	85	82	131	88	92	107	126	142	153	163	181	206	235	261

SECONDARY (8-10) ENROLLMENT

	85/86	90/91	GR%	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Total Enrollment No.	268805	395330	0.080	417440	438375	444594	465784	501186	555591	609458	652000	684614	724317	780291
Eastern Mountain	5132	8334	0.102	8976	9426	9752	10421	11437	12933	14471	15791	16913	18252	20056
Eastern Hill	19692	33979	0.115	37045	38902	40736	44063	48952	56028	63456	70090	75986	83004	92322
Eastern Terai	50395	72198	0.075	75837	79641	80348	83737	89631	98841	107857	114782	119893	126183	135224
Central Mountain	4323	5250	0.040	5335	5603	5469	5514	5711	6093	6432	6623	6693	6815	7066
Central Hill	14721	23059	0.094	24658	25894	26595	28216	30746	34516	38343	41539	44171	47325	51630
Central Terai	40395	48973	0.039	49752	52247	50980	51386	53196	56736	59878	61630	62261	63375	65685

SECONDARY (8-10) ENROLLMENT

	85/86	90/91	GR%	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Central Valley	36921	51985	0.071	53733	56427	55756	56624	58736	62386	65120	65771	64603	63242	62202
Western Mountain	235	265	0.024	265	279	268	266	272	286	297	301	300	301	308
Western Hill	48512	79052	0.103	85203	89476	92626	99052	108789	123098	137831	150508	161311	174203	191555
Western Terai	14543	18600	0.050	19099	20057	19781	20153	21087	22732	24249	25227	25759	26503	27764
Mid-Western Mountain	1705	2409	0.072	2523	2650	2666	2771	2958	3253	3539	3756	3913	4106	4388
Mid-Western Hill	8820	15851	0.124	17422	18296	19315	21063	23591	27222	31083	34613	37831	41562	46718
Mid-Western Terai	10091	15848	0.094	16956	17806	18297	19423	21175	23784	26435	28654	30485	32680	35670
Far-Western Mountain	3007	4144	0.066	4319	4536	4541	4696	4987	5457	[illegible]	6240	6467	6754	7182
Far-Western Hill	5307	7015	0.057	7251	7615	7560	7753	8166	8861		9964	10241	10607	11185
Far-Western Terai	5006	8368	0.108	9065	9520	9905	10647	11753	13367	15043	16511	17786	19306	21337
2. Total Enrollment %	100.0	100.0	0	100	100	100	100	100	100	100	100	100	100	100
Eastern Mountain	1.91	2.11	0.020	2.15	2.15	2.19	2.24	2.28	2.33	2.37	2.42	2.47	2.52	2.57
Eastern Hill	7.33	8.60	0.032	8.87	8.87	9.16	9.46	9.77	10.08	10.41	10.75	11.10	11.46	11.83
Eastern Terai	18.75	18.26	-0.005	18.17	18.17	18.07	17.98	17.88	17.79	17.70	17.60	17.51	17.42	17.33
Central Mountain	1.61	1.33	-0.038	1.28	1.28	1.23	1.18	1.14	1.10	1.06	1.02	0.98	0.94	0.91
Central Hill	5.48	5.83	0.013	5.91	5.91	5.98	6.06	6.13	6.21	6.29	6.37	6.45	6.53	6.62
Central Terai	15.03	12.39	-0.038	11.92	11.92	11.47	11.03	10.61	10.21	9.82	9.45	9.09	8.75	8.42
Central Valley	13.74	13.15	-0.009	12.87	12.87	12.54	12.16	11.72	11.23	10.68	10.09	9.44	8.73	7.97
Western Mountain	0.09	0.07	-0.052	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.04
Western Hill	18.05	20.00	0.021	20.41	20.41	20.83	21.27	21.71	22.16	22.62	23.08	23.56	24.05	24.55
Western Terai	5.41	4.70	-0.028	4.58	4.58	4.45	4.33	4.21	4.09	3.98	3.87	3.76	3.66	3.56
Mid-Western Mountain	0.63	0.61	-0.008	0.60	0.60	0.60	0.59	0.59	0.59	0.58	0.58	0.57	0.57	0.56
Mid-Western Hill	3.28	4.01	0.041	4.17	4.17	4.34	4.52	4.71	4.90	5.10	5.31	5.53	5.75	5.99
Mid-Western Terai	3.75	4.01	0.013	4.06	4.06	4.12	4.17	4.23	4.28	4.34	4.39	4.45	4.51	4.57
Far-Western Mountain	1.12	1.05	-0.013	1.03	1.03	1.02	1.01	1.00	0.98	0.97	0.96	0.94	0.93	0.92
Far-Western Hill	1.97	1.77	-0.021	1.74	1.74	1.70	1.66	1.63	1.59	1.56	1.53	1.50	1.46	1.43
Far-Western Terai	1.86	2.12	0.026	2.17	2.17	2.23	2.29	2.35	2.41	2.47	2.53	2.60	2.67	2.73

SECONDARY (8-10) TEACHERS

	85/86	90/91	TS RATIO	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Total Teacher No.	9290	11627	34	12269	12884	13055	13662	14681	16249	17793	18998	19904	21008	22571
Eastern Mountain	186	278	30	299	314	325	348	382	431	483	527	564	609	669
Eastern Hill	706	869	39	947	995	1042	1127	1252	1433	1623	1793	1943	2123	2361
Eastern Terai	1117	1364	53	1433	1505	1518	1582	1693	1867	2038	2169	2265	2384	2555
Central Mountain	55	226	23	230	241	235	237	246	262	277	285	288	293	304
Central Hill	741	740	31	791	831	853	905	987	1108	1230	1333	1418	1519	1657
Central Terai	1143	1198	41	1217	1278	1247	1257	1301	1388	1465	1508	1523	1550	1607
Central Valley	1422	2117	25	2188	2298	2271	2306	2392	2541	2652	2678	2631	2575	2533
Western Mountain	38	51	5	51	54	52	51	52	55	57	58	58	58	59
Western Hill	1949	2351	34	2534	2661	2755	2946	3235	3661	4099	4476	4797	5181	5697
Western Terai	437	447	42	459	482	475	484	507	546	583	606	619	637	667
Mid-Western Mountain	162	180	13	189	198	199	207	221	243	264	281	292	307	328

SECONDARY (8-10) TEACHERS

	85/86	90/91	TS RATIO	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Mid-Western Hill	365	543	29	597	627	662	722	808	933	1065	1186	1296	1427	1600
Mid-Western Terai	337	366	43	392	411	423	449	489	549	611	662	704	755	824
Far-Western Mountain	170	221	19	230	242	242	250	266	291	315	333	345	360	383
Far-Western Hill	270	415	17	429	450	447	459	483	524	563	589	606	627	662
Far-Western Terai	192	261	32	283	297	309	332	367	417	469	515	555	602	666

SECONDARY (8-10) SCHOOLS

	85/86	90/91	SS RATIO	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Total Schools	1411	2079	190	2197	2307	2341	2454	2642	2931	3218	3446	3621	3834	4134
Eastern Mountain	34	63	132	68	71	74	79	86	98	109	119	128	138	152
Eastern Hill	115	167	203	182	191	200	217	241	275	312	344	373	408	454
Eastern Terai	169	232	311	244	256	258	269	288	318	347	369	385	405	435
Central Mountain	17	51	103	52	54	53	54	55	59	62	64	65	66	69
Central Hill	122	143	161	153	161	165	175	191	214	238	258	274	293	320
Central Terai	160	227	216	231	242	236	238	247	263	278	286	289	294	304
Central Valley	139	271	192	280	294	291	295	306	325	339	343	337	330	324
Western Mountain	7	8	33	8	8	8	8	8	9	9	9	9	9	9
Western Hill	297	445	178	480	504	521	558	612	693	776	847	908	981	1078
Western Terai	71	107	174	110	115	114	116	121	131	139	145	148	152	160
Mid-Western Mountain	26	34	71	36	37	38	39	42	46	50	53	55	58	62
Mid-Western Hill	71	102	155	112	118	124	136	152	175	200	223	243	268	301
Mid-Western Terai	62	85	186	91	96	98	104	114	128	142	154	164	175	191
Far-Western Mountain	31	44	94	46	48	48	50	53	58	63	66	69	72	76
Far-Western Hill	51	58	121	60	63	63	64	68	73	79	82	85	88	92
Far-Western Terai	39	42	199	45	48	50	53	59	67	76	83	89	97	107

LOWER + SECONDARY (6-10) ENROLLMENT

	85/86	90/91	GR%	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Total Enrollment No.	541298	773808	0.074	807140	843155	897524	976034	1051032	1122245	1190213	1269673	1357391	1455994	1559939
Eastern Mountain	10462	16848	0.100	17991	18790	20526	22904	25270	27593	29922	32690	35841	39421	43253
Eastern Hill	41739	65566	0.095	69771	72895	79008	87448	95994	104810	113763	123928	134992	147575	161555
Eastern Terai	95264	130525	0.065	135103	141200	148324	159308	169994	180571	190519	201542	213150	226270	240469
Central Mountain	8456	11619	0.066	12031	12558	13414	14653	15765	16672	17503	18644	20062	21659	23216
Central Hill	33588	47192	0.070	49100	51283	54539	59182	63570	67790	71888	76634	81772	87550	93791
Central Terai	78560	94976	0.039	95795	100072	102998	108349	112863	116508	119425	123192	127441	132280	137055
Central Valley	66760	93437	0.070	95932	100259	104049	109958	114813	118485	120616	122380	123314	123532	122265
Western Mountain	545	598	0.019	591	617	628	651	666	671	672	681	692	706	718
Western Hill	103988	155399	0.084	163669	170979	183656	201413	218891	236356	253694	273510	295040	319372	345956
Western Terai	29090	41284	0.073	43003	44886	48214	52934	57239	60862	64243	68759	74285	80512	86662
Mid-Western Mountain	3456	5293	0.089	5596	5841	6361	7078	7760	8373	8969	9731	10646	11684	12743

LOWER + SECONDARY (6-10) ENROLLMENT

	85/86	90/91	GR%	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Mid-Western Hill	19803	34150	0.115	36962	38592	42867	48579	54341	60086	66013	73141	81351	90747	100959
Mid-Western Terai	20411	33387	0.103	35758	37336	41051	46112	51120	55915	60722	66622	73544	81436	89763
Far-Western Mountain	6201	9159	0.081	9611	10033	10844	11973	13024	13945	14824	15957	17314	18843	20384
Far-Western Hill	11770	15304	0.054	15651	16339	17168	18406	19464	20320	21074	22063	23212	24489	25744
Far-Western Terai	11205	19071	0.112	20576	21476	23879	27088	30259	33286	36366	40198	44735	49917	55406
2. Total Enrollment %	201.4	195.7	0	100	100	100	100	100	100	100	100	100	100	100
Eastern Mountain	3.89	4.26	0.018	4.34	4.34	4.42	4.50	4.58	4.67	4.75	4.84	4.93	5.02	5.11
Eastern Hill	15.53	16.59	0.013	16.81	16.81	17.03	17.25	17.48	17.71	17.95	18.19	18.43	18.67	18.92
Eastern Terai	35.44	33.02	-0.014	32.55	32.55	32.09	31.64	31.20	30.76	30.33	29.90	29.48	29.07	28.66
Central Mountain	3.15	2.94	-0.014	2.90	2.90	2.86	2.82	2.78	2.75	2.71	2.67	2.64	2.60	2.57
Central Hill	12.50	11.94	-0.009	11.83	11.83	11.72	11.61	11.51	11.40	11.30	11.20	11.10	11.00	10.90
Central Terai	29.23	24.02	-0.038	23.10	23.10	22.21	21.36	20.54	19.75	18.99	18.26	17.56	16.88	16.23
Central Valley	24.84	23.64	-0.010	-71.43	-71.43	-70.83	-70.29	-69.82	-69.42	-69.08	-68.81	-68.60	-68.46	-68.38
Western Mountain	0.20	0.15	-0.057	0.14	0.14	0.13	0.13	0.12	0.11	0.11	0.10	0.09	0.09	0.08
Western Hill	38.69	39.31	0.003	39.43	39.43	39.56	39.69	39.81	39.94	40.07	40.20	40.33	40.46	40.59
Western Terai	10.82	10.44	-0.007	10.37	10.37	10.30	10.22	10.15	10.08	10.01	9.93	9.86	9.79	9.72
Mid-Western Mountain	1.29	1.34	0.008	1.35	1.35	1.36	1.37	1.38	1.39	1.41	1.42	1.43	1.44	1.45
Mid-Western Hill	7.37	8.64	0.032	8.92	8.92	9.21	9.50	9.81	10.13	10.46	10.80	11.14	11.50	11.88
Mid-Western Terai	7.59	8.45	0.021	8.63	8.63	8.81	9.00	9.20	9.39	9.60	9.80	10.01	10.23	10.45
Far-Western Mountain	2.31	2.32	0.001	2.32	2.32	2.32	2.32	2.32	2.33	2.33	2.33	2.33	2.33	2.34
Far-Western Hill	4.38	3.87	-0.024	3.78	3.78	3.69	3.60	3.51	3.42	3.34	3.26	3.18	3.10	3.03
Far-Western Terai	4.17	4.82	0.030	4.97	4.97	5.11	5.27	5.42	5.58	5.75	5.92	6.09	6.27	6.46

LOWER + SECONDARY (6-10) TEACHERS

	85/86	90/91	TS RATIO	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Total Teacher No.	21783	24530	32	25550	26680	28484	31032	33382	35501	37499	39924	42658	45705	48830
Eastern Mountain	545	654	26	698	728	801	899	992	1079	1165	1273	1400	1544	1693
Eastern Hill	1832	1997	33	2116	2209	2409	2676	2932	3175	3419	3715	4050	4429	4833
Eastern Terai	2448	2725	48	2816	2941	3104	3345	3569	3774	3967	4193	4441	4719	5011
Central Mountain	193	481	24	498	520	554	603	648	686	720	766	823	888	951
Central Hill	1978	1720	27	1784	1862	1988	2163	2320	2459	2593	2758	2944	3152	3369
Central Terai	2511	2518	38	2538	2650	2740	2892	3013	3103	3173	3274	3393	3527	3655
Central Valley	2761	4106	23	4213	4401	4588	4865	5083	5232	5315	5395	5448	5468	5415
Western Mountain	107	124	5	122	128	130	136	139	139	139	141	144	147	149
Western Hill	4727	4852	32	5104	5331	5737	6299	6842	7371	7895	8505	9178	9936	10755
Western Terai	906	942	44	981	1024	1096	1200	1296	1378	1455	1556	1678	1815	1952
Mid-Western Mountain	498	392	14	414	433	471	524	574	619	664	720	787	864	942
Mid-Western Hill	969	1247	27	1349	1408	1568	1780	1991	2197	2409	2668	2970	3316	3687
Mid-Western Terai	768	830	40	889	928	1025	1155	1281	1399	1518	1666	1843	2045	2255
Far-Western Mountain	425	504	18	529	552	598	661	719	770	818	881	957	1042	1128
Far-Western Hill	686	918	17	939	980	1030	1105	1169	1220	1264	1324	1393	1470	1545
Far-Western Terai	429	520	37	561	586	647	730	814	899	985	1088	1207	1343	1490

LOWER + SECONDARY (6-10) SCHOOLS

	85/86	90/91	SS RATIO	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Total Schools		4070	190	4254	4443	4744	5174	5586	5977	6353	6796	7290	7846	8433
Eastern Mountain		132	128	141	147	161	179	198	216	234	256	281	309	339
Eastern Hill		372	176	396	414	448	496	545	595	645	703	766	837	917
Eastern Terai		427	306	442	462	485	521	556	591	623	659	697	740	787
Central Mountain		105	111	109	113	121	132	142	151	158	168	181	196	210
Central Hill		337	140	351	366	389	423	454	484	513	547	584	625	670
Central Terai		411	231	415	433	446	469	488	504	517	533	551	572	593
Central Valley		408	229	419	438	454	480	501	517	527	534	538	539	534
Western Mountain		25	24	25	26	26	27	28	28	28	28	29	30	30
Western Hill		806	193	849	887	953	1045	1135	1226	1316	1419	1530	1656	1794
Western Terai		172	240	179	187	201	221	238	254	268	286	309	335	361
Mid-Western Mountain		99	53	105	109	119	132	145	157	168	182	199	219	238
Mid-Western Hill		255	134	276	288	320	363	406	449	493	546	607	678	754
Mid-Western Terai		169	198	181	189	208	233	259	283	307	337	372	412	454
Far-Western Mountain		102	90	107	112	121	133	145	155	165	178	193	210	227
Far-Western Hill		164	93	168	175	184	197	209	218	226	236	249	262	276
Far-Western Terai		86	222	93	97	108	122	136	150	164	181	202	225	250

Secondary Education Cohort Reconstruction
(Grades 6-10)

NEPAL
COHORT RECONSTRUCTION
SECONDARY EDUCATION (Grades 6–10)

Transitional Rates

	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10
Repetition	0.09	0.11	0.10	0.10	0.20
Promotion	0.82	0.75	0.85	0.84	0.80
Dropout	0.09	0.14	0.05	0.06	0.00

Assumption: SLC regular student appearance rate of 80% and pass rate of 40% and SLC exempted (compartmental and exempted) student appearance rate of 80% and pass rate of 47%.

Flow of A Hypothetical Cohort

Year	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	G-10 Leavers	Regular SLC Pass	Exempted SLC Pass	Reg & Exmp SLC Pass	Retention of Cohort by Year	Dropouts by Year
1	1000									1000	90
2	90	820								910	123
3	8	164	615							787	54
4	1	25	185	523						733	44
5		3	37	209	439	351	141		141	688	15
6			6	52	263	211	84	53	137	322	3
7			1	10	97	77	31	32	63	108	
8				2	28	23	9	12	21	30	
9					7	6	2	3	6	7	
10					1	1		1		1	
Totals						669	267	100	367	4586	330

INDICATORS DERIVED FROM COHORT RECONSTRUCTION

	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Total
Pupil-Year by Grade	1099	1012	843	796	836	4586
Survival by Grade	1000	901	759	717	569	3046
Dropout by Grade	99	142	42	48		331
Repetition by Grade	99	111	84	80	167	

Percentage who reach Grade 8	75.90%
Percentage who reach Grade 10	66.88%
Percentage who reach Grade 10 without repeating	43.91%
Percentage who pass the SLC for the first time	26.70%
Percentage who pass the SLC after repeating the exam	10.04%
Total percentage who pass the SLC	36.65%

Average Duration of Study:	
Cohort	4.59
Grade 10 enrollees	5.69
SLC holders	5.95
Dropouts	2.34
Average number of grades completed by the cohort	3.05

Input-output ratio:	
Grade 10 leavers	1.37
SLC holders	2.50

Efficiency:	
Grade 10 leavers	72.89%
SLC holders	39.96%
Percentage of wastage due to dropout	25.48%
Percentage of wastage due to repetition	74.52%

Technical Notes to Annex 2 tables

To calculate the efficiency of the educational system, it is necessary to understand the flow of pupils into, through and out of a schooling cycle. Cohort reconstruction is often used to describe the flows of a given cohort of 1000 children through a cycle of education. In most countries, stock data -- number of students enrolled -- are readily available, but not the flow statistics, including repetition, promotion and dropout. If the number of repeaters is available by grade, it is possible to calculate the three other main flows -- new entrants, promotees and dropouts --, from which indicators of efficiency can be derived.

A key assumption of the reconstructed cohort method is "homogeneous behavior" by which the same promotion, repetition and dropout rates apply to all pupils enrolled in a given grade, regardless of whether or not they have previously repeated before. Another feature of the model is that cohort flow indicators are not related to any particular school year, but rather show what will happen to the cohort after all those who repeat have finally either been promoted or dropped out.

Some of the indicators that can be derived from cohort reconstruction are as follows:

Indicators of retention by grade:

- **Survival by grade**--calculated by adding the number of pupils promoted from one grade to the next in each of the years enrolled. This indicates the impact of the repetition and dropout rates on the capacity of a school system to retain pupils enrolled until the end of the cycle.
- **Dropout by grade**--calculated either by adding the dropouts of a given grade in all years or by taking the difference between the number of pupils surviving between two grades.

- **Number of graduates from the final grade**--depending on the definition of graduates, some systems consider only those who pass the school leaving examination as graduates while others include those who finish the final grade but not necessarily pass the examination.

Indicators of retention by years spent in the cycle:

- **Enrollment by years of study**--obtained by adding the enrollees in all grades in a given year.

- **Dropout by years of study**--obtained by adding the dropouts from each grade for the relevant year.

- **Graduates by years of study**--these figures show how many graduate each year after repeating how many years.

Indicators of duration of study:

- **Average duration of study for graduates**--measured by the total number of pupil-years the cohort spent at school and by average year of study of graduates (dividing the pupil-years by the

number of graduates). If Grade 10 leavers are regarded as graduates, 351 students would graduate after 5 years of study, 211 after 6 years of study and so on. The total number of pupil-years (one pupil spending one year in a grade uses one pupil-year) spent at school by the 669 Grade 10 leavers divided by the number of leavers gives average study time for the Grade 10 leavers:

$$\frac{(351x5)+(211x6)+(77x7)+(23x8)+(6x9)+(1x10)}{669} = \frac{3808}{669} = 5.69 \text{ years}$$

If SLC holders are regarded as graduates:

$$\frac{(141x5)+(137x6)+(63x7)+(21x8)+(6x9)}{367} = \frac{2190}{367} = 5.95 \text{ years}$$

- **Average duration of study for dropouts**--obtained dividing the total number of pupil-years the dropouts spent at school by the number of years dropout spent in school.

$$\frac{(90x1)+(123x2)+(54x3)+(44x4)+(15x5)+(3x6)}{330} = \frac{764}{317} = 2.34 \text{ years}$$

- **Average duration of study for cohort**--obtained dividing the total number of years the cohort spent in school by 1000.

$$\frac{4586}{1000} = 4.59$$

- **Average number of grades completed by cohort**--obtained dividing the sum of the survivors by 1000.

$$\frac{3046}{1000} = 3.05$$

Indicators of efficiency

- **Input-output ratio**--the reconstructed cohort method defines wastage as the number of pupil-years spent on repetition and dropout. The input-output ratio indicates how efficiently a school system produces a given number of graduates. Input is expressed as the number of pupil-years used by the cohort. The output is the number of graduates who complete the cycle. The ratio is obtained by dividing the number of pupil-years by the number of years the graduates would need had there been no repetition and dropout. In a perfectly efficient system -- no repetition and dropout -- the ratio would equal 1. A ratio of 2.50 means that this cohort used two and a half times the input in a system without repetition and dropout.

Input-output ratio for Grade 10 leavers:

$$\frac{4586}{669x5} = \frac{4586}{3345} = 1.37$$

Input-output ratio for SLC holders:

$$\frac{4586}{367x5} = \frac{4586}{1835} = 2.50$$

Therefore, the Nepal secondary school system needs 6.9 pupil-years (equivalent to 1.37 x 5 years required had it been an efficient system) for each student that leaves Grade 10 and 12.5 pupil-years (2.50 x 5) for each student holding an SLC.

Another way of expressing this indicator is in terms of the percentage of the total number of pupil-years wasted. In the above cases, 4586 - 3345 = 1241 pupil- years wasted, i.e. 27% of the total (for the Grade 10 leavers) and 4586 - 1835 = 2751 pupil-years wasted, i.e. 60% of the total (for SLC holders).

- **Efficiency**-- The efficiency of the secondary school system could also be expressed by the following reverse percentages obtained by dividing one by the input-output ratio:

  For Grade 10 leavers: $\frac{1}{1.37} = 72.89\%$

  For SLC holders: $\frac{1}{2.50} = 39.96\%$

- **Percentage of wastage due to dropout**--this is obtained by multiplying the dropout by grades by the year they spend in school and then divided by the total pupil-year minus the total output times the number of years of the cycle:

$$\frac{(99x1)+(142x2)+(42x3)+(48x4)}{4586-(367x5)} = \frac{701}{1835} = 25.48\%$$

- **Percentage of wastage due to repetition**--this is obtained by subtracting the percentage of wastage due to dropout from one:

  1 - 25.48 = 74.52%

Regulations of Private Schools in Nepal

(A) CONTROL

(1) **Registration and issuance of permit to a new school**

In deciding whether or not to have a new school in the district, the district education officer will consider a combination of factors:

(a) the population and geographical situation of the area;
(b) number of feeder schools and number of schools of the same level in operation in the area;
(c) regional and local development requirements;
(d) economic feasibility of the new school;
(e) possibility of local participation in the operation of the school;
(f) whether or not the opening of the new school is in accordance with the NESP; and
(g) whether or not the managing committee of the new school can mobilize adequate financial resources to run the new school.

(2) **Requirements for obtaining and maintaining a permit**

(a) The school should have minimum number of students and adequate number of teachers.
(b) Within one year of issuance of a permit, the school should mobilize adequate resources to procure land, have school building, playground, furniture, and educational materials as specified by MOEC. Boarding schools should have a hostel.
(c) The school must follow the government curriculum and use government textbooks. Reference books can be used; but they have to be selected from the list specified by the government.
(d) The school management committee should pay teachers and other staff members at rates at least equal to those of government teachers and staff members.
(e) For boarding schools, 20% of the total enrollment should be boarders in the first year; the percentage should reach 50 within seven years. The food served in such schools should meet the nutrition standards specified by the government.
(f) The school should follow the notices, directives, and decision issued by the Ministry of Education and Culture, regional education departments, and district education offices.
(g) Secondary private schools will be subject to the SLC examination.

(3) **Composition of school management committee**

The committee will have nine members: one chairman to be appointed by the district

education officer, the headmaster of the school as the secretary, one member nominated by the district education committee, one member nominated by the concerned ward of the municipality, the district education officer of his/her representative, two members nominated by the above-mentioned members from among the guardians, and two other members nominated by the above-mentioned members of the committee.

(B) INCENTIVES

(1) **Tax exemption**

Private schools are exempted from paying sales tax and custom duty on the following: bus or minibus for transporting students, projectors, typewriters, duplicating machines, mathematical instruments, science-related chemicals, apparatuses, equipments and other curriculum-related items. The quantities of these items to be exempted are based on the number of students and/or provision made in the curriculum. There is no house tax on school buildings.

(2) **Other regulations**

Private schools have an agreement with the government that they will not receive financial support from the government. The government, on the other hand, will not tax the earnings of private schools.

Source: compiled from Bajracharya (1992).

Unit Costs Of Secondary Education In Nepal

1. Two types of unit costs are considered: per-student recurrent costs and per-student capital costs.

Per-student recurrent costs of secondary education

2. Recurrent costs consist of the costs of education inputs or services that are expended in one year or less. They include "school-related" (or "institutional") recurrent costs incurred in the school and school system (such as costs of teachers, administrators, and other education personnel, school supplies, instructional materials and other teaching aids, utilities, minor repair and regular maintenance, etc.), as well as "student-related" annual spending by parents on education items other than those related to school fees (such as textbooks, uniforms, writing supplies, etc.). In turn, parental spending on secondary education (direct private costs) can be split into two parts: school-fee related spending which is given to the school or school system to support the "school-related" recurrent costs of secondary education, and non-fee related spending made directly on the students. School-related recurrent costs are costs familiar to school staff and planners. Private costs are part of the costs of schooling; the total cost of secondary schooling will be significantly underestimated if private costs are substantial.

3. For government-aided schools, school-related recurrent costs are financed partly by government regular expenditure on secondary education and partly by the school fees paid by parents. For community schools and PBS schools, school-related recurrent costs are completely financed by school fees paid by parents. For all three types of schools, student-related recurrent costs are financed completely by the parents, by definition. Table I presents estimates of per-student recurrent by types of secondary school as well as the sources of financing in 1992.

4. For each type of school, per-student total recurrent cost is broken down into per-student school-related recurrent cost and per-student school-related recurrent cost. The per-student recurrent costs were estimated as follows (all costs are in 1992 prices):

Table I: **Per-Student Recurrent Expenditure Of Secondary Education, 1992**

	Government Aided	Community	PBS*	Unit Cost Ratios Com/Gov't.	PBS/Gov't.
Per-Student Recurrent Expenditure (NRs/Student)					
Total	2,098	1,545	6,008	0.74	2.86
School-related	1,653	1,100	3,408	0.67	2.06
Student-related	445	445	2,600	1.00	5.84
Financial Sources					
Cost to Government (Nrs)	922	0	0		
As % of Total	43.9	0	0		
Cost to Parents (Nrs)	1,176	1,546	6,008		
As % of Total	56.1	100	100		

* Figures are for non-boarding students. They do not include expenditure by PBS schools on rent. Per-student recurrent expenditure for boarding students is Nrs 38,836. The average recurrent expenditure for all PBS students is Nrs 10,604 per student.

Source: Mission Estimates

(a) Per-student recurrent costs of government-aided schools

In 1992/93, an estimated Nrs 610 million in regular public expenditure (data from MOEC) will be spent on an estimated 661 thousand students in government-aided schools, or a cost of Nrs 922 per student to the government. In 1992, the average total school fee (tuition plus other school fees) is estimated to be Nrs 880 per student in grades 7-10 and Nrs 330 (non-tuition school fees) per student in grade 6, according to information provided by MOEC. These estimates of total school fees are consistent with school fee figures obtained from a visit to government and community schools during the mission. Using the distribution of secondary enrollment by grade in 1991, the average total school fee per student in secondary education (grades 6-10) is estimated to be Nrs 731. Thus, the total school-related recurrent cost is Nrs 1,653 (922 + 731) per student. Also, based on information provided by MOEC, the average cost of textbook is Nrs 120 per student. The cost of writing supplies is put at Nrs 100 per student per year and the cost of uniforms is Nrs 225 per student per year. The total student-related cost is Nrs 445 (120 + 100 + 225) per student. The total cost to the parent is Nrs 1,176 (731 + 445) per student. Finally, the per-student total recurrent cost is Nrs 2,098 (1,653 + 445) per student per year in 1992/93.

(b) Per-student recurrent costs of community schools

It is assumed that no regular expenditure of the government will be devoted to community

schools; all costs are borne by parents. The total school fee is estimated to be Nrs 1,100 per student in 1992 (according to MOEC information). The student-related cost is assumed the same as that for government-aided schools. Thus, the per-student total recurrent cost is Nrs 1,545 (1,100 + 445).

(c) Per-student recurrent costs of PBS schools

In 1992, the total school fee for a non-boarding student is Nrs 4,251 per year; the total school-related recurrent expenditure is estimated to be Nrs 3,737 (4,251 X .879) per student. The figure .879 is the actual recurrent expenditure to school fee in 1991. Since expenditure on rent is about 8.8% (1991 figure) of total recurrent expenditure of a PBS school, the non-rent school-related recurrent expenditure is Nrs 3,408 (3,737 X .912) per student. This non-rent unit recurrent cost is the appropriate unit cost to estimate because the unit recurrent costs for the other two types of schools do not contain expenditure on rent. Information from the visit to PBS schools in Kathmandu Valley indicates that textbooks cost about Nrs 750 per student per year, writing supplies cost Nrs 1,100 per student per year, and uniforms cost Nrs 750 per student per year. The total student-related recurrent cost is Nrs 2,600 per student per year and the total recurrent cost is Nrs 6,008 per student per year. Again, all the recurrent costs are financed by parents.

5. Table I shows that government-aided schools has a per-student total recurrent cost of Nrs 2,098, 43.9% of which is financed by the government. The unit recurrent cost of community schools is Nrs 1,545 and is only 74% of that for government-aided schools. In contrast, PBS schools has a unit recurrent cost of Nrs 6,008 which is 2.86 times that of government-aided schools. Table I also shows that PBS schools have more resources devoted to students in terms of both school-related resources and student-related resources.

Free Secondary Education Policy:

Projected Financial Requirements, FY93-FY02

1. This Annex presents estimates of financial requirements for several possibilities of the development of secondary education during the period 1992/93-2001/02. **The cost figures are in 1992 constant prices.** More details of the financial projection, including the key assumptions and parameters, are given in the Note at the end of this Annex.

CASE 1 (BASE CASE, CONDITIONS AS OF 1992):

2. In this case, the conditions as of 1992 are presumed to prevail in the ten-year period. In particular, unit costs are the same as those in 1992 (in real terms), the government does not charge tuition on Grade-6 students in government-aided schools and no subsidies are given to community schools, the projected enrollments are based on the assumption of a slow improvement in the internal efficiency of primary and secondary education (see Annex 1 on enrollment projection), and the distribution of enrollment by school type is constant at that of 1991 (roughly 78% of students in Government-aided schools, 15% in community schools and 7% in PBS schools).

3. The projected recurrent costs for CASE 1 are shown in Table I. Part A of the table gives the projected enrollment by type of school. Part B of the table gives projected recurrent costs for all of secondary education and for each of the three types of secondary schools. In particular, the total recurrent cost of secondary education will increase from Nrs. 2,160 million in 1992/93 to Nrs. 4,026 million in 2001/02; the 86% increase in the recurrent cost over the ten-year period is due completely to the increase in the total projected enrollment in the same time period. The total recurrent cost is Nrs. 12,471 million for the Eighth-Plan period and Nrs. 17,554 million for the Ninth-Plan period.

4. Part C of Table I shows the costs to the government and to parents (including local community). For secondary education as a whole, the government has to support 28-29% of the total recurrent cost for each of the ten years; private financing, as indicated before (Chapter IV), is the major source of recurrent resources to secondary education. In contrast, the government has to support a higher share (44.5%) of the total recurrent cost of government-aided schools. The cost to the Government will be Nrs. 3,590 million in the Eighth-Plan period and Nrs. 4,990 million in the Ninth-Plan period. Since government recurrent expenditure is directed at government-aided schools only, both community schools and PBS schools are completely financed by private sources.

5. Table II presents estimates of new requirements in capital costs of secondary education to accommodate expanded enrollments in this subsector. Note that the table does not present estimates of capital requirements for upgrading existing school facilities. Many existing schools are reported to be in poor physical conditions; they also lack equipment and laboratories. But there is no information on the current stock of capital inputs and the state of their conditions. The cost of upgrading, in terms of bringing the existing stock to some standards for physical facilities, cannot be estimated with some degree of accuracy.

6. Part A of Table II shows the new enrollments by type of school for each of the ten years. New enrollments can be accommodated into one or two ways: through construction of additional classrooms, and through the construction of new schools. Part B shows the requirements in new capital investment, assuming that all the new enrollments are accommodated in new classrooms (the less expensive and more probable option for Nepal). Part C shows the requirements based on the construction of new schools. In practice, new enrollments will be accommodated in both new classrooms and new schools. Thus, the capital requirements will be somewhere in between those given in Parts B and C.

7. Since the great majority of PBS schools are operated on rented properties (as of 1992), the additional students for PBS schools will probably be accommodated in additional rented properties (and not in new school buildings), unless there is a change in government policy to encourage construction of PBS schools (Chapter IV). Thus, Parts B and C also provide estimates of the annualized capital-cost requirements (such as rents for school building per year) relative to 1992 for PBS schools.

8. The new capital-cost requirements are estimated on unit capital costs based on the experiences and standards of some externally-funded development projects in secondary education (see discussion in the section on unit costs). These unit capital costs are probably well above the actual per-student capital expenditure on the great majority of existing secondary schools, especially government-aided and community schools. Thus, the projected capital-cost requirements are likely to be much larger than the actual capital expenditure in the next ten years. However, it does not mean that the projected requirements are too high, rather it means that secondary schools are under-capitalized.

9. Table II assumes that all capital investment will be supported by private financing. This is certainly the case for PBS schools. As indicated before, some local governments may provide some in-kind resources to community and government-aided schools through non-education projects for school construction, but the amount of resources is very small and information on such subsidies is not available. There is uncertainty in the role of the government in the financing of capital investment for government-aided schools in the future. The buildings of government-aided schools were primarily built with contributions from the local community (information on government-financed school construction is not available). In the past several years, the government, through the ADB-supported secondary science-education project, has provided these schools with some science equipment and demonstration laboratories (but the magnitude of external fund is very small compared to the projected requirement). The amount of government capital spending on government-aided schools in the next ten years depends on the government's decision regarding externally-funded secondary projects. But in light of the low priority accorded to secondary education, the government's contribution will probably be rather insignificant compared to the capital-cost requirements for government-aided schools (say, less than 5%).[1]

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[1] Nevertheless, Table II can be easily altered to provide estimates of the costs of capital investment to the government under other assumptions about the extent of government financing.

10. Finally, Table III gives the sum of the recurrent and capital cost requirements for the 1992/93-2001/02 period. It assumes that new classrooms are used to accommodate new enrollments. Again, the table shows the importance of private financing for the expansion of secondary education.

CASE 2 (NO FREE SECONDARY EDUCATION):

11. This case is similar to CASE 1 except that there is no free secondary education for students in government-aided schools. Compared to Case 1, it means that Grade 6 students in government-aided schools have to pay tuition and that parents bear a larger proportion of the recurrent costs for government-aided schools. There is no change in the total recurrent cost, total capital, and total cost (recurrent plus capital) required for each of the three types of schools. The results are shown in Tables IV-VI. The tables show that, without free secondary education, the projected enrollment in government-aided schools will cost the government Nrs. 2, 932 million during the Eighth-Plan period and Nrs. 4,104 million during the Ninth-Plan period. Thus compared to CASE 1, CASE 2 costs Nrs. 657 million and Nrs. 886 million less in the two periods respectively. In other words, it costs the government about 22% more in the ten-year period to fully compensate government-aided schools for the loss in tuition revenue from Grade 6 students. CASE 2 is a financially more feasible scenario than CASE 1 but it is not a very probable scenario because of the political difficulty for the government to charge tuition again on Grade 6 students in government-aided schools.

CASES INVOLVING FREE SECONDARY EDUCATION:

12. To provide an illustration of the total cost of the policy to the government under different coverage and timing schemes, estimates are made for eight scenarios and the current (1992) situation (see Table VII). Note that the current situation and scenarios 2, 4, 6, 7, and 8 cover government-aided schools only; scenarios 1, 3, and 5 cover both government-aided and community schools. Scenarios 4-8 are "full-graded" plans in that they cover all five secondary grades; in contrast, the current situation and scenarios 1-3 are "partial" plans in that they cover only lower-secondary grades. Scenarios 1-6 and 8 are also "phased" plans in that the policy becomes effective for different grades at different times. Scenario 7 is almost an immediate implementation of the policy. Finally, scenario 8 considers preferential treatment of female students. Part A of Table VIII presents estimates of the cost to the government of the current situation and scenarios 1-8 (see Note at the end of this Annex for details on computation). It demonstrates the large variations in the costs of the different scenarios to the government. For example, the current situation would cost the Government Nrs. 657 million and Nrs. 886 million in the Eighth-Plan period and the Ninth-Plan period respectively; the corresponding figures for scenario 7 (the fastest implementation) are Nrs. 1,865 million and Nrs. 2,967 million.

13. The total (recurrent) cost of secondary education to the Government consists of the cost of the free secondary education policy and the regular cost of the support for teacher salaries of government-aided schools. Part B of Table VIII shows the total-cost figures associated with the different scenarios. It can be seen that, the cost of the free secondary-education policy to the government is quite significant compared to the total cost of secondary education to the government.

The increase in the total cost to the government in Part B reflects the effects of enrollment growth and the free secondary-education policy. Part C of Table VIII shows the annual growth rate (in real terms) in the requirement cost of secondary education to the government. All the scenarios require rather high growth rates in government resources to secondary education.

CASE 3 (SCENARIO 4 OF FREE SECONDARY EDUCATION: "GRADES 6-7, PLUS REMOTE DISTRICTS"):

14. In this case, only government-aided schools are covered. Grade 6 students pay no tuition beginning in 1992/93, Grade 7 students in 1994/95, and grades 6-10 students in 18 remote districts in 1997/98. The projected recurrent costs, capital costs, and total costs of secondary education as well as their financing are given respectively in Tables IX, X, and XI. Part C of Table IX shows that the government is required to share 31.7% and 33.5% of the total recurrent cost of secondary education respectively in the Eighth-Plan and Ninth-Plan periods. For government-aided schools, the government's share will be 49.2% and 52.2% respectively in the two plan periods. These figures are obviously higher than the corresponding ones for CASE 1 shown in Table I (Part C).

CASE 4 (SCENARIO 6 OF FREE SECONDARY EDUCATION, "ALL GRADES, PHASED"):

15. In this case, only government-aided schools are included. All five grades of secondary education are covered, but in a gradually phased manner (grade 6 in 1992/93, grade 7 in 1994/95, grade 8 in 1997/98, grade 9 in 1999/2000, and grade 10 in 2001/02). The projected recurrent costs, capital costs, and total costs of secondary education as well as their financing are given respectively in Tables XII-XIV. Since this plan is more expensive than the plan in scenario 4, the government will have to bear an even larger share of the costs of secondary education (see Part C in Table XII). For government-aided schools, the Government's share will be 49.2% and 58.6% respectively in the Eighth-Plan and Ninth-Plan periods.

Note to Annex 5

This Note provides details on the projection of financial requirements in the period 1992/93-2001/02, as shown in Tables I-VI, and IX-XIV.

(1) Enrollments by type of school by grades

First enrollments by grade level for the entire secondary-education system were projected, using the "slow improvement in efficiency" scenario (see Annex 1). Then, for each grade, enrollments were distributed between the three types of schools, using the distribution pattern in 1991. In 1991, the total private share was .1101 in Grade 6, .1185 in Grade 7, .3305 in Grade 8, .3167 in Grade 9, and .2917 in Grade 10. Among private schools, community schools account for 70% of the total private enrollment. See Table XV for the resultant projected enrollments by school type and by grade.

(2) Projection of recurrent costs

Recurrent costs by sources of financing were first projected for each type of school, using the unit-cost information in Table I, Annex 4. For a given year, the total recurrent cost is equal to the product of enrollment and the corresponding unit cost. Note that Table I, Annex 4 gives unit recurrent costs for the average student in Grades 6-10. For both community and PBS schools, such figures were directly applicable. For government-aided schools, information on tuition cost by grade (Nrs. 550 per student per year) was also used because of the free secondary education policy. The per-student recurrent cost to the government in 1992/93 was budgeted at Nrs. 922; this cost would have been Nrs.759 for the same year if there had been no free secondary education. Note that different estimates of the per-student recurrent cost to the government were used over the ten-year period (except the no free secondary-education scenario) because of changing enrollments and different scenarios for the free secondary-education policy. But the total recurrent cost (sum of government and private costs) for each of the three types of schools was assumed to be constant over time (as a proxy for constant quality). Recurrent costs by type of school were then summed to obtain the recurrent costs for the secondary-education system.

(3) Projection of capital costs

Capital costs for expansion were first projected for each type of school. The capital cost per student place is Nrs. 23,100 (annualized cost is Nrs. 3,566) through the construction of new schools in 1992/93. There is no information on unit capital cost of new classrooms. In this projection, it was assumed that the unit capital cost of new classrooms was half that of new schools. The same unit capital costs were used for all three types of schools. Capital costs for expansion were equal to the product of new enrollments and unit costs. All capital costs were assumed to be financed by private sources. Capital costs for the system were equal to the sum of capital costs for the three types of schools.

(4) Projection of total costs

Total costs were equal to the sum of recurrent costs and capital costs.

(5) Costs of free secondary-education policy

The key assumption is that the costs of the policy equal to the loss in tuition revenue. In other words, the government will compensate schools fully for their loss in tuition. The tuition is estimated to be Nrs. 550 per student per year in government-aided schools and Nrs. 600 per student per year in community schools. For scenarios 4 and 5, information on the share of government-aided students in the 18 remote districts is needed. The 18 remote districts include all the 16 mountain regions plus Dhading and Gorkha. Using information on government enrollment by grade by district in 1991 from MOEC, it is found that the share was .0909 in Grade 8, .0887 in Grade 9, and .0848 in Grade 10. For scenario 8, information on female enrollment in 1991 was used. The share of female enrollment in government-aided schools was .2862 in Grade 8, .2675 in Grade 9, and .2726 in Grade 10.

(6) Parameters

See Table XVI for a list of the parameters used.

Table I: Projected requirements in recurrent costs of grades 6-10, 1992/93-2001/02
Case 1 (base case), 1992 prices

Key assumptions:
(1) Unit recurrent costs same as those in 1992, constant 1992 prices
(2) Distribution of enrollment by school type same as that in 1991
(3) Distribution of financing by source same as that in 1992
(4) No tuition for grade-6 students in government-aided schools

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993-97	9th Plan 1998-02
(A) Enrollment (thousand)												
All Sch.	844.0	898.0	978.0	1051.0	1123.0	1191.0	1269.0	1357.0	1477.0	1579.0	4894.0	6873.0
Govt.	660.3	706.9	773.2	830.8	883.3	933.0	994.1	1065.6	1159.4	1242.7	3854.6	5394.8
Commu	128.6	133.7	143.4	154.1	167.8	180.6	192.4	204.0	222.3	235.4	727.6	1034.8
PBS	55.1	57.3	61.4	66.1	71.9	77.4	82.5	87.4	95.3	100.9	311.8	443.5
(B) Total recurrent-cost requirements (NRs million)												
All Sch.	2160.4	2289.1	2485.9	2671.6	2864.2	3046.0	3245.4	3464.9	3772.2	4025.8	12471.1	17554.3
Govt.	1377.2	1474.5	1612.7	1732.9	1842.4	1945.9	2073.4	2222.6	2418.2	2591.9	8039.6	11252.1
Commu	198.8	206.8	221.6	238.3	259.4	279.3	297.5	315.3	343.7	364.0	1124.9	1599.7
PBS	584.4	607.8	651.5	700.5	762.4	820.9	874.5	926.9	1010.3	1069.9	3306.6	4702.5
(C) Cost requirements by source (NRs million)												
All Sch.												
Public	610.0	661.1	725.7	775.4	817.3	860.0	919.2	988.8	1074.9	1147.5	3589.7	4990.4
Private	1550.4	1627.9	1760.1	1896.2	2046.9	2186.0	2326.2	2476.1	2697.4	2878.3	8881.5	12563.9
% Publi	28.2	28.9	29.2	29.0	28.5	28.2	28.3	28.5	28.5	28.5	28.8	28.4
Govt. Sch.												
Public	610.0	661.1	725.7	775.4	817.3	860.0	919.2	988.8	1074.9	1147.5	3589.7	4990.4
Private	767.2	813.4	886.9	957.4	1025.0	1085.9	1154.2	1233.8	1343.4	1444.4	4450.0	6261.7
% Publi	44.3	44.8	45.0	44.7	44.4	44.2	44.3	44.5	44.4	44.3	44.6	44.4
Commu.Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	198.8	206.8	221.6	238.3	259.4	279.3	297.5	315.3	343.7	364.0	1124.9	1599.7
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PBS Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	584.4	607.8	651.5	700.5	762.4	820.9	874.5	926.9	1010.3	1069.9	3306.6	4702.5
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table II: Projected new requirements in capital costs of grades 6–10, 1992/93–2001/02
Case 1 (base case), 1992 prices

Key assumptions:
(1) Same capital cost per student place (NRs 23,100) for all types of schools
(2) Distribution of enrollment by type of school same as that in 1991
(3) No-upgrading of existing capital inputs as of 1992/93
(4) Capital costs are privately financed

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993–97	9th Plan 1998–02
(A) New enrollment thousand)												
All Sch.	34.2	54.0	80.0	73.0	72.0	68.0	78.0	88.0	120.0	102.0	313.2	456.0
Govt.	25.8	46.6	66.3	57.6	52.5	49.6	61.1	71.5	93.8	83.3	248.8	359.4
Commu	5.9	5.2	9.6	10.8	13.6	12.9	11.8	11.5	18.3	13.1	45.1	67.7
PBS	2.5	2.2	4.1	4.6	5.8	5.5	5.1	4.9	7.9	5.6	19.3	29.0
(B) Total new capital–cost requirements (through construction of new classrooms) (NRs million)												
All Sch.	395.0	623.7	924.0	843.2	831.6	785.4	900.9	1016.4	1386.0	1178.1	3617.5	5266.8
Govt.	298.0	538.6	765.2	665.5	606.6	573.3	706.2	826.0	1083.4	961.7	2873.9	4150.5
Commu	68.1	59.6	111.2	124.4	157.5	148.5	136.3	133.3	211.8	151.5	520.7	781.4
PBS	28.9	25.5	47.6	53.3	67.5	63.6	58.4	57.1	90.8	64.9	222.8	334.9
PBS Annualiz Capital Cost	4.5	8.4	15.8	24.0	34.4	44.2	53.2	62.1	76.1	86.1	87.0	321.7
(C) Total new capital–cost requirements (through construction of new schools) (NRs million)												
All Sch.	790.0	1247.4	1848.0	1686.3	1663.2	1570.8	1801.8	2032.8	2772.0	2356.2	7234.9	10533.6
Govt.	596.0	1077.2	1530.4	1331.0	1213.2	1146.5	1412.4	1652.0	2166.8	1923.4	5747.8	8301.1
Commu	136.3	119.1	222.3	248.7	315.0	297.0	272.6	266.6	423.7	303.0	1041.5	1562.8
PBS	57.8	51.1	95.3	106.6	135.0	127.3	116.8	114.2	181.6	129.8	445.7	669.8
PBS Annualiz Capital Cost	8.9	16.8	31.5	48.0	68.8	88.5	106.5	124.1	152.1	172.2	174.0	643.4

Table III: Projected requirements in total costs (recurrent plus capital) for secondary education, 1992/93-2001/02
Case 1 (base case), 1992 prices

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993-97	9th Plan 1998-02
(A) Total-cost requirements (NRs million)												
All Sch.	2555.4	2912.8	3409.9	3514.8	3695.8	3831.4	4146.3	4481.3	5158.2	5203.9	16088.6	22821.1
Govt.	1675.2	2013.1	2377.9	2398.3	2449.0	2519.2	2779.6	3048.6	3501.6	3553.6	10913.5	15402.7
Commu	266.9	266.3	332.8	362.7	416.9	427.8	433.8	448.6	555.5	515.4	1645.6	2381.1
PBS	613.2	633.3	699.2	753.8	829.9	884.5	932.9	984.1	1101.1	1134.8	3529.5	5037.4
(B) Cost requirements by source												
All Sch.												
Public	610.0	661.1	725.7	775.4	817.3	860.0	919.2	988.8	1074.9	1147.5	3589.7	4990.4
Private	1945.4	2251.6	2684.1	2739.3	2878.5	2971.4	3227.1	3492.5	4083.4	4056.4	12498.9	17830.7
% Publi	23.9	22.7	21.3	22.1	22.1	22.4	22.2	22.1	20.8	22.1	22.3	21.9
Govt. Sch.												
Public	610.0	661.1	725.7	775.4	817.3	860.0	919.2	988.8	1074.9	1147.5	3589.7	4990.4
Private	1065.2	1352.0	1652.1	1622.9	1631.6	1659.2	1860.4	2059.8	2426.8	2406.1	7323.9	10412.2
% Publi	36.4	32.8	30.5	32.3	33.4	34.1	33.1	32.4	30.7	32.3	32.9	32.4
Commu.Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	266.9	266.3	332.8	362.7	416.9	427.8	433.8	448.6	555.5	515.4	1645.6	2381.1
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PBS Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	613.2	633.3	699.2	753.8	829.9	884.5	932.9	984.1	1101.1	1134.8	3529.5	5037.4
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table IV: Projected requirements in recurrent costs of grades 6-10, 1992/93-2001/02
Case 2 (no free secondary education), 1992 prices

Key assumptions:
(1) Unit recurrent costs same as those in 1992, constant 1992 prices
(2) Distribution of enrollment by school type same as that in 1991
(3) Distribution of financing by source same as that in 1992
(4) No free secondary education policy

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993-97	9th Plan 1998-02
(A) Enrollment (thousand)												
All Sch.	844.0	898.0	978.0	1051.0	1123.0	1191.0	1269.0	1357.0	1477.0	1579.0	4894.0	6873.0
Govt.	660.3	706.9	773.2	830.8	883.3	933.0	994.1	1065.6	1159.4	1242.7	3854.6	5394.8
Commu	128.6	133.7	143.4	154.1	167.8	180.6	192.4	204.0	222.3	235.4	727.6	1034.8
PBS	55.1	57.3	61.4	66.1	71.9	77.4	82.5	87.4	95.3	100.9	311.8	443.5
(B) Total recurrent-cost requirements (NRs million)												
All Sch.	2160.4	2289.1	2485.9	2671.6	2864.2	3046.0	3245.4	3464.9	3772.2	4025.8	12471.1	17554.3
Govt.	1377.2	1474.5	1612.7	1732.9	1842.4	1945.9	2073.4	2222.6	2418.2	2591.9	8039.6	11252.1
Commu	198.8	206.8	221.6	238.3	259.4	279.3	297.5	315.3	343.7	364.0	1124.9	1599.7
PBS	584.4	607.8	651.5	700.5	762.4	820.9	874.5	926.9	1010.3	1069.9	3306.6	4702.5
(C) Cost requirements by source (NRs million)												
All Sch.												
Public	502.3	537.8	588.2	632.0	672.0	709.7	756.3	810.7	882.0	945.4	2932.3	4104.0
Private	1658.1	1751.3	1897.7	2039.6	2192.2	2336.3	2489.2	2654.2	2890.2	3080.4	9538.8	13450.3
% Publi	23.3	23.5	23.7	23.7	23.5	23.3	23.3	23.4	23.4	23.5	23.5	23.4
Govt. Sch.												
Public	502.3	537.8	588.2	632.0	672.0	709.7	756.3	810.7	882.0	945.4	2932.3	4104.0
Private	874.9	936.7	1024.5	1100.8	1170.4	1236.2	1317.2	1411.9	1536.2	1646.6	5107.3	7148.1
% Publi	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5
Commu.Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	198.8	206.8	221.6	238.3	259.4	279.3	297.5	315.3	343.7	364.0	1124.9	1599.7
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PBS Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	584.4	607.8	651.5	700.5	762.4	820.9	874.5	926.9	1010.3	1069.9	3306.6	4702.5
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table V: Projected new requirements in capital costs of grades 6-10, 1992/93-2001/02
Case 2 (no free secondary education), 1992 prices

Key assumptions:
(1) Same capital cost per student place (NRs 23,100) for all types of schools
(2) Distribution of enrollment by type of school same as that in 1991
(3) No-upgrading of existing capital inputs as of 1992/93
(4) Capital costs are privately financed

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993-97	9th Plan 1998-02
(A) New enrollment thousand)												
All Sch.	34.2	54.0	80.0	73.0	72.0	68.0	78.0	88.0	120.0	102.0	313.2	456.0
Govt.	25.8	46.6	66.3	57.6	52.5	49.6	61.1	71.5	93.8	83.3	248.8	359.4
Commu	5.9	5.2	9.6	10.8	13.6	12.9	11.8	11.5	18.3	13.1	45.0	67.7
PBS	2.5	2.2	4.1	4.6	5.8	5.5	5.1	4.9	7.9	5.6	19.3	29.0
(B) Total new capital-cost requirements (through construction of new classrooms) (NRs million)												
All Sch.	394.8	623.7	924.0	843.2	831.6	785.4	900.9	1016.4	1386.0	1178.1	3617.2	5266.8
Govt.	298.1	538.6	765.2	665.5	606.6	573.3	706.2	826.0	1083.4	961.7	2874.0	4150.5
Commu	67.6	59.6	111.2	124.4	157.5	148.5	136.3	133.3	211.8	151.5	520.2	781.4
PBS	29.0	25.5	47.6	53.3	67.5	63.6	58.4	57.1	90.8	64.9	223.0	334.9
PBS Annualiz Capital Cost	4.5	8.4	15.8	24.0	34.4	44.2	53.3	62.1	76.1	86.1	87.1	321.8
(C) Total new capital-cost requirements (through construction of new schools) (NRs million)												
All Sch.	789.6	1247.4	1848.0	1686.3	1663.2	1570.8	1801.8	2032.8	2772.0	2356.2	7234.5	10533.6
Govt.	596.3	1077.2	1530.4	1331.0	1213.2	1146.5	1412.4	1652.0	2166.8	1923.4	5748.1	8301.1
Commu	135.3	119.1	222.3	249.7	315.0	297.0	272.6	266.6	423.7	303.0	1040.5	1562.8
PBS	58.0	51.1	95.3	106.6	135.0	127.3	116.8	114.2	181.6	129.8	445.9	669.8
PBS Annualiz Capital Cost	9.0	16.8	31.5	48.0	68.8	88.5	106.5	124.2	152.2	172.2	174.2	643.6

Table VI: Projected requirements in total costs (recurrent plus capital) for secondary education, 1992/93-2001/02
Case 2 (no free secondary education), 1992 prices

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993-97	9th Plan 1998-02
(A) Total-cost requirements (NRs million)												
All Sch.	2555.2	2912.8	3409.9	3514.8	3695.8	3831.4	4146.3	4481.3	5158.2	5203.9	16088.3	22821.1
Govt.	1675.4	2013.1	2377.9	2398.3	2449.0	2519.2	2779.6	3048.6	3501.6	3553.6	10913.7	15402.7
Commu	266.4	266.3	332.8	362.7	416.9	427.8	433.8	448.6	555.5	515.4	1645.1	2381.1
PBS	613.4	633.3	699.2	753.8	829.9	884.5	932.9	984.1	1101.1	1134.8	3529.6	5037.4
(B) Cost requirements by source												
All Sch.												
Public	502.3	537.8	588.2	632.0	672.0	709.7	756.3	810.7	882.0	945.4	2932.3	4104.0
Private	2052.8	2375.0	2821.7	2882.7	3023.8	3121.7	3390.1	3670.6	4276.2	4258.5	13156.0	18717.1
% Publi	19.7	18.5	17.2	18.0	18.2	18.5	18.2	18.1	17.1	18.2	18.2	18.0
Govt. Sch.												
Public	502.3	537.8	588.2	632.0	672.0	709.7	756.3	810.7	882.0	945.4	2932.3	4104.0
Private	1173.1	1475.3	1789.7	1766.3	1777.0	1809.4	2023.4	2237.9	2619.6	2608.3	7981.3	11298.6
% Publi	30.0	26.7	24.7	26.4	27.4	28.2	27.2	26.6	25.2	26.6	26.9	26.6
Commu.Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	266.4	266.3	332.8	362.7	416.9	427.8	433.8	448.6	555.5	515.4	1645.1	2381.1
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PBS Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	613.4	633.3	699.2	753.8	829.9	884.5	932.9	984.1	1101.1	1134.8	3529.6	5037.4
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table VII: Description of alternative scenarios of the implementation of the free secondary education policy

Current situation:	No tuition for grade 6 students in government-aided schools, beginning 1992/93
Scenario 1:	No tuition for grade 6 students in government-aided schools, beginning 1992/93 And no tuition for grade 6 students in community schools, beginning 1993/94
Scenario 2:	No tuition for grade 6 students in government-aided schools, beginning 1992/93 No tuition for grade 7 students in government-aided schools, beginning 1994/95
Scenario 3:	No tuition for grade 6 students in government-aided schools, beginning 1992/93 No tuition for grade 6 students in community schools, beginning 1993/94 No tuition for grade 7 students in government-aided schools, beginning in 1994/95 No tuition for grade 7 students in community schools, beginning 1994/95
Scenario 4:	No tuition for grade 6 students in government-aided schools, beginning 1992/93 No tuition for grade 7 students in government-aided schools, beginning 1994/95 No tuition for grades 8-10 students in government-aided schools in the 18 remote districts, beginning 1997/98
Scenario 5:	No tuition for grade 6 students in government-aided schools, beginning 1992/93 No tuition for grade 6 students in community schools, beginning 1993/94 No tuition for grade 7 students in government-aided schools, beginning in 1994/95 No tuition for grade 7 students in community schools, beginning 1994/95 No tuition for grades 8-10 students in government-aided schools in the 18 remote districts, beginning 1997/98
Scenario 6:	No tuition for grade 6 students in government-aided schools, beginning 1992/93 No tuition for grade 7 students in government-aided schools, beginning 1994/95 No tuition for grade 8 students in government-aided schools, beginning 1997/98 No tuition for grade 9 students in government-aided schools, beginning 1999/2000 No tuition for grade 10 students in government-aided schools, beginning 2001/2002
Scenario 7:	No tuition for grade 6 students in government-aided schools, beginning 1992/93 No tuition for grades 7-10 students in government-aided schools, beginning 1993/94
Scenario 8:	No tuition for grade 6 students in government-aided schools, beginning 1992/93 No tuition for grade 7 students in government-aided schools, beginning 1994/95 No tuition for female students in grades 8-10 in government-aided schools, beginning 1997/98

Table VIII: Costs of free secondary education to government, alternative scenarios

(A) Cost to government of alternative scenarios of free secondary education
(NRs million, 1992 prices)

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	1993-97	1998-02
Current	107.7	123.3	137.5	143.4	145.4	150.3	163.0	178.2	192.8	202.1	657.3	886.4
Scenario 1	107.7	135.0	150.5	157.0	159.1	164.5	178.4	195.0	211.1	221.2	709.3	970.1
Scenario 2	107.7	123.3	248.6	268.0	276.3	283.1	300.7	327.5	356.7	389.3	1023.9	1657.3
Scenario 3	107.7	135.0	273.0	294.3	303.4	310.9	330.2	359.6	391.8	427.6	1113.4	1820.1
Scenario 4	107.7	123.3	248.6	268.0	276.3	303.4	322.4	350.3	381.5	415.2	1023.9	1772.8
Scenario 5	107.7	135.0	273.0	294.3	303.4	331.2	351.9	382.4	416.6	453.6	1113.4	1935.7
Scenario 6	107.7	123.3	248.6	268.0	276.3	366.7	386.5	500.4	548.5	683.5	1023.9	2485.5
Scenario 7	107.7	388.8	425.3	456.9	485.8	513.1	546.8	586.1	637.7	683.5	1864.5	2967.1
Scenario 8	107.7	123.3	248.6	268.0	276.3	346.6	368.5	398.8	434.3	470.5	1023.9	2018.6

(B) Total recurrent cost of secondary education to government, alternative scenarios
(NRs million, 1992 prices)

No free ed. policy	502.3	537.8	588.2	632.0	672.0	709.7	756.3	810.7	882.0	945.4	2932.3	4104.0
Current	610.0	661.1	725.7	775.4	817.3	860.0	919.2	988.8	1074.9	1147.5	3589.7	4990.4
Scenario 1	610.0	672.8	738.7	789.0	831.1	874.2	934.6	1005.6	1093.1	1166.6	3641.6	5074.2
Scenario 2	610.0	661.1	836.8	900.0	948.3	992.8	1056.9	1138.1	1238.7	1334.6	3956.2	5761.3
Scenario 3	610.0	672.8	861.1	926.4	975.4	1020.7	1086.5	1170.3	1273.8	1372.9	4045.7	5924.2
Scenario 4	610.0	661.1	836.8	900.0	948.3	1013.1	1078.6	1160.9	1263.5	1360.6	3956.2	5876.9
Scenario 5	610.0	672.8	861.1	926.4	975.4	1041.0	1108.2	1193.1	1298.6	1398.9	4045.7	6039.7
Scenario 6	610.0	661.1	836.8	900.0	948.3	1076.4	1142.7	1311.0	1430.5	1628.8	3956.2	6589.5
Scenario 7	610.0	926.6	1013.5	1089.0	1157.8	1222.9	1303.0	1396.7	1519.7	1628.8	4796.9	7071.2
Scenario 8	610.0	661.1	836.8	900.0	948.3	1056.3	1124.8	1209.4	1316.3	1415.8	3956.2	6122.6

(C) Average rate of growth in government expenditure on secondary education needed for alternative scenarios

										Average 1993-97	Average 1998-02
Current	8.4	9.8	6.8	5.4	5.2	6.9	7.6	8.7	6.8	7.6	7.0
Scenario 1	10.3	9.8	6.8	5.3	5.2	6.9	7.6	8.7	6.7	8.1	7.0
Scenario 2	8.4	26.6	7.6	5.4	4.7	6.5	7.7	8.8	7.7	12.0	7.1
Scenario 3	10.3	28.0	7.6	5.3	4.6	6.4	7.7	8.8	7.8	12.8	7.1
Scenario 4	8.4	26.6	7.6	5.4	6.8	6.5	7.6	8.8	7.7	12.0	7.5
Scenario 5	10.3	28.0	7.6	5.3	6.7	6.5	7.7	8.8	7.7	12.8	7.5
Scenario 6	8.4	26.6	7.6	5.4	13.5	6.2	14.7	9.1	13.9	12.0	11.5
Scenario 7	51.9	9.4	7.5	6.3	5.6	6.6	7.2	8.8	7.2	18.8	7.1
Scenario 8	8.4	26.6	7.6	5.4	11.4	6.5	7.5	8.8	7.6	12.0	8.4

Table IX: Projected requirements in recurrent costs of grades 6-10, 1992/93-2001/02
Case 3 (Free for grades 6 & 7 plus "remote"), 1992 prices

Key assumptions:
(1) Unit recurrent costs same as those in 1992, constant 1992 prices
(2) Distribution of enrollment by school type same as that in 1991
(3) Distribution of financing by source same as that in 1992
(4) For government-aided schools, no tuition for all grades 6 & 7 students plus grades 8-10 students in 18 remote districts

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993-97	9th Plan 1998-02
(A) Enrollment (thousand)												
All Sch.	844.0	898.0	978.0	1051.0	1123.0	1191.0	1269.0	1357.0	1477.0	1579.0	4894.0	6873.0
Govt.	660.3	706.9	773.2	830.8	883.3	933.0	994.1	1065.6	1159.4	1242.7	3854.6	5394.8
Commu	128.6	133.7	143.4	154.1	167.8	180.6	192.4	204.0	222.3	235.4	727.6	1034.8
PBS	55.1	57.3	61.4	66.1	71.9	77.4	82.5	87.4	95.3	100.9	311.8	443.5
(B) Total recurrent-cost requirements (NRs million)												
All Sch.	2160.4	2289.1	2485.9	2671.6	2864.2	3046.0	3245.4	3464.9	3772.2	4025.8	12471.1	17554.3
Govt.	1377.2	1474.5	1612.7	1732.9	1842.4	1945.9	2073.4	2222.6	2418.2	2591.9	8039.6	11252.1
Commu	198.8	206.8	221.6	238.3	259.4	279.3	297.5	315.3	343.7	364.0	1124.9	1599.7
PBS	584.4	607.8	651.5	700.5	762.4	820.9	874.5	926.9	1010.3	1069.9	3306.6	4702.5
(C) Cost requirements by source (NRs million)												
All Sch.												
Public	610.0	661.1	836.8	900.0	948.3	1013.1	1078.6	1160.9	1263.5	1360.6	3956.2	5876.9
Private	1550.4	1627.9	1649.1	1771.6	1916.0	2032.9	2166.8	2303.9	2508.7	2665.2	8514.9	11677.5
% Publi	28.2	28.9	33.7	33.7	33.1	33.3	33.2	33.5	33.5	33.8	31.7	33.5
Govt. Sch.												
Public	610.0	661.1	836.8	900.0	948.3	1013.1	1078.6	1160.9	1263.5	1360.6	3956.2	5876.9
Private	767.2	813.4	775.9	832.8	894.1	932.8	994.8	1061.7	1154.7	1231.3	4083.5	5375.3
% Publi	44.3	44.8	51.9	51.9	51.5	52.1	52.0	52.2	52.2	52.5	49.2	52.2
Commu.Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	198.8	206.8	221.6	238.3	259.4	279.3	297.5	315.3	343.7	364.0	1124.9	1599.7
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PBS Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	584.4	607.8	651.5	700.5	762.4	820.9	874.5	926.9	1010.3	1069.9	3306.6	4702.5
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table X: Projected new requirements in capital costs of grades 6-10, 1992/93-2001/02
Case 3 (Free for grades 6 & 7 plus "remote"), 1992 prices

Key assumptions:
(1) Same capital cost per student place (NRs 23,100) for all types of schools
(2) Distribution of enrollment by type of school same as that in 1991
(3) No-upgrading of existing capital inputs as of 1992/93
(4) Capital costs are privately financed

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993-97	9th Plan 1998-02
(A) New enrollment thousand)												
All Sch.	34.2	54.0	80.0	73.0	72.0	68.0	78.0	88.0	120.0	102.0	313.2	456.0
Govt.	25.8	46.6	66.3	57.6	52.5	49.6	61.1	71.5	93.8	83.3	248.8	359.4
Commu	5.9	5.2	9.6	10.8	13.6	12.9	11.8	11.5	18.3	13.1	45.0	67.7
PBS	2.5	2.2	4.1	4.6	5.8	5.5	5.1	4.9	7.9	5.6	19.3	29.0
(B) Total new capital-cost requirements (through construction of new classrooms) (NRs million)												
All Sch.	394.8	623.7	924.0	843.2	831.6	785.4	900.9	1016.4	1386.0	1178.1	3617.2	5266.8
Govt.	298.1	538.6	765.2	665.5	606.6	573.3	706.2	826.0	1083.4	961.7	2874.0	4150.5
Commu	67.6	59.6	111.2	124.4	157.5	148.5	136.3	133.3	211.8	151.5	520.2	781.4
PBS	29.0	25.5	47.6	53.3	67.5	63.6	58.4	57.1	90.8	64.9	223.0	334.9
PBS Annualiz Capital Cost	4.5	8.4	15.8	24.0	34.4	44.2	53.3	62.1	76.1	86.1	87.1	321.8
(C) Total new capital-cost requirements (through construction of new schools) (NRs million)												
All Sch.	789.6	1247.4	1848.0	1686.3	1663.2	1570.8	1801.8	2032.8	2772.0	2356.2	7234.5	10533.6
Govt.	596.3	1077.2	1530.4	1331.0	1213.2	1146.5	1412.4	1652.0	2166.8	1923.4	5748.1	8301.1
Commu	135.3	119.1	222.3	248.7	315.0	297.0	272.6	266.6	423.7	303.0	1040.5	1562.8
PBS	58.0	51.1	95.3	106.6	135.0	127.3	116.8	114.2	181.6	129.8	445.9	669.8
PBS Annualiz Capital Cost	9.0	16.8	31.5	48.0	68.8	88.5	106.5	124.2	152.2	172.2	174.2	643.6

Table XI: Projected requirements in total costs (recurrent plus capital) for secondary education, 1992/93-2001/02
Case 3 (Free for grades 6 & 7 plus "remote"), 1992 prices

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993-97	9th Plan 1998-02
(A) Total-cost requirements (NRs million)												
All Sch.	2555.2	2912.8	3409.9	3514.8	3695.8	3831.4	4146.3	4481.3	5158.2	5203.9	16088.3	22821.1
Govt.	1675.4	2013.1	2377.9	2398.3	2449.0	2519.2	2779.6	3048.6	3501.6	3553.6	10913.7	15402.7
Commu	266.4	266.3	332.8	362.7	416.9	427.8	433.8	448.6	555.5	515.4	1645.1	2381.1
PBS	613.4	633.3	699.2	753.8	829.9	884.5	932.9	984.1	1101.1	1134.8	3529.6	5037.4
(B) Cost requirements by source												
All Sch.												
Public	610.0	661.1	836.8	900.0	948.3	1013.1	1078.6	1160.9	1263.5	1360.6	3956.2	5876.9
Private	1945.2	2251.6	2573.1	2614.7	2747.6	2818.3	3067.7	3320.3	3894.7	3843.3	12132.2	16944.3
% Publi	23.9	22.7	24.5	25.6	25.7	26.4	26.0	25.9	24.5	26.1	24.6	25.8
Govt. Sch.												
Public	610.0	661.1	836.8	900.0	948.3	1013.1	1078.6	1160.9	1263.5	1360.6	3956.2	5876.9
Private	1065.4	1352.0	1541.1	1498.3	1530.7	1506.0	1701.0	1887.7	2238.1	2193.0	6957.5	9525.8
% Publi	36.4	32.8	35.2	37.5	38.7	40.2	38.8	38.1	36.1	38.3	36.2	38.2
Commu.Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	266.4	266.3	332.8	362.7	416.9	427.8	433.8	448.6	555.5	515.4	1645.1	2381.1
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PBS Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	613.4	633.3	699.2	753.8	829.9	884.5	932.9	984.1	1101.1	1134.8	3529.6	5037.4
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table XII: Projected requirements in recurrent costs of grades 6-10, 1992/93-2001/02
Case 4 (Free for grades 6-10, phased over ten years), 1992 prices

Key assumptions:
(1) Unit recurrent costs same as those in 1992, constant 1992 prices
(2) Distribution of enrollment by school type same as that in 1991
(3) Distribution of financing by source same as that in 1992
(4) For government-aided schools, no tuition for grades 6-10, phased in over ten years

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993-97	9th Plan 1998-02
(A) Enrollment (thousand)												
All Sch.	844.0	898.0	978.0	1051.0	1123.0	1191.0	1269.0	1357.0	1477.0	1579.0	4894.0	6873.0
Govt.	660.3	706.9	773.2	830.8	883.3	933.0	994.1	1065.6	1159.4	1242.7	3854.6	5394.8
Commu	128.6	133.7	143.4	154.1	167.8	180.6	192.4	204.0	222.3	235.4	727.6	1034.8
PBS	55.1	57.3	61.4	66.1	71.9	77.4	82.5	87.4	95.3	100.9	311.8	443.5
(B) Total recurrent-cost requirements (NRs million)												
All Sch.	2160.4	2289.1	2485.9	2671.6	2864.2	3046.0	3245.4	3464.9	3772.2	4025.8	12471.1	17554.3
Govt.	1377.2	1474.5	1612.7	1732.9	1842.4	1945.9	2073.4	2222.6	2418.2	2591.9	8039.6	11252.1
Commu	198.8	206.8	221.6	238.3	259.4	279.3	297.5	315.3	343.7	364.0	1124.9	1599.7
PBS	584.4	607.8	651.5	700.5	762.4	820.9	874.5	926.9	1010.3	1069.9	3306.6	4702.5
(C) Cost requirements by source (NRs million)												
All Sch.												
Public	610.0	661.1	836.8	900.0	948.3	1076.4	1142.7	1311.0	1430.5	1628.8	3956.2	6589.5
Private	1550.4	1627.9	1649.1	1771.6	1916.0	1969.6	2102.7	2153.8	2341.7	2396.9	8514.9	10964.8
% Publi	28.2	28.9	33.7	33.7	33.1	35.3	35.2	37.8	37.9	40.5	31.7	37.5
Govt. Sch.												
Public	610.0	661.1	836.8	900.0	948.3	1076.4	1142.7	1311.0	1430.5	1628.8	3956.2	6589.5
Private	767.2	813.4	775.9	832.8	894.1	869.5	930.7	911.6	987.8	963.1	4083.5	4662.6
% Publi	44.3	44.8	51.9	51.9	51.5	55.3	55.1	59.0	59.2	62.8	49.2	58.6
Commu.Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	198.8	206.8	221.6	238.3	259.4	279.3	297.5	315.3	343.7	364.0	1124.9	1599.7
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PBS Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	584.4	607.8	651.5	700.5	762.4	820.9	874.5	926.9	1010.3	1069.9	3306.6	4702.5
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table XIII: Projected new requirements in capital costs of grades 6-10, 1992/93-2001/02
Case 4 (Free for grades 6-10, phased over ten years), 1992 prices

Key assumptions:
(1) Same capital cost per student place (NRs. 23,100) for all types of schools
(2) Distribution of enrollment by type of school same as that in 1991
(3) No-upgrading of existing capital inputs as of 1992/93
(4) Capital costs are privately financed

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993-07	9th Plan 1998-02
(A) New enrollment thousand)												
All Sch.	34.2	54.0	80.0	73.0	72.0	68.0	78.0	88.0	120.0	102.0	313.2	456.0
Govt.	25.8	46.6	66.3	57.6	52.5	49.6	61.1	71.5	93.8	83.3	248.8	359.4
Commu	5.9	5.2	9.6	10.8	13.6	12.9	11.8	11.5	18.3	13.1	45.0	67.7
PBS	2.5	2.2	4.1	4.6	5.8	5.5	5.1	4.9	7.9	5.6	19.3	29.0
(B) Total new capital-cost requirements (through construction of new classrooms) (NRs million)												
All Sch.	394.8	623.7	924.0	843.2	831.6	785.4	900.9	1016.4	1386.0	1178.1	3617.2	5266.8
Govt.	298.1	538.6	765.2	665.5	606.6	573.3	706.2	826.0	1083.4	961.7	2874.0	4150.5
Commu	67.6	59.6	111.2	124.4	157.5	148.5	136.3	133.3	211.8	151.5	520.2	781.4
PBS	29.0	25.5	47.6	53.3	67.5	63.6	58.4	57.1	90.8	64.9	223.0	334.9
PBS Annualiz Capital Cost	4.5	8.4	15.8	24.0	34.4	44.2	53.3	62.1	76.1	86.1	87.1	321.8
(C) Total new capital-cost requirements (through construction of new schools) (NRs million)												
All Sch.	789.6	1247.4	1848.0	1686.3	1663.2	1570.8	1801.8	2032.8	2772.0	2356.2	7234.5	10533.6
Govt.	596.3	1077.2	1530.4	1331.0	1213.2	1146.5	1412.4	1652.0	2166.8	1923.4	5748.1	8301.1
Commu	135.3	119.1	222.3	248.7	315.0	297.0	272.6	266.6	423.7	303.0	1040.5	1562.8
PBS	58.0	51.1	95.3	106.6	135.0	127.3	116.8	114.2	181.6	129.8	445.9	669.8
PBS Annualiz Capital Cost	9.0	16.8	31.5	48.0	68.8	88.5	106.5	124.2	152.2	172.2	174.2	643.6

Table XIV: Projected requirements in total costs (recurrent plus capital) for secondary education, 1992/93-2001/02
Case 4 (Free for grades 6-10, phased over ten years), 1992 prices

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	8th Plan 1993-97	9th Plan 1998-02
(A) Total-cost requirements (NRs million)												
All Sch.	2555.2	2912.8	3409.9	3514.8	3695.8	3831.4	4146.3	4481.3	5158.2	5203.9	16088.3	22821.1
Govt.	1675.4	2013.1	2377.9	2398.3	2449.0	2519.2	2779.6	3048.6	3501.6	3553.6	10913.7	15402.7
Commu	266.4	266.3	332.8	362.7	416.9	427.8	433.8	448.6	555.5	515.4	1645.1	2381.1
FdS	613.4	633.3	699.2	753.8	829.9	884.5	932.9	984.1	1101.1	1134.8	3529.6	5037.4
(B) Cost requirements by source												
All Sch.												
Public	610.0	661.1	836.8	900.0	948.3	1076.4	1142.7	1311.0	1430.5	1628.8	3956.2	6589.5
Private	1945.2	2251.6	2573.1	2614.7	2747.6	2755.0	3003.6	3170.2	3727.7	3575.0	12132.2	16231.6
% Publi	23.9	22.7	24.5	25.6	25.7	28.1	27.6	29.3	27.7	31.3	24.6	28.9
Govt. Sch.												
Public	610.0	661.1	836.8	900.0	948.3	1076.4	1142.7	1311.0	1430.5	1628.8	3956.2	6589.5
Private	1065.4	1352.0	1541.1	1498.3	1500.7	1442.7	1636.9	1737.6	2071.1	1924.8	6957.5	8813.1
% Publi	36.4	32.8	35.2	37.5	38.7	42.7	41.1	43.0	40.9	45.8	36.2	42.8
Commu.Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	266.4	266.3	332.8	362.7	416.9	427.8	433.8	448.6	555.5	515.4	1645.1	2381.1
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PBS Sch.												
Public	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private	613.4	633.3	699.2	753.8	829.9	884.5	932.9	984.1	1101.1	1134.8	3529.6	5037.4
% Publi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table XV: Projected enrollments of secondary education, 1992/93-2001/02

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	1993-97	1998-02
Projected enrollments by school type by grade (thousand)												
All Sch.	844.0	898.0	978.0	1051.0	1123.0	1191.0	1269.0	1357.0	1477.0	1579.0	4894.0	6873.0
Grade 6	220.0	252.0	281.0	293.0	297.0	307.0	333.0	364.0	394.0	413.0	1343.0	1811.0
Grade 7	185.0	201.0	229.0	257.0	270.0	274.0	284.0	308.0	338.0	386.0	1142.0	1590.0
Grade 8	157.0	155.0	168.0	191.0	215.0	227.0	233.0	244.0	285.0	292.0	886.0	1281.0
Grade 9	136.0	147.0	148.0	157.0	178.0	201.0	214.0	221.0	231.0	250.0	766.0	1117.0
Grade 10	146.0	143.0	152.0	153.0	163.0	182.0	205.0	220.0	229.0	238.0	757.0	1074.0
Govt. Sch.	660.3	706.9	773.2	830.8	883.3	933.0	994.1	1065.6	1159.4	1242.7	3854.6	5394.8
Grade 6	195.8	224.3	250.1	260.7	264.3	273.2	296.3	323.9	350.6	367.5	1195.1	1611.6
Grade 7	163.1	177.2	201.9	226.5	238.0	241.5	250.3	271.5	297.9	340.3	1006.7	1401.6
Grade 8	105.1	103.8	112.5	127.9	143.9	152.0	156.0	163.4	190.8	195.5	593.2	857.6
Grade 9	92.9	100.4	101.1	107.3	121.6	137.3	146.2	151.0	157.8	170.8	523.4	763.2
Grade 10	103.4	101.3	107.7	108.4	115.5	128.9	145.2	155.8	162.2	168.6	536.2	760.7
Commu.Sc	128.6	133.7	143.4	154.1	167.8	180.6	192.4	204.0	222.3	235.4	727.6	1034.8
Grade 6	17.0	19.4	21.7	22.6	22.9	23.7	25.7	28.1	30.4	31.8	103.5	139.6
Grade 7	15.3	16.7	19.0	21.3	22.4	22.7	23.6	25.5	28.0	32.0	94.7	131.9
Grade 8	36.3	35.9	38.9	44.2	49.7	52.5	53.9	56.4	65.9	67.6	205.0	296.4
Grade 9	30.1	32.6	32.8	34.8	39.5	44.6	47.4	49.0	51.2	55.4	169.8	247.6
Grade 10	29.8	29.2	31.0	31.2	33.3	37.2	41.9	44.9	46.8	48.6	154.6	219.3
PBS Sch.	55.1	57.3	61.4	66.1	71.9	77.4	82.5	87.4	95.3	100.9	311.8	443.5
Grade 6	7.3	8.3	9.3	9.7	9.8	10.1	11.0	12.0	13.0	13.6	44.4	59.8
Grade 7	6.6	7.1	8.1	9.1	9.6	9.7	10.1	10.9	12.0	13.7	40.6	56.5
Grade 8	15.6	15.4	16.7	18.9	21.3	22.5	23.1	24.2	28.3	29.0	87.8	127.0
Grade 9	12.9	14.0	14.1	14.9	16.9	19.1	20.3	21.0	21.9	23.8	72.8	106.1
Grade 10	12.8	12.5	13.3	13.4	14.3	15.9	17.9	19.3	20.0	20.8	66.2	94.0

Table XVI: Key parameters used in cost projections

(A) Key parameters concerning enrollments

0.2165	= private share in grades 6-10, 1991
0.1101	= private share in grade 6 in 1991
0.1185	= private share in grade 7 in 1991
0.3305	= private share in grade 8 in 1991
0.3167	= private share in grade 9 in 1991
0.2917	= private share in grade 10 in 1991
0.7000	= share of community schools in private education in 1991
0.3000	= share of PBS schools in private education, 1991
0.0909	= share of government-aided students in 18 remote districts, grade-8 level in 1991
0.0887	= share of government-aided students in 18 remote districts, grade-9 level, 1991
0.0848	= share of government-aided students in 18 remote districts, grade-10 level in 1991
0.2862	= share of female students in government aided schools, grade 8, 1991
0.2675	= share of female students in government aided schools, grade 9, 1991
0.2726	= share of female students in government aided schools, grade 10, 1991

(B) Key parameters concerning recurrent costs (1992 prices)

0.9223	= per-student recurrent cost to government (thousand), government-aided schools, 1992/93
0.7589	= per-student recurrent cost to government (thousand), government-aided schools, no free educatio
0.0	= per-student recurrent cost to government (thousand), community schools, 1992/93
0.0	= per-student recurrent cost to government (thousand), PBS schools, 1992/93
2.0980	= per-student recurrent cost (thousand), government-aided schools, 1992/93
1.5460	= per-student recurrent cost (thousand), community schools, 1992/93
10.6040	= per-student recurrent cost (thousand), PBS schools, 1992/93
0.7750	= direct private cost of secondary schooling (thousand, no tuition), government-aided schools, 1992
1.3250	= direct private cost of secondary schooling (thousand, with tuition), government-aided schools, 19
0.5500	= annual tuition (NRs thousand) of students in government-aided schools, 1992
0.6000	= annual tuition (NRs thousand) of students in community schools, 1992

(C) Key parameters concerning capital costs (1992 prices)

11.5500	= per-student capital cost (thousand), secondary education, 1992/93, new classrooms
1.7830	= annualized per-student capital cost, secondary education, 1992/93, new classrooms
23.1000	= per-student capital cost (thousand), secondary education, 1992/93, new schools
3.5660	= annualized per-student capital cost, secondary education, 1992/93, new schools
2.0000	= capital cost of new school to capital cost of new classrooms

(D) Key parameter concerning growth rate of government allocation to secondary education

0.0500	= annual growth rate in government revenue, 1992-2002

Physical and Financial Projections for the
Phase-out/Phase-in Plan for Certificate Level Students
at Tribhuvan University to the Higher Secondary Education System

A. Physical Projections

Phase-out/Phase-in Plan

1. Four types of institutions are involved in the phase-out of Certificate Level (CL) courses at Tribhuvan University (TU) into the Higher Secondary Education Program: (i) TU campuses (constituent), (ii) private (TU affiliated) campuses, (iii) community higher secondary schools (proposed and Government supported) and (iv) private and boarding (PBS) higher secondary schools. The assumption is that fresh (new) students in CL1 (or Grade 11) will be phased out from TU and private campuses and transferred to Grade 11 in community and private higher secondary schools in a phased manner. In 1988/89 and 1989/90 TU campuses accommodated 69% of total Certificate Level students and the private campuses enrolled 31%. This proportion was 67% and 33% for TU and private campuses respectively in 1990/91 (Table I).

Table I: Enrollment of Certificate Level Students

	1988/89	1989/90	1990/91
Fresh CL Students	34,734	40,170	47,878
TU	23,907	27,555	32,003
Private Campus	10,827	12,615	15,875
Fresh CL Students (%)			
TU	69%	69%	67%
Private Campus	31%	31%	33%

2. Three scenarios have been estimated for three different paces/timings in the implementation of the phase-out/phase-in plan for the higher secondary education system reform. The first (early) scenario assumes and early phase-out of CL students from Tribhuvan University by 1996/97. The second (medium) scenario assumes that the phase-out of TU would proceed at a somewhat slower pace and will be over by the year 2001/02. The third (late) scenario assumes that the phase-out will occur by 2006/07 (Table II).

Table II: Scenarios of Phase-out/Phase-in Plan
(Percentage share of fresh students)

		Early	Medium	Late
1990/91				
	TU Campus	67	67	67
	Private Campus	33	33	33
	Private Schools	-	-	-
	Community Schools	-	-	-
1996/97				
	TU Campus	-	25	50
	Private Campus	-	10	20
	Private. Schools	30	25	10
	Community Schools	70	40	20
2001/02				
	TU Campus	-	-	30
	Private Campus	-	-	-
	Private Schools	40	40	30
	Community Schools	60	60	40
2006/07				
	TU Campus	-	-	-
	Private Campus	-	-	-
	Comm. Schools	40	40	40
	Private Schools	60	60	60

3. In the early scenario, the CL courses in campuses will be completely phased out by 1996/97. In the medium scenario, the TU campuses will stop enrolling fresh students in the Certificate Level by 1999/00, the community schools will take 60% of total fresh students and the private higher secondary schools will enroll 40% by 2001/02. The late phase-out/phase-in plan assumes that the implementation of the higher secondary reform program will be completed by the year 2006/07. [1]

4. According to the proposed phase-out/phase-in plan, TU and the private campuses will be replaced by the private and community higher secondary schools respectively. At present, TU campuses have been concentrated in relatively accessible areas and students have been subsidized. However, private campuses have reached even some remote districts and have been operated on a cost recovery basis. Students who do not get admission in the TU campuses enroll in private campuses. Regarding the secondary schools, the private and boarding schools are generally located in urban and semi-urban areas (in 1991, 56% of the private schools were located in the Kathmandu Valley). These schools provide quality education but charge relatively high fees to students. Thus the phase-out/phase-in plan proposed here implicitly assumes a complete reversal in the financing of higher secondary education in Nepal. The community higher secondary schools will serve more remote areas and will be less expensive than the private schools. This plan is therefore justifiable also on equity grounds.

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[1] Calculations on the three scenarios are available. This study has chosen the medium scenario as the most likely scenario of reform.

5. Regarding the share of fresh students between community and private schools, currently 31 schools are participating in the MOEC supported higher secondary education program which started in 1992, with one private school among them. The response of the private schools will depend on the government's policy of stimulating their participation in order to achieve the targeted 40% share by the year 2001/02.

6. The promotion rate from CL1 (Grade 11) to CL2 (Grade12) in TU and private campuses has been calculated from Fresh (or new) and Carry (or continuing) students with a one-year lag, assuming that the Carry students are in their second year. Although a few technical courses such as medicine are of three-year duration, most of the CL courses are of two-year duration. Table III shows the promotion rate from within the CL program.

Table III: Promotion Within the Certificate Level Program

	1987/88	1988/89	1989/90	1990/91
CL Fresh (Year 1)	39,247	34,734	40,170	47,878
TU	29,297	23,907	27,555	32,003
Private	9,950	10,827	12,615	15,875
CL Carry (Year 2)	15,346	25,991	28,114	32,417
TU	9,267	18,826	20,575	22,507
Private	6,079	7,165	7,539	9,910
Promotion from Year 1 to 2 (One year lag)	-	66%	81%	81%

7. About 81% of fresh students (CL1) will appear in the examination at the end of their first year, and 19% will drop out. At present, Carry students who fail their CL1 examination in some courses, re-take the examination in the following year but do not repeat the courses. On the basis of these repetition and dropout rates for CL students, the projection makes assumptions about the rates for Grades 11 and 12 in the future higher secondary education program. Assuming that there will not be an external examination at the end of Grade 11, the dropout rate is expected to be lower, but the repetition rate higher. The assumption therefore is that the dropout rate will be 16% and the repetition rate will be 11% in Grade 11.

8. Regarding the estimated promotion rate from Grade 12 to Bachelor Level (BL) programs, the current rate from CL to BL is used as an a guideline. Historically, these promotion rates have fluctuated widely, and students who fail their second year exam will continue taking the exam until they succeed and move on to the BL program (Table IV). On the basis of these historical rates, the projection assumes 60% dropout and 11% repetition rates in Grade 12 in the future higher secondary schools.

Table IV: Promotion Rates from Certificate Level to Bachelor Level

	1987/88	1988/89	1989/90	1990/91
Bachelor Fresh	17,906	14,176	13,528	17,781
TU	16,543	12,883	12,111	16,228
Private	1,363	1,293	1,417	1,553
Certificate Level Carry	15,346	25,991	28,114	32,417
TU	9,267	18,826	20,575	22,507
Private	6,079	7,165	7,539	9,910
Promotion from CL Carry (One year lag)		92%	52%	63%

9. In the case of private schools, the dropout rate is assumed to be 5% for Grade 11 and 20% for Grade 12, and repetition rate is assumed to be 7% and 11% for these two grades, respectively. The present repetition and dropout rates in private schools are lower than those in public schools due to higher pass rates, family and socioeconomic background of students, and their urban location. Therefore two rates are used: one for private schools and the other for the rest of the projection. The projection for Grades 11 and 12 enrollment takes into account the difference in repetition and dropout rates between private and non-private institutions. As a result, the phase-out and phase-in plan also affects the enrollment projection. The assumptions on the decline in these repetition and dropout rates by the year 2001/02 are given in Annex 1, Table II.

10. Enrollment in Sanskrit, Law and Technical subject was not included in the net Higher Secondary Schools (HSS) Fresh Enrollment in the Phase-out/Phase-in Plan. Projections of fresh enrollment in these subjects were made separately and net fresh enrollment for the remaining subjects were estimated (see Annex 1, Table VII). There was no growth of enrollment in technical subjects during the 1988-91 period. However, considering the priority given by the Government to technical education, the projection assumes a 3% and 5% growth of technical enrollment during the Eighth and Ninth Plan, respectively.

11. Enrollment in the Law Faculty increased by 6.6% per annum over the three years (1988-91). It is assumed that this rate of growth will continue during the projection period. Enrollment in Sanskrit campuses has been very small (436 students in 1989/90). It is assumed that sanskrit enrollment will grow at the rate of 3% and 5% during the Eight and Ninth plan-period. The historical proportions of fresh students in total enrollment were used as a guide for the projection of fresh enrollments in these subjects. It is assumed that the fresh students will constitute 35% of total enrollment in Technical subjects, 50% in Sanskrit and 58% in Law (see Table ..-A: Phase-out/Phase-in Plan for Higher Secondary Education).

Enrollment by Faculty

12. Projections for the distribution of students in TU and private campuses by faculty in the phase-out plan was based on the actual distribution of CL enrollment by faculty (excluding Law, Sanskrit and Technical subjects) in TU and private campuses (Table V).

Table V: Distribution of Certificate Level Enrollment by Faculty in Tribhuvan University and Private Campuses

	Tribhuvan University		Private Campuses		Total	
	Number	%	Number	%	Number	%
1989/90						
Science	5,797	14.0	859	4.6	6,656	11.0
Education	2,779	6.8	-	-	2,779	4.6
Management	10,851	26.2	7,967	42.0	18,818	31.2
Humanities	21,958	53.0	10,127	53.4	32,085	53.2
Total	41,385	100.0	18,953	100.0	60,338	100.0
1990/91						
Science	6,419	13.6	1,195	4.8	7,614	10.6
Education	3,607	7.7	48	0.2	3,655	5.1
Management	11,927	25.3	10,774	43.6	22,701	31.6
Humanities	25,138	53.4	12,720	51.4	37,858	52.7
Total	47,091	100.0	24,737	100.0	71,828	100.0

13. The distribution of total Certificate Level students (Grades 11 and 12) in 1990/91 by four faculties shows that most of the students studied Humanities (52.7%), followed by Management (31.6%), Science (10.6%) and Education (5.1%). Based on this figures, Table VI presents the assumptions on the distribution of higher secondary enrollment by faculties.

Table VI: Assumptions on share of enrollment by Faculty and Institutions

	Total		TU	Private Campuses	Private Schools
	1993-97	1998-02	1993-2002	1993-2002	1993-2002
Science	10.6	13.6	13.6	4.8	16.3
Education	5.1	7.7	7.7	0.2	8.5
Management	31.6	25.3	25.3	43.6	29.1
Humanities	52.7	53.4	53.4	51.4	46.1
Total	100.0	100.0	100.0	100.0	100.0

14. The 1990/91 total enrollment distribution by faculty has been used to project faculty-wise enrollment for the 1992-97 period. For 1997-2002 period, however, an alternate distribution pattern has been proposed -- the proportions of enrollment in science, management and education are to increase by 15%, 10% and 5% respectively. The 1991 enrollment distribution pattern in Tribhuvan University and private campuses has been used to estimate faculty-wise enrollment in these institutions for both periods.

15. Because the Higher Secondary Education program has not yet been implemented in the schools, the ratio for community schools and private schools had to be assumed. The assumption is that private schools, being located in urban areas, will be able to draw on part-time teachers to offer more science and management tracks in order to attract students. However, community schools, which will be mostly in rural areas, are likely to face severe problems in getting teachers and facilities to run science programs and therefore will offer more humanities. The projection assumes

that 16.3% of students in the private schools will enroll in science, 29.1% in management, and 8.5% in education. These ratios are 20% higher in science, 15% higher in Management and 10% higher in education compared to those of Tribhuvan University. Faculty-wise enrollment in community higher secondary schools has been estimated as a residual.

Number of Higher Secondary Education Institutions by Region

16. The projected Grades 11 and 12 enrollment by type of institutions (TU, private campus, private and community higher secondary schools) has been distributed among the five development regions and three ecological regions plus the Kathmandu Valley. The actual Certificate Level enrollment distribution pattern for 1990/91 was used as a basis to project the regional shares for TU and Private campuses (Tables VII and VIII). The number of campuses required are then estimated using actual campuses to student ratios for TU and private campuses in 1990/91.

17. Distribution of private and community higher secondary enrollment by region has been estimated using the 1990/91 secondary (8-10) enrollment share in private and community schools respectively. The regional enrollment for private and community secondary schools has been disaggregated using the total school/student ratio in secondary schools by region and the information on regional distribution aggregate enrollment (Table IX). The regional distribution of enrollment in community higher secondary schools based on the present secondary school enrollment pattern helps to improve equity of educational opportunities.

Table VII: Certificate Level Enrollment Distribution in Tribhuvan University by Region

	1989/90 CL Students	%	1990/91 CL Students	%	Certificate Level Campuses	1990/91 Student/campus
Total	48,768	100.0	54,510	100.0	56	973
EM	-	-	-	-	-	-
EH	2,426	5.0	3,160	5.8	4	790
ET	7,377	15.1	8,131	14.9	8	1,016
CM	-	-	-	-	-	-
CH	230	0.5	226	0.4	1	226
CT	5,346	11.0	6,132	11.2	5	1,226
CV	21,183	43.4	22,130	40.6	20	1,106
WM	-	-	-	-	-	-
WH	8,089	16.6	8,622	15.8		1,078
WT	1,690	3.5	2,245	4.1	3	748
MWM	106	0.2	147	0.3	1	147
MWH	145	0.3	209	0.4	1	209
MWT	1,911	3.9	3,162	5.8	3	1,054
FWM	-	-	-	-	-	-
FWH	143	0.3	157	0.3	1	157
FWT	122	0.2	189	0.3	1	189

Table VIII: Certificate Level Enrollment Distribution in Private Campuses by Region

	1989/90 CL Students	%	1990/91 CL Students	%	Private Campuses	Student/ Campus
Nepal	20,094	100.0	25,785	100.0	93	277
EM	351	1.7	526	2.0	4	131
EH	1,163	5.8	868	3.4	5	174
ET	3,935	19.6	4,604	17.9	11	419
CM	238	1.2	165	0.6	2	83
CH	1,100	5.5	1,641	6.4	5	328
CT	2,305	11.5	2,712	10.5	8	339
CV	5,895	29.3	7,256	28.1	26	279
WM	-	-	-	-	-	-
WH	1,699	8.4	2,790	10.8	12	233
WT	1,205	6.0	1,496	5.8	6	249
MWM	-	-	-	-	-	-
MWH	1,182	5.9	1,570	6.1	5	314
MWT	133	0.7	465	1.8	2	232
FWM	187	0.9	217	0.8	2	109
FWH	177	0.9	183	0.7	3	61
FWT	524	2.6	1,292	5.0	2	646

Table IX: Secondary (8-10) enrollment distribution of private and community schools by Region, 1991

	Community Schools				Private Schools		
	No.	SSR	Estimated Enrollment	%	No.	Enrollment	%
Total	1,887	189	355,705	100.0	192	39,625	100.0
EM	62	132	8,184	2.3	1	150	0.4
EH	163	203	33,089	9.3	4	890	2.2
ET	205	311	63,755	17.9	27	8,443	21.3
CM	50	103	5,150	1.4	1	100	0.3
CH	138	161	22,218	6.2	5	841	2.1
CT	215	216	46,440	13.1	12	2,533	6.4
CV	164	192	31,488	8.9	107	20,497	51.7
WM	8	33	265	0.1	-	-	-
WH	424	178	75,472	21.2	21	3,580	9.0
WT	105	174	18,270	5.1	2	330	0.8
MWM	34	71	2,414	0.7	-	-	-
MWH	101	155	15,655	4.4	1	196	0.5
MWT	78	186	14,508	4.1	7	1,340	3.4
FWM	44	94	4,144	1.2	-	-	-
FWH	57	121	6,897	1.9	1	118	0.3
FWT	39	199	7,761	2.2	3	607	1.5

18. In order to estimate the number of private and community higher secondary schools needed, the number of higher secondary education programs requirements have been calculated. Each of the four tracks of curriculum (humanities, education, science and management) have been considered as higher secondary education programs. For example, if one school runs courses in two tracks, they will be counted as two programs. The regional projection of programs is based on the average class sizes of private and community secondary schools (8-10) in 1991. The projection also assumes a minimum class size of 40 in the higher secondary schools as recommended by NEC in 1992.

19. The regional projection of higher secondary schools is based on the projected number of programs and the assumption regarding multiple programs in these schools. More programs in one school means more options for students and more students will be attracted to that school. However, it may not be feasible to have more programs in the school if the number of students is small. Of the 31 schools which received approval from CHSE to run Grade 11 in 1992, only one school has multiple programs. This means that initially, almost all higher secondary schools will run a single program and add additional programs based on the number of students and availability of resources. It is also unlikely that all four programs will be run in all the schools. Based on these considerations, it is assumed that, in average, there will be 1.5 programs per school in the Hills and 2 programs in the Terai and Valley. In the Mountains, however, it will not be feasible to have multiple program schools as the average number of students per class will be small (Table X).

Table X: Class size and average programs per school by region

	Community schools		Private schools	
	Class size	Average Programs per school	Class size	Programs per school
EM	44	1.0	50	1.0
EH	68	1.5	74	1.5
ET	104	2.0	104	2.0
CM	40	1.0	40	1.0
CH	54	1.5	56	1.5
CT	72	2.0	70	2.0
CV	64	2.0	64	2.0
WM	40	1.0	.	1.0
WH	59	1.5	57	1.5
WT	58	2.0	55	2.0
MWM	40	1.0	.	.
MWH	52	1.5	65	1.5
MWT	62	2.0	64	2.0
FWM	40	1.0	.	.
FWH	40	1.5	40	1.5
FWT	66	2.0	67	2.0

Demand for Higher Secondary Education Teachers

20. The actual number of students and teachers in Tribhuvan University campuses by region is used as the basis of projecting the number of teachers by region. The actual student/teacher ratio (STR) by region for 1990/91 is given in Table XI. Although the current ratio is very low (in average 19 students per teacher), the current STR has been used on the assumption that TU will not allow further reductions in the ratio as it is committed to maximize its resources.

21. As information is not available for the number of teachers in the private campuses, a constant student-teacher ratio (25 students/teacher) has been used for all the regions on the assumption that there is a better utilization of teachers in the private campuses compared with Tribhuvan University. In the case of private and community schools, the proposed CHSE curriculum requires five Master level teachers per track for Grades 11 and 12 and this ratio is used as the basis for the projection. For example, the curriculum in Humanities requires three teachers for the elective subjects and two teachers for English and Nepali. Multiple track schools however, would require less than five teachers depending upon the combination of tracks.

Table XI: Student/teacher ratios in Tribhuvan University campuses, 1990/91

	No. of Students	No. of Teachers	STR
Total	94,132	4,845	19
EM	.	.	.
EH	4,102	123	33
ET	12,288	574	21
CM	.	.	.
CH	226	27	8
CT	8,776	474	19
CV	47,654	2,777	17
WM	.	.	.
WH	12,308	562	22
WT	3,661	146	25
MWM	163	5	33
MWH	318	13	24
MWT	4,228	109	39
FWM	.	.	.
FWH	217	18	12
FWT	189	17	11

Supply of Teachers and Teacher Training

22. There are four sources of supply of teachers: (i) teacher transfers from Tribhuvan University, (ii) existing teachers with Master level degrees in secondary schools, (iii) upgrading of existing teachers through in-service programs, and (iv) fresh entrants to the teaching profession.

23. Regarding the first source of supply, there were a total of 4845 Tribhuvan University teachers in 1990/91, of which 2806 (57% of total) are estimated to be Certificate Level teachers. This is based on the share of CL students (54510) in the total TU enrollment (94132) in 1990/91. The existing stock of TU teachers will be affected by the attrition rate. Information is not available on the attrition rate of TU teachers or the age structure of TU teachers. In general, the attrition rate is low for permanent teachers and higher for temporary teachers. In 1991, all TU teachers who have served for at least one year were made permanent staff, and their attrition rate is expected to be no more than 2%. The university's future policy regarding voluntary retirement of senior teachers may also affect the attrition rate. Therefore, three scenarios have been constructed using low (2%), medium (3%) and high (5%) attrition rates.

24. Tribhuvan University's authorities and the teachers' union want the transfer of TU teachers to higher secondary schools to be conducted on a voluntary basis. Given the high opportunity cost of TU teachers going to rural areas, it is unlikely that many of them will be willing to go to the higher secondary schools. The government may not be able to attract teachers with higher salaries and good facilities in the community schools. Thus, it is assumed that one out of four TU teachers will be transferred to the higher secondary schools (low case). In the medium and higher cases this ratio has been assumed to be 3:1 and 2:1 respectively.

25. Regardingthe second source of supply, currently about 9% of the secondary school teachers have Master Level degrees. Regional variation is also wide (see Table XII). It is assumed

that these teachers can be transferred to the higher secondary schools. The subject specialization of these teachers, however, is not known which means that not all of them can be transferred to the higher secondary schools. The assumption is that 50% can be transferred in the low case, 66% in the medium case and 75% in the high case.

26. Considering the third source of supply, the government has stopped the policy of upgrading teachers through in-service training programs. Increasing the supply of teachers, particularly in the critical subjects like Science, English and Mathematics where the shortage of teachers is acute, would require the re-introduction of the in-service program for teachers, particularly in remote areas. The number of teachers to be upgraded through the in-service program is estimated using the following relation:

-Additional teacher requirement
-Less transfer from TU (1st source)
-Less available Master Level in secondary schools (2nd source).
-Less new appointments (4th source)
-Equals in-service training required.

27. As regards the fourth source of supply, it is expected that many fresh graduates will enter teaching. This is due to the recent government's policy of retrenchment whereby the lack of opportunities in the civil service will channel fresh graduates into teaching. The projection assumes a ratio of 4:1 (1 Master Level teacher addition every 4 new secondary teachers) for the new Master Level teachers supply.

Table XII: Regional Distribution of Master Level Teachers in Secondary (8-10) Schools, 1991

	No. of Teachers	No. of Master Level Teachers	%
Total	11,627	1,058	9.1
EM	278	5	1.8
EH	869	17	2.0
ET	1,364	104	7.6
CM	226	5	2.2
CH	740	41	5.5
CT	1,198	77	6.4
CV	2,117	471	22.2
WM	51	.	.
WH	2,351	129	5.5
WT	447	49	11.0
MWM	180	2	1.1
MWH	543	21	3.9
MWT	366	30	8.2
FWM	221	15	6.8
FWH	415	39	9.4
FWT	261	53	20.3

Higher Secondary Education Examination

28. At present Tribhuvan University conducts examinations for both first and second year of the CL program. There are no polices regarding the examinations for the higher secondary school program. Discussions between the CHSE and the Office of the Controller of Examinations (OCE) indicate that the SLC examination would take place as usual and that there will be an external examination after Grade 12. Therefore, the projection of students who will appear and pass Grade 12 examination has been made. It is assumed that two types of students (regular and exempted) will appear in the examination. Assumptions regarding the promotion rate of Grade 12 will determine the number of students who will appear the examination under the regular program. There is no information on the "appear once" rate of exempted students and pass rates of both types of students. Table XIII presents assumptions of these rates under the high, medium and low scenarios.

Table XIII: Grade 11 Appear and Pass Rates

	Low	Medium	High
Appear once rates			
Exempted	0.75	0.80	0.85
Pass rate			
Regular	0.20	0.25	0.30
Exempted	0.15	0.20	0.25

29. It is assumed that the appear once rate of the exempted students will be similar to that of the SLC examinations. The present pass rate in CL level has ranged from 5 to 25% depending upon the faculty. The assumptions about pass rates are based on this information (see Table VII in Annex 1 for projection on Higher Secondary Examination).

B. Financial Projections

REGULAR COSTS

Government Cost of Teachers

30. The projection of the government cost of teachers for Grades 11 and 12 is based on the pay scale implemented in April, 1992. The Education Act has categorized secondary (8-10) teachers into four grades : Fourth grade (lowest) to First grade (highest). The pay scale differs not only in terms of different grades but also regarding qualifications. Secondary teachers of Third grade with a Bed qualification and seven years of service earn Nrs. 3900 per month for 13 months, including the Dashain allowance. Similarly, Tribhuvan University lecturers with seven years of service get Nrs. 4455 per month for 13 months. In order to attract Master Level teachers to higher secondary schools, it is necessary to pay the monthly salary equivalent to that of the university lecturers. The total costs and government costs for teachers have been projected at the rate of Nrs. 4500 per month (about US$ 92) for Grades 11 and 12 teachers in Tribuhuvan University, the private campuses, the private higher secondary schools and the community higher secondary schools. Also, the monthly salary scale of teachers in the Mountain regions is assumed to be 50% higher (Nrs. 6800).

31. Based on the current grant-in-aid system of the secondary schools, the projection proposes to provide grants to community higher secondary schools to meet 100% of the teachers salaries in Mountains and 50% in the rest of the regions. The projection also assumes that the government will continue to provide grants to Tribhuvan University to finance 100% of its teachers salaries. Private higher secondary schools however will not get grants for teachers salaries. The projection assumes a similar government grant-in-aid policy to estimate the costs for other educational personnel and other regular costs.

32. Private campuses are also receiving lump-sum grants from the government since 1991. These grants have ranged from Nrs. 75,000 to Nrs.100,000 for 1991. Therefore, government costs for private campuses have been projected at the rate of Nrs. 100,000 per campus per year in average.

Costs of Other Educational Personnel

33. In 1990/91 there were 4970 other educational staff (267 administrators, 2525 clerks and 2178 peons)in Tribhuvan University. There was one administrator for every 18 teachers, 9 clerks and 8 peons per administrators. These ratios have been used to project the requirements of administrators, clerks and peons in TU for Grades 11 and 12 programs. The projection of the number of administrators, clerks and peons for other Grades 11 and 12 institutions is based on the assumption of a minimum requirement of one administrator, one clerk and one peon for each institution.

34. The projection of total costs of other educational personnel assumes a monthly salary of administrators, clerks and peons for all types of institutions based on the new Tribhuvan University pay scale of the respective positions:[2]

- Administrator : Nrs 3200 (basic scale of Nrs 2900 and seven grades at the rate of Nrs. 40 per year)
- Clerks (Non-gazetted first class):Nrs. 2200 (basic scale of Nrs 2040 and seven grades at the rate of Nrs. 20 per year)
- Peons (or equivalent) : Nrs. 1300 (basic scale of Nrs. 1200 and seven grades at the rate of Nrs. 10 per year).

35. At present, there is no effective system of supervision of secondary schools. There are limited numbers of supervisors with limited funds for travel. Although the supervision of the higher secondary schools will be made through the existing mechanism, additional supervisors will be required. The projection proposes to employ one supervisor for every ten higher secondary schools and to increase the status of the supervisor to gazetted second class (technical). Based on the government employees new pay scale for gazetted second class (technical) with 28% (field allowance), the projection assumes a monthly cost of Nrs. 5000 per supervisor (basic salary Nrs. 3550, seven grades or Nrs. 350 and field allowance of Nrs. 1100).

Other Regular Costs

36. The other regular costs include expenses for stationery, public utilities (water, electricity, etc.) maintenance, laboratory materials and miscellaneous expenses. No information is available about the current expenditure rates for these activities. The projection assumes the

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[2/] The estimation of the government costs of other educational personnel assumes the same grant-in-aid policy adopted for teachers salaries.

following rates based on previous studies and mission estimates: [3]

- Stationery cost: 20 paisa per student.
- Cost of public utilities: Nrs. 30,000 for TU and Nrs. 10,000 for other institutions.
- Maintenance cost: Nrs. 25,000 for TU and Nrs.10,000 for other institutions.
- Miscellaneous expenses: Nrs. 5,000 for all institutions.
- Laboratory equipment cost: Nrs. 5,000 per science institution.

Student Fees

37. Fees for Tribhuvan University students were increased after the 1991 session as follows:

- General subjects: Nrs 700 per annum (Monthly tuition: Nrs 500 per annum, and other annual fees for registration, admission and miscellaneous).
- Science subjects: Nrs 835 (Nrs 700 as for General subjects and Nrs 135 for laboratory fees).

38. Private campuses charge an average of Nrs 1000 annually for students in general subjects. In science, the annual fees range between Nrs 4000 and Nrs 9000. Secondary schools fees for Grade 10 range between Nrs 800 and Nrs 1100 per annum. Considering the fees of different types of institutions, the following rates have been assumed in the projection:

- TU (General: Nrs. 700; Science: Nrs 835)
- Private Campus (General: Nrs 4000; Science: Nrs 6000)
- Private HSS (General: Nrs 4000; Science: Nrs 6000)
- Community HSS (General: Nrs 1500; Science: Nrs 3000)

39. It is assumed that freeships will be provided to 25% of the students in TU (which means a continuation of a current policy), 5% of the students in private campuses and private HSS and 10% of the students in community HSS. Based on these assumptions, the net revenue from students fees is estimated.

DEVELOPMENT COSTS

Costs for Improvement of the Physical Facilities

40. There is no available information on the physical facilities of secondary schools. It is, however, believed that no extra space for Grades 11 and 12 is readily available. The projection assumes therefore, that all higher secondary schools would require construction of additional classrooms, that all HSS running science programs would require construction of laboratory buildings,

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3/ The estimation of government costs of other regular costs assumes a grant-in-aid policy similar to the policy adopted for teachers salaries.

that 90% of the HSS would require construction of a hostel and that all HSS need funds for the improvement of libraries and furniture.

41. At present, the CHSE is housed in the CTSDC building at the Sanothimi Educational Complex (outside Kathmandu). A CHSE building would also need to be constructed during the projection period. The following assumptions have been made regarding the construction unit costs based on previous studies and mission estimates:

- Community and Private HSS: Nrs 1,500,000.
- Lab for science HSS : Nrs 1,000,000.
- Hostel for HSS : Nrs 500,000
- Library and Furniture Improvement : Nrs 50,000
- CHSE building : Nrs 3,000,000

42. The projections for construction assume that the government will provide a grant to CHSE to construct its building. Regarding the construction of schools, hostel, labs and improvement of library and furniture, it is assumed that the share of the government will be only 40% and all HSS. Private HSS would also get funds for infrastructure improvement. In the case of private HSS, the government may provide construction funds as grants or loans. It is believed that this policy will encourage the private schools to run higher secondary education programs.

Administration Costs of the CHSE

43. According to the proposed CHSE organization chart, the council requires 21 officers, 23 clerks and 12 lower level personnel. The projection assumes that during the 1993-97 period there will no change in the number of staff and, after 1997, the number of officers, clerks and peons will have to be increased by 25%, 50% and 100% in order to meet the growing enrollment in higher secondary schools. Based on the government employees new pay scale, the average monthly cost per staff is assumed at Nrs 4220 for officers, Nrs. 2050 for clerks (non gazetted first class with seven years of service) and Nrs 1200 for peons.

Net Income of the CHSE

44. The examination unit of the CHSE will earn income through student registration fees, examination fees and sale of books and old exam papers. The HSS will also pay registration fees to the Council. The CHSE will use its earnings in conducting the Grade 12 examination. It is assumed that the CHSE will not be involved in Grade 11 examinations. Based on the information of cost and fees from the OCE and Tribhuvan University, the following assumptions have been made for the projection exercise:

- Registration of school: Nrs 500 per school.
- Students registration: Nrs 50 per student.
  (all Grades 11 and 12 students)
- Examination fee (Grade 12): Nrs 200 per student.
- Other certificate fees: Nrs 100 per student.

- Re-totalling: (1% of Nrs 100 per student examinees)
- Sale of used papers: Nrs 0.05 per student
- Administration cost: Nrs 125 per student.

Teaching Training and Advocacy

45. The projection proposes to conduct in-service training of secondary teachers for upgrading their qualifications (Master levels). It is assumed that the duration of the in-service training will be two years. The unit cost of training is estimated to be Nrs 75,000 (Stipend of Nrs 24,000 at the rate of Nrs 2000 per month and 50% of the cost of replacing a graduate teacher in the school).

46. The number of advocacy programs is based on the number of new secondary schools (one for 10 HSS) and the unit cost of the advocacy program (orientation to teachers, community leaders and local elites about objectives and procedure of higher secondary schooling) has been calculated at Nrs.20,000.

Textbooks Development Cost

47. The CHSE had already developed a higher secondary education curriculum for four tracks : Humanities, Commerce, Science and Education which are being experimented in the experimental 31 higher secondary schools. The required number of textbooks have been estimated based on the CHSE curriculum. The estimated number of books for Grades 11 and 1 by tracks is as follows:

- Core subjects (Nepali + English)	: 4
- Humanities (3 electives)	: 6
- Commerce (3 subjects)	: 6
- Education (9 subjects)	: 9
- Science (4 subjects)	: 8
Total	33

48. The total development cost of one text book is assumed to be Nrs. 100,000. The projected estimates do not include the cost of printing and distribution as it is assumed that these activities will be carried out on a cost recovery basis.

Scholarship Costs

49. The cost for scholarships is estimated on the assumption that 5% of Grades 11 and 12 students will be provided scholarships at the rate of Nrs. 500 per month for 10 months.

R&D and Overhead Costs

50. It is assumed that the management and overhead costs for the program will not exceed 10% of the total cost. R&D activities (basically monitoring and evaluation) will amount to 1% of the total cost.

PHASE-OUT/PHASE-IN PLAN FOR CERTIFICATE LEVEL STUDENTS AT TRIBHUVAN UNIVERSITY TO THE HIGHER SECONDARY EDUCATION SYSTEM

A. PHYSICAL PROJECTIONS

PHASE-OUT/PHASE-IN PLAN

	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Phasing % Fresh	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TU CAMPUS	69.0	69.0	67.0	67.0	63.0	60.0	56.0	55.0	50.0	40.0	35.0	30.0	30.0	30.0
Private Campus	31.0	31.0	33.0	33.0	33.0	29.0	27.0	25.0	20.0	20.0	15.0	10.0	0.0	0.0
Private HSS	0.0	0.0	0.0	0.0	0.0	3.0	5.0	7.0	10.0	15.0	20.0	25.0	30.0	30.0
General HSS	0.0	0.0	0.0	0.0	4.0	8.0	12.0	13.0	20.0	25.0	30.0	35.0	40.0	40.0
Early Phasing % Fresh	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TU CAMPUS	69.0	69.0	67.0	67.0	63.0	50.0	30.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0
Private Campus	31.0	31.0	33.0	33.0	33.0	20.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Private HSS	0.0	0.0	0.0	0.0	0.0	5.0	15.0	20.0	30.0	30.0	35.0	35.0	40.0	40.0
Community HSS	0.0	0.0	0.0	0.0	4.0	25.0	45.0	55.0	70.0	70.0	65.0	65.0	60.0	60.0
Medium Term Phasing % Fresh	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TU CAMPUS	69.0	69.0	67.0	67.0	63.0	52.0	45.0	35.0	25.0	20.0	10.0	0.0	0.0	0.0
Private Campus	31.0	31.0	33.0	33.0	33.0	24.0	20.0	15.0	10.0	5.0	0.0	0.0	0.0	0.0
Private HSS	0.0	0.0	0.0	0.0	0.0	6.0	10.0	15.0	25.0	30.0	40.0	40.0	40.0	40.0
Community HSS	0.0	0.0	0.0	0.0	4.0	18.0	25.0	35.0	40.0	45.0	50.0	60.0	60.0	60.0
Late Phasing % Fresh	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TU CAMPUS	69.0	69.0	67.0	67.0	63.0	60.0	56.0	55.0	50.0	40.0	35.0	30.0	30.0	30.0
Private Campus	31.0	31.0	33.0	33.0	33.0	29.0	27.0	25.0	20.0	20.0	15.0	10.0	0.0	0.0
Private HSS	0.0	0.0	0.0	0.0	0.0	3.0	5.0	7.0	10.0	15.0	20.0	25.0	30.0	30.0
Community HSS	0.0	0.0	0.0	0.0	4.0	8.0	12.0	13.0	20.0	25.0	30.0	35.0	40.0	40.0
2. Phasing Number Fresh	37.0	38.7	42.3	31.8	46.1	48.9	53.4	54.9	57.3	58.7	61.2	66.9	74.9	82.4
TU CAMPUS	26.0	26.7	28.3	21.3	29.0	29.3	29.9	30.2	28.7	23.5	21.4	20.1	22.5	24.7
Private Campus	11.0	12.0	14.0	10.5	15.2	14.2	14.4	13.7	11.5	11.7	9.2	6.7	0.0	0.0
Private HSS	0.0	0.0	0.0	0.0	0.0	1.5	2.7	3.8	5.7	8.8	12.2	16.7	22.5	24.7
Community HSS	0.0	0.0	0.0	0.0	1.8	3.9	6.4	7.1	11.5	14.7	18.4	23.4	30.0	33.0
3. TU Students '000	43.0	50.4	55.5	50.4	52.7	58.3	60.3	61.3	60.2	53.8	47.1	43.1	43.9	47.9
Grade 11	26.0	29.6	31.6	24.8	31.8	32.8	33.5	33.9	32.4	27.0	24.4	22.7	24.9	27.3
Fresh	26.0	26.7	28.3	21.3	29.0	29.3	29.9	30.2	28.7	23.5	21.4	20.1	22.5	24.7
Repeaters	0.0	2.9	3.3	3.5	2.7	3.5	3.6	3.7	3.7	3.6	2.9	2.6	2.4	2.6
Grade 12	17.0	20.9	23.9	25.7	20.9	25.5	26.8	27.4	27.8	26.7	22.8	20.4	19.0	20.5
Promotees	17.0	19.0	21.6	23.1	18.1	23.2	23.9	24.5	24.7	23.7	19.8	17.9	16.7	18.4
Repeaters	0.0	1.9	2.3	2.6	2.8	2.3	2.8	2.9	3.0	3.1	2.9	2.5	2.2	2.1

	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
4. Private Campus Students '000	19.0	22.1	26.0	24.6	26.8	29.2	29.3	28.8	26.0	24.2	21.5	16.8	7.6	1.5
Grade 11	11.0	13.2	15.4	12.2	16.6	16.0	16.2	15.5	13.2	13.2	10.6	7.8	0.8	0.1
Fresh	11.0	12.0	14.0	10.5	15.2	14.2	14.4	13.7	11.5	11.7	9.2	6.7	0.0	0.0
Repeaters	0.0	1.2	1.5	1.7	1.3	1.8	1.8	1.8	1.7	1.4	1.4	1.1	0.8	0.1
Grade 12	8.0	8.9	10.6	12.4	10.3	13.2	13.1	13.3	12.8	11.0	10.9	9.0	6.8	1.4
Promotees	8.0	8.0	9.6	11.3	8.9	12.1	11.7	11.8	11.3	9.6	9.7	7.8	5.8	0.6
Repeaters	0.0	0.9	1.0	1.2	1.4	1.1	1.5	1.4	1.5	1.4	1.2	1.2	1.0	0.7
5. Private HSS Students '000	0.0	0.0	0.0	0.0	0.0	1.5	4.1	6.6	9.9	14.9	21.6	29.9	40.6	49.1
Grade 11	0.0	0.0	0.0	0.0	0.0	1.5	2.8	4.0	6.0	9.2	12.9	17.6	23.7	26.4
Fresh	0.0	0.0	0.0	0.0	0.0	1.5	2.7	3.8	5.7	8.8	12.2	16.7	22.5	24.7
Repeaters	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.6	0.9	1.2	1.7
Grade 12	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.6	3.8	5.7	8.7	12.3	16.9	22.7
Promotees	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.4	3.6	5.3	8.1	11.3	15.5	20.9
Repeaters	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.6	1.0	1.4	1.9
6. Community HSS Students '000	0.0	0.0	0.0	0.0	1.8	5.5	10.0	13.2	18.7	25.7	32.9	41.8	53.3	62.9
Grade 11	0.0	0.0	0.0	0.0	1.8	4.1	6.9	7.9	12.3	16.0	20.1	25.6	32.7	36.4
Fresh	0.0	0.0	0.0	0.0	1.8	3.9	6.4	7.1	11.5	14.7	18.4	23.4	30.0	33.0
Repeaters	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.8	0.9	1.4	1.7	2.2	2.7	3.5
Grade 12	0.0	0.0	0.0	0.0	0.0	1.3	3.1	5.4	6.4	9.7	12.8	16.2	20.7	26.5
Promotees	0.0	0.0	0.0	0.0	0.0	1.3	3.0	5.0	5.8	9.0	11.7	14.8	18.9	24.2
Repeaters	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.6	0.7	1.1	1.4	1.8	2.3
7. Grade 11	34.7	35.5	42.8	38.3	51.5	55.8	60.8	62.8	65.5	67.1	69.6	75.4	83.9	92.0
8. Grade 12	26.0	24.8	29.0	40.4	33.5	42.5	46.8	51.2	53.3	55.9	58.0	60.8	66.2	74.1
9. Grade 11 + 12	60.7	60.3	71.8	78.6	85.0	98.2	107.6	114.0	118.8	122.9	127.6	136.2	150.1	166.1

ENROLLMENT BY FACULTY ('000)

	93-97	98-02	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
TOTAL	1.000	1.000	71.8	78.6	85.0	98.2	107.6	114.0	118.8	122.9	127.6	136.2	150.1	166.1
Science	0.106	0.136	7.6	8.3	9.0	10.4	11.4	12.1	12.6	16.7	17.4	18.5	20.4	22.6
Education	0.051	0.077	3.7	4.0	4.3	5.0	5.5	5.8	6.1	9.5	9.8	10.5	11.6	12.8
Law	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Management	0.316	0.253	22.7	24.8	26.9	31.0	34.0	36.0	37.5	31.1	32.3	34.5	38.0	42.0
Humanities	0.527	0.534	37.8	41.4	44.8	51.8	56.7	60.1	62.6	65.7	68.1	72.7	80.1	88.7
1. TU	1.000	1.000	47.1	50.4	52.7	58.3	60.3	61.3	60.2	53.8	47.1	43.1	43.9	47.9
Science	0.136	0.136	6.4	6.9	7.2	7.9	8.2	8.3	8.2	7.3	6.4	5.9	6.0	6.5
Education	0.076	0.076	3.6	3.9	4.0	4.5	4.6	4.7	4.6	4.1	3.6	3.3	3.4	3.7
Law	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Management	0.253	0.253	11.9	12.7	13.3	14.7	15.2	15.5	15.2	13.6	11.9	10.9	11.1	12.1
Humanities	0.535	0.535	25.2	27.0	28.2	31.2	32.3	32.8	32.2	28.8	25.2	23.1	23.5	25.6

ENROLLMENT BY FACULTY ('000)

	93-97	98-02	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
2. Private Campus	1.000	1.000	24.8	24.6	26.8	29.2	29.3	28.8	26.0	24.2	21.5	16.8	7.6	1.5
Science	0.048	0.048	1.2	1.2	1.3	1.4	1.4	1.4	1.3	1.2	1.0	0.8	0.4	0.1
Education	0.002	0.002	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Law	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Management	0.436	0.436	10.8	10.7	11.7	12.7	12.8	12.6	11.3	10.6	9.4	7.3	3.3	0.6
Humanities	0.513	0.513	12.7	12.6	13.8	15.0	15.0	14.8	13.3	12.4	11.0	8.6	3.9	0.7
3. Private HSS	1.000	1.000				1.5	4.1	6.6	9.9	14.9	21.6	29.9	40.6	49.1
Science	0.163	0.163				0.2	0.7	1.1	1.6	2.4	3.5	4.9	6.6	8.0
Education	0.085	0.085				0.1	0.3	0.6	0.8	1.3	1.8	2.5	3.4	4.2
Law	0.000	0.000				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Management	0.291	0.291				0.4	1.2	1.9	2.9	4.3	6.3	8.7	11.8	14.3
Humanities	0.461	0.461				0.7	1.9	3.1	4.5	6.9	10.0	13.8	18.7	22.6
4. Community HSS					5.5	9.3	13.9	17.3	22.9	30.0	37.3	46.3	58.0	67.7
Science					0.6	0.8	1.1	1.3	1.6	5.8	6.4	7.0	7.5	8.0
Education					0.3	0.4	0.5	0.5	0.6	4.0	4.3	4.6	4.7	5.0
Law					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Management					1.9	3.1	4.8	6.1	8.2	2.6	4.7	7.5	11.8	15.0
Humanities					2.9	4.9	7.5	9.5	12.6	17.6	21.9	27.2	34.1	39.7
5. Total HSS					5.5	10.7	18.0	23.9	32.7	45.0	59.0	76.2	98.6	116.8
Science					0.6	1.1	1.8	2.4	3.2	8.2	9.9	11.8	14.1	16.0
Education					0.3	0.5	0.8	1.1	1.4	5.3	6.2	7.2	8.2	9.1
Law					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Management					1.9	3.6	6.0	8.0	11.0	7.0	11.0	16.2	23.6	29.3
Humanities					2.9	5.6	9.4	12.5	17.1	24.5	31.9	41.0	52.8	62.4

HIGHER SECONDARY EDUCATION ENROLLMENT BY REGION

	Ratio/91	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. TU Enrollment	1.000	48768	54510	50445	52667	58297	60277	61300	60152	53754	47122	43110	43885	47871
Eastern Mountain	0.000	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastern Hill	0.058	2426	3160	2924	3053	3380	3494	3554	3487	3116	2732	2499	2544	2775
Eastern Terai	0.149	7377	8131	7525	7856	8696	8991	9144	8973	8018	7029	6430	6546	7141
Central Mountain	0.000	0	0	0	0	0	0	0	0	0	0	0	0	0
Central Hill	0.004	230	226	209	218	242	250	254	249	223	195	179	182	198
Central Terai	0.112	5346	6132	5675	5925	6558	6781	6896	6767	6047	5301	4850	4937	5385
Central Valley	0.406	21183	22130	20480	21382	23667	24471	24887	24421	21823	19131	17502	17817	19435
Western Mountain	0.000	0	0	0	0	0	0	0	0	0	0	0	0	0
Western Hill	0.158	8089	8622	7979	8330	9221	9534	9696	9514	8502	7453	6819	6941	7572
Western Terai	0.041	1690	2245	2078	2169	2401	2483	2525	2477	2214	1941	1775	1807	1972

HIGHER SECONDARY EDUCATION ENROLLMENT BY REGION

	Ratio/91	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Mid-Western mountain	0.003	106	147	136	142	157	163	165	162	145	127	116	118	129
Mid-Western Hill	0.004	145	209	193	202	224	231	235	231	206	181	165	168	184
Mid-Western Terai	0.058	1911	3162	2926	3055	3382	3497	3556	3489	3118	2733	2501	2546	2777
Far-Western Mountain	0.000	0	0	0	0	0	0	0	0	0	0	0	0	0
Far-Western Hill	0.003	143	157	145	152	168	174	177	173	155	136	124	126	138
Far-Western Terai	0.003	122	189	175	183	202	209	213	209	186	163	149	152	166
2. Private Campus Enrollment	1.000	20094	25785	24596	26809	29201	29307	28763	25953	24215	21495	16336	7606	1452
Eastern Mountain	0.020	351	526	502	547	596	598	587	529	494	438	343	155	30
Eastern Hill	0.034	1163	868	828	902	983	987	968	874	815	724	567	256	49
Eastern Terai	0.179	3935	4604	4392	4787	5214	5233	5136	4634	4324	3838	3006	1358	259
Central Mountain	0.006	238	165	157	172	187	188	184	166	155	138	108	49	9
Central Hill	0.064	1100	1641	1565	1706	1858	1865	1831	1652	1541	1368	1071	484	92
Central Terai	0.105	2305	2712	2587	2820	3071	3082	3025	2730	2547	2261	1771	800	153
Central Valley	0.281	5895	7256	6921	7544	8217	8247	8094	7303	6814	6049	4738	2140	409
Western Mountain	0.000	0	0	0	0	0	0	0	0	0	0	0	0	0
Western Hill	0.108	1699	2790	2661	2901	3160	3171	3112	2808	2620	2326	1822	823	157
Western Terai	0.058	1205	1496	1427	1555	1694	1700	1669	1506	1405	1247	977	441	84
Mid-Western mountain	0.000	0	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Western Hill	0.061	1182	1570	1498	1632	1778	1784	1751	1580	1474	1309	1025	463	88
Mid-Western Terai	0.018	133	465	444	483	527	529	519	468	437	388	304	137	26
Far-Western Mountain	0.008	187	217	207	226	246	247	242	218	204	181	142	64	12
Far-Western Hill	0.007	177	183	175	190	207	208	204	184	172	153	119	54	10
Far-Western Terai	0.050	524	1292	1232	1343	1463	1468	1441	1300	1213	1077	844	381	73
3. Community HSS Enrollment	1.000				5544	9268	13937	17291	22852	30028	37340	46318	58034	67719
Eastern Mountain	0.023				128	213	321	398	526	691	859	1065	1335	1558
Eastern Hill	0.093				516	862	1296	1608	2125	2793	3473	4308	5397	6298
Eastern Terai	0.179				992	1659	2495	3095	4090	5375	6684	8291	10388	12122
Central Mountain	0.014				78	130	195	242	320	420	523	648	812	948
Central Hill	0.062				344	575	864	1072	1417	1862	2315	2872	3598	4199
Central Terai	0.131				726	1214	1826	2265	2994	3934	4892	6068	7602	8871
Central Valley	0.089				493	825	1240	1539	2034	2673	3323	4122	5165	6027
Western Mountain	0.001				6	9	14	17	23	30	37	46	58	68
Western Hill	0.212				1175	1965	2955	3666	4845	6366	7916	9819	12303	14356
Western Terai	0.051				283	473	711	882	1165	1531	1904	2362	2960	3454
Mid-Western mountain	0.007				39	65	98	121	160	210	261	324	406	474
Mid-Western Hill	0.044				244	408	613	761	1005	1321	1643	2038	2554	2980
Mid-Western Terai	0.041				227	380	571	709	937	1231	1531	1899	2379	2776
Far-Western Mountain	0.012				67	111	167	207	274	360	448	556	696	813
Far-Western Hill	0.019				105	176	265	329	434	571	709	880	1103	1287
Far-Western Terai	0.022				122	204	307	380	503	661	821	1019	1277	1490

HIGHER SECONDARY EDUCATION ENROLLMENT BY REGION

	Ratio/91	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
4. Private HSS Enrollment	1.000					1466	4063	6620	9854	14945	21636	29922	40565	49089
Eastern Mountain	0.004					6	16	26	39	60	87	120	162	196
Eastern Hill	0.022					32	89	146	217	329	476	658	892	1080
Eastern Terai	0.213					312	865	1410	2099	3183	4608	6373	8640	10456
Central Mountain	0.003					4	12	20	30	45	65	90	122	147
Central Hill	0.021					31	85	139	207	314	454	628	852	1031
Central Terai	0.064					94	260	424	631	956	1385	1915	2596	3142
Central Valley	0.518					759	2105	3429	5105	7742	11207	15500	21013	25428
Western Mountain	0.000					0	0	0	0	0	0	0	0	0
Western Hill	0.090					132	366	596	887	1345	1947	2693	3651	4418
Western Terai	0.008					12	33	53	79	120	173	239	325	393
Mid-Western mountain	0.000					0	0	0	0	0	0	0	0	0
Mid-Western Hill	0.005					7	20	33	49	75	108	150	203	245
Mid-Western Terai	0.034					50	138	225	335	508	736	1017	1379	1669
Far-Western Mountain	0.000					0	0	0	0	0	0	0	0	0
Far-Western Hill	0.003					4	12	20	30	45	65	90	122	147
Far-Western Terai	0.015					22	61	99	148	224	325	449	608	736

HIGHER SECONDARY EDUCATION INSTITUTIONS BY REGION

	Ratio/91	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. TU Campuses			56	56	54	60	62	63	62	55	48	44	45	49
Eastern Mountain	0		0	0	0	0	0	0	0	0	0	0	0	0
Eastern Hill	790		4	4	4	4	4	4	4	4	3	3	3	4
Eastern Terai	1016		8	8	8	9	9	9	9	8	7	6	6	7
Central Mountain	0		0	0	0	0	0	0	0	0	0	0	0	0
Central Hill	226		1	1	1	1	1	1	1	1	1	1	1	1
Central Terai	1226		5	5	5	5	6	6	6	5	4	4	4	4
Central Valley	1106		20	20	19	21	22	23	22	20	17	16	16	18
Western Mountain	0		0	0	0	0	0	0	0	0	0	0	0	0
Western Hill	1078		8	8	8	9	9	9	9	8	7	6	6	7
Western Terai	748		3	3	3	3	3	3	3	3	3	2	2	3
Mid-Western mountain	147		1	1	1	1	1	1	1	1	1	1	1	1
Mid-Western Hill	209		1	1	1	1	1	1	1	1	1	1	1	1
Mid-Western Terai	1054		3	3	3	3	3	3	3	3	3	2	2	3
Far-Western Mountain	0		0	0	0	0	0	0	0	0	0	0	0	0
Far-Western Hill	157		1	1	1	1	1	1	1	1	1	1	1	1
Far-Western Terai	189		1	1	1	1	1	1	1	1	1	1	1	1

HIGHER SECONDARY EDUCATION INSTITUTIONS BY REGION

	Ratio/91	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
2. Private Campuses		93	133	133	97	105	106	104	94	87	77	61	27	5
Eastern Mountain	131	4	5	5	4	5	5	4	4	4	3	3	1	0
Eastern Hill	174	5	3	3	5	6	6	6	5	5	4	3	1	0
Eastern Terai	419	11	18	18	11	12	12	12	11	10	9	7	3	1
Central Mountain	83	2	2	2	2	2	2	2	2	2	2	1	1	0
Central Hill	328	5	7	7	5	6	6	6	5	5	4	3	1	0
Central Terai	339	8	11	11	8	9	9	9	8	8	7	5	2	0
Central Valley	279	26	36	36	27	29	30	29	26	24	22	17	8	1
Western Mountain	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Western Hill	233	12	25	25	12	14	14	13	12	11	10	8	4	1
Western Terai	249	6	8	8	6	7	7	7	6	6	5	4	2	0
Mid-Western mountain	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Western Hill	314	5	5	5	5	6	6	6	5	5	4	3	1	0
Mid-Western Terai	232	2	3	3	2	2	2	2	2	2	2	1	1	0
Far-Western Mountain	109	2	2	2	2	2	2	2	2	2	2	1	1	0
Far-Western Hill	61	3	5	5	3	3	3	3	3	3	3	2	1	0
Far-Western Terai	646	2	3	3	2	2	2	2	2	2	2	1	1	0
3. Community HSS (Programs)	Class Sz.				32	72	109	135	178	234	291	361	453	528
Eastern Mountain	44				0	2	4	5	6	8	10	12	15	18
Eastern Hill	68				2	6	10	12	16	21	26	32	40	46
Eastern Terai	104				1	8	12	15	20	26	32	40	50	58
Central Mountain	40				0	2	2	3	4	5	7	8	10	12
Central Hill	54				4	5	8	10	13	17	21	27	33	39
Central Terai	72				4	8	13	16	21	27	34	42	53	62
Central Valley	64				1	6	10	12	16	21	26	32	40	47
Western Mountain	40				1	0	0	0	0	0	0	1	1	1
Western Hill	59				6	17	25	31	41	54	67	83	104	122
Western Terai	58				1	4	6	8	10	13	16	20	26	30
Mid-Western mountain	40				0	1	1	2	2	3	3	4	5	6
Mid-Western Hill	52				5	4	6	7	10	13	16	20	25	29
Mid-Western Terai	62				4	3	5	6	8	10	12	15	19	22
Far-Western Mountain	40				1	1	2	3	3	5	6	7	9	10
Far-Western Hill	40				0	2	3	4	5	7	9	11	14	16
Far-Western Terai	66				2	2	2	3	4	5	6	8	10	11

HIGHER SECONDARY EDUCATION INSTITUTIONS BY REGION

	Ratio/91	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
4. Private HSS (Programs)						11	29	48	72	108	157	217	294	356
Eastern Mountain	50					0	0	0	0	1	1	1	2	2
Eastern Hill	74					0	1	1	1	2	3	4	6	7
Eastern Terai	104					2	4	7	10	15	22	31	42	50
Central Mountain	40					0	0	0	0	1	1	1	2	2
Central Hill	56					0	1	1	2	3	4	6	8	9
Central Terai	70					1	2	3	5	7	10	14	19	22
Central Valley	64					6	16	27	40	60	88	121	164	199
Western Mountain	1					0	0	0	0	0	0	0	0	0
Western Hill	57					1	3	5	8	12	17	24	32	39
Western Terai	55					0	0	0	1	1	2	2	3	4
Mid-Western mountain	1					0	0	0	0	0	0	0	0	0
Mid-Western Hill	65					0	0	0	0	1	1	1	2	2
Mid-Western Terai	64					0	1	2	3	4	6	8	11	13
Far-Western Mountain	1					0	0	0	0	0	0	0	0	0
Far-Western Hill	40.0					0	0	0	0	1	1	1	2	2
Far-Western Terai	67.0					0	0	1	1	2	2	3	5	5

HIGHER SECONDARY EDUCATION INSTITUTIONS (SUMMARY)

		89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
No. of Institute (TU)			56	56	54	60	62	63	62	55	48	44	45	49
Mountain			1	1	1	1	1	1	1	1	1	1	1	1
Hill			15	15	14	16	17	17	17	15	13	12	12	13
Valley			20	20	19	21	22	23	22	20	17	16	16	18
Terai			20	20	19	21	22	22	22	20	17	16	16	18
No. of Private Campus			133	133	97	105	106	104	94	87	77	61	27	5
Mountain			9	9	8	9	9	9	8	8	7	5	2	0
Hill			45	45	31	34	34	33	30	28	25	20	9	2
Valley			36	36	27	29	30	29	26	24	22	17	8	1
Terai			43	43	30	33	33	32	29	27	24	19	9	2
No. of Private HSS						7	19	31	46	70	101	140	190	229
Mountain	1.0					0	0	1	1	1	2	2	3	4
Hill	1.5					2	5	8	11	17	25	34	47	57
Valley	2.0					3	8	13	20	30	44	61	82	99
Terai	2.0					2	6	9	14	21	31	42	58	70
No. of Community HSS					32	63	95	118	155	204	254	315	395	460
Mountain	1.0				2	6	10	12	16	21	26	32	40	46
Hill	1.5				17	32	49	60	80	105	130	162	202	236
Valley	2.0				1	3	5	6	8	10	13	16	20	24
Terai	2.0				12	21	32	39	52	68	85	105	132	154

HIGHER SECONDARY EDUCATION INSTITUTIONS (SUMMARY)

	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
SUMMARY													
Institution		189	189	183	235	281	315	357	417	481	560	657	744
1. TU Campus		56	56	54	60	62	63	62	55	48	44	45	49
2. Private Campus		133	133	97	105	106	104	94	87	77	61	27	5
3. Private HSS				0	7	19	31	46	70	101	140	190	229
4. Community HSS				32	63	95	118	155	204	254	315	395	460
5. HSS Total				32	70	114	148	201	274	355	455	584	690
Region		189	189	183	235	281	315	357	417	481	560	657	744
Mountain		10	10	11	17	20	22	26	30	35	40	46	52
Hill		60	60	63	84	104	118	138	165	193	227	270	308
Valley		56	56	47	57	65	71	76	85	96	109	126	142
Terai		63	63	61	77	93	104	117	137	157	183	214	243
6. Community HSS Science Students				556	836	1130	1278	1556	5806	6381	6970	7468	8017
Total HSS Students				1844	5457	10012	13249	18688	25740	32923	41768	53348	62893
Students per Program				58	75	92	98	105	110	113	116	118	119
Science Programs				10	11	12	13	15	53	56	60	63	67
Other Students				1	5	9	12	17	20	27	35	46	55
7. Private HSS Science Students				0	239	662	1079	1606	2436	3527	4877	6612	8002
Total HSS Students				0	1466	4063	6620	9854	14945	21636	29922	40565	49089
Students per Program					138	138	138	138	138	138	138	138	138
Science Programs					2	5	8	12	18	26	35	48	58
Other Students				0	1227	3401	5541	8248	12509	18109	25045	33953	41088
8. TU Science Students				7156	7921	8191	8330	8174	7304	6403	5858	5963	6505
Total Students				52667	58297	60277	61300	60152	53754	47122	43110	43885	47871
Students per Program				973	973	973	973	973	973	973	973	973	973
Science Programs				7	8	8	9	8	8	7	6	6	7
Other Students				45510	50376	52087	52971	51979	46450	40719	37252	37922	41366
9. Private Campus Science Students				1300	1416	1421	1395	1258	1174	1042	816	369	70
Total Students				26809	29201	29307	28763	25953	24215	21495	16836	7606	1452
Students per Program				277	277	277	277	277	277	277	277	277	277
Science Programs				5	5	5	5	5	4	4	3	1	0
Other Students				25509	27785	27886	27368	24694	23041	20453	16019	7238	1382
HSS by region		0	0	32	70	114	148	201	274	355	455	584	690
Mountain		0	0	2	6	10	12	16	22	27	34	43	50
Hill		0	0	17	34	53	68	91	122	155	196	249	293
Valley		0	0	1	6	13	19	28	41	57	77	102	123
Terai		0	0	12	23	38	49	66	90	116	148	190	224
Science Programs		5	5	22	26	30	34	39	81	90	102	118	132
TU		0	0	7	8	8	9	8	8	7	6	6	7
Private Campus		5	5	5	5	5	4	4	3	1	0	0	0
Private HSS					2	5	8	12	18	26	35	48	58
Community HSS				10	11	12	13	15	53	56	60	63	67

NUMBER OF TEACHERS

	Ratio/91	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
TU Teachers		2498	2742	2537	2649	2932	3032	3083	3026	2704	2370	2168	2207	2408
Eastern Mountain	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastern Hill	33	74	96	89	93	102	106	108	106	94	83	76	77	84
Eastern Terai	21	351	387	358	374	414	428	435	427	382	335	306	312	340
Central Mountain	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Central Hill	8	29	28	26	27	30	31	32	31	28	24	22	23	25
Central Terai	19	281	323	299	312	345	357	363	356	318	279	255	260	283
Central Valley	17	1246	1302	1205	1258	1392	1439	1464	1437	1284	1125	1030	1048	1143
Western Mountain	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Western Hill	22	368	392	363	379	419	433	441	432	386	339	310	316	344
Western Terai	25	68	90	83	87	96	99	101	99	89	78	71	72	79
Mid-Western mountain	33	3	4	4	4	5	5	5	5	4	4	4	4	4
Mid-Western Hill	24	6	9	8	8	9	10	10	10	9	8	7	7	8
Mid-Western Terai	39	49	81	75	78	87	90	91	89	80	70	64	65	71
Far-Western Mountain	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Far-Western Hill	12	12	13	12	13	14	14	15	14	13	11	10	11	11
Far-Western Terai	11	11	17	16	17	18	19	19	19	17	15	14	14	15
1. TU Teachers Summary		2498	2742	2537	2649	2932	3032	3083	3026	2704	2370	2168	2207	2408
Mountain		3	4	4	4	5	5	5	5	4	4	4	4	4
Hill		488	538	498	520	575	595	605	593	530	465	425	433	472
Valley		1246	1302	1205	1258	1392	1439	1464	1437	1284	1125	1030	1048	1143
Terai		760	898	831	868	960	993	1010	991	886	776	710	723	789
Private Campus Teachers		804	1031	984	1072	1168	1172	1151	1038	969	860	673	304	58
Eastern Mountain	25.0	14	21	20	22	24	24	23	21	20	18	14	6	1
Eastern Hill	25.0	47	35	33	36	39	39	39	35	33	29	23	10	2
Eastern Terai	25.0	157	184	176	191	209	209	205	185	173	154	120	54	10
Central Mountain	25.0	10	7	6	7	7	8	7	7	6	6	4	2	0
Central Hill	25.0	44	66	63	68	74	75	73	66	62	55	43	19	4
Central Terai	25.0	92	108	103	113	123	123	121	109	102	90	71	32	6
Central Valley	25.0	236	290	277	302	329	330	324	292	273	242	190	86	16
Western Mountain	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Western Hill	25.0	68	112	106	116	126	127	124	112	105	93	73	33	6
Western Terai	25.0	48	60	57	62	68	68	67	60	56	50	39	18	3
Mid-Western mountain	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Western Hill	25.0	47	63	60	65	71	71	70	63	59	52	41	19	4
Mid-Western Terai	25.0	5	19	18	19	21	21	21	19	17	16	12	5	1
Far-Western Mountain	25.0	7	9	8	9	10	10	10	9	8	7	6	3	0
Far-Western Hill	25.0	7	7	7	8	8	8	8	7	7	6	5	2	0
Far-Western Terai	25.0	21	52	49	54	59	59	58	52	49	43	34	15	3

NUMBER OF TEACHERS

	Ratio/91	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
2. Private Campus Teachers		804	1031	984	1072	1168	1172	1151	1038	969	860	673	304	58
Mountain	25.0	31	36	35	38	41	41	41	37	34	30	24	11	2
Hill	25.0	213	282	269	293	319	321	315	284	265	235	184	83	16
Valley	25.0	236	290	277	302	329	330	324	292	273	242	190	86	16
Terai	25.0	324	423	403	440	479	481	472	426	397	352	276	125	24
3. Private HSS Teachers					0	64	177	288	428	649	940	1300	1763	2133
Mountain	5.0	1.0			0	1	2	3	4	6	8	12	16	19
Hill	5.0	1.5			0	13	35	57	85	129	187	259	350	424
Valley	5.0	2.0			0	30	82	134	199	302	438	605	821	993
Terai	5.0	2.0			0	21	58	94	140	212	307	425	576	697
4. Community HSS Teachers					268	517	778	965	1276	1677	2085	2586	3240	3781
Mountain	5.0	1.0			10	32	48	59	78	103	128	159	199	232
Hill	5.0	1.5			128	242	364	452	598	785	977	1211	1518	1771
Valley	5.0	2.0			10	32	48	60	79	104	130	161	202	235
Terai	5.0	2.0			120	211	317	394	520	684	850	1055	1321	1542
5. Summary														
No. of Teachers		3301	3773	3521	3989	4682	5159	5487	5768	5998	6255	6728	7515	8380
TU		2498	2742	2537	2649	2932	3032	3083	3026	2704	2370	2168	2207	2408
Private Campus		804	1031	984	1072	1168	1172	1151	1038	969	860	673	304	58
Private HSS		0	0	0	0	64	177	288	428	649	940	1300	1763	2133
Community HSS		0	0	0	268	517	778	965	1276	1677	2085	2586	3240	3781
Total HSS		0	0	0	268	581	955	1253	1704	2326	3025	3886	5003	5914
Stock TU Teachers			3076	2984	2894	2807	2764	2770	2790	2784	2674	2494	2312	2208
Transfer Required			334	446	245	-125	-268	-314	-236	80	304	325	104	-200
Transfer to HSS						-41	-88	-104	-78	27	100	107	34	-66

TEACHER TRAINING

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Master Level Secondary Teachers	0.091	1058	1106	1162	1166	1206	1280	1397	1506	1580	1623	1677	1760
Eastern Mountain	0.018	5	5	6	6	6	7	8	9	9	10	11	12
Eastern Hill	0.020	17	19	20	21	23	25	29	32	36	39	42	47
Eastern Terai	0.076	104	109	114	115	120	129	142	155	165	172	181	194
Central Mountain	0.022	5	5	5	5	5	5	6	6	6	6	6	7
Central Hill	0.055	41	44	46	47	50	54	61	68	73	78	84	91
Central Terai	0.064	77	78	82	80	80	83	89	94	96	97	99	103
Central Valley	0.222	471	486	510	504	512	531	564	589	595	584	572	562

TEACHER TRAINING

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Western Mountain	0.000	0	0	0	0	0	0	0	0	0	0	0	0
Western Hill	0.055	129	139	146	152	162	178	201	225	246	264	285	313
Western Terai	0.110	49	50	53	52	53	56	60	64	67	68	70	73
Mid-Western mountain	0.011	2	2	2	2	2	2	3	3	3	3	3	4
Mid-Western Hill	0.039	21	23	24	26	28	32	36	42	46	51	56	62
Mid-Western Terai	0.082	30	32	34	35	37	40	45	50	54	58	62	68
Far-Western Mountain	0.068	15	16	16	16	17	18	20	21	23	23	24	26
Far-Western Hill	0.094	39	40	42	42	43	45	49	53	55	57	59	62
Far-Western Terai	0.203	53	57	60	63	67	74	85	95	105	113	122	135
Transfer Master Teachers		53	71	77	60	74	89	109	112	104	96	102	116
Summary		1058	1106	1162	1166	1206	1280	1397	1506	1580	1623	1677	1760
Mountain		27	28	30	30	31	33	36	39	41	43	45	48
Hill		247	265	279	287	306	334	377	420	457	488	526	576
Valley		471	486	510	504	512	531	564	589	595	584	572	562
Terai		313	327	343	345	358	382	421	458	487	508	535	573
Delta MA Teachers			48	55	4	41	74	117	109	74	44	54	83
3. Master Level Teacher (NEW)	0.15	0	0	40	47	56	45	68	93	105	129	167	137
3a. Transfer From TU					-41	-88	-104	-78	27	100	107	34	-66
Delta HSS Teachers			0	268	314	374	298	451	622	699	861	1117	911
4. Training Required (in Service)					248	332	269	352	391	390	529	813	725

B. FINANCIAL PROJECTIONS

Regular Costs

GOVERNMENT COST OF TEACHERS

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. TU Teachers		2741.9	2537.5	2649.2	2932.4	3032.0	3083.5	3025.7	2703.9	2370.3	2168.5	2207.5	2408.0
Salary cost (Million)	4500.0	160.4	148.4	155.0	171.5	177.4	180.4	177.0	158.2	138.7	126.9	129.1	140.9
Government Cost	1.0	160.4	148.4	155.0	171.5	177.4	180.4	177.0	158.2	138.7	126.9	129.1	140.9
2. Private Campuses No		133	97	105	106	104	94	87	77	61	27	5	0
Salary Cost	4500.0	60.3	57.6	62.7	68.3	68.6	67.3	60.7	56.7	50.3	39.4	17.8	3.4
Government Grant	100.0	13.3	9.7	10.5	10.6	10.4	9.4	8.7	7.7	6.1	2.7	0.5	0.0
3. Community HSS Teachers		0.0	0.0	267.5	517.4	778.1	965.4	1275.9	1676.5	2084.8	2586.0	3240.2	3780.9
Mountain		0.0	0.0	10.0	31.8	47.8	59.3	78.4	103.1	128.1	159.0	199.2	232.4
Others		0.0	0.0	257.5	485.6	730.3	906.0	1197.4	1573.5	1956.6	2427.1	3041.0	3548.5
SALARY COST		0.0	0.0	15.9	31.2	46.9	58.2	77.0	101.2	125.8	156.0	195.5	228.1
Mountain	6800.0	0.0	0.0	0.9	2.8	4.2	5.2	6.9	9.1	11.3	14.1	17.6	20.5
Others	4500.0	0.0	0.0	15.1	28.4	42.7	53.0	70.0	92.0	114.5	142.0	177.9	207.6
Government Cost		0.0	0.0	8.4	17.0	25.6	31.7	42.0	55.1	68.6	85.0	106.6	124.3
Mountain	1.00	0.00	0.00	0.88	2.81	4.23	5.25	6.93	9.11	11.33	14.05	17.61	20.54
Others	0.50	0.00	0.00	7.53	14.20	21.36	26.50	35.02	46.02	57.23	70.99	88.95	103.79
4. Private HSS Teachers		0.0	0.0	0.0	63.7	176.6	287.7	428.2	649.5	940.2	1300.3	1762.8	2133.3
SALARY COST	4500.0	0.0	0.0	0.0	0.3	0.8	1.3	1.9	2.9	4.2	5.9	7.9	9.6
Government Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Total Cost of Teachers		220.7	206.0	233.7	271.4	293.7	307.2	316.6	318.9	319.0	328.1	350.4	382.0
Government Cost		173.7	158.1	173.9	199.1	213.3	221.5	227.7	221.1	213.3	214.6	236.2	265.2

COST FOR OTHER EDUCATIONAL PERSONNEL

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Administrators		284	272	274	336	386	422	461	510	563	635	733	827
TU	18.2	151	139	146	161	167	169	166	149	130	119	121	132
Private Campus	1.0	133	133	97	105	106	104	94	87	77	61	27	5
Private HSS	1.0	0	0	0	7	19	31	46	70	101	140	190	229
Community HSS	1.0	0	0	32	63	95	118	155	204	254	315	395	460
2. Clerks		1549	1444	1497	1690	1785	1845	1858	1758	1657	1635	1752	1939
TU	9.4	1416	1311	1368	1515	1566	1593	1563	1397	1224	1120	1140	1244
Private Campus	1.0	133	133	97	105	106	104	94	87	77	61	27	5
Private HSS	1.0	0	0	0	7	19	31	46	70	101	140	190	229
Community HSS	1.0	0	0	32	63	95	118	155	204	254	315	395	460
3. Peon		1368	1276	1322	1496	1585	1641	1658	1579	1500	1492	1606	1780
TU	8.2	1235	1143	1194	1321	1366	1389	1363	1218	1068	977	995	1085
Private Campus	1.0	133	133	97	105	106	104	94	87	77	61	27	5
Private HSS	1.0	0	0	0	7	19	31	46	70	101	140	190	229
Community HSS	1.0	0	0	32	63	95	118	155	204	254	315	395	460

COST FOR OTHER EDUCATIONAL PERSONNEL

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
4. Supervisors	10.0	0	0	3	7	11	15	20	27	35	45	58	69
5. Cost		79.2	74.2	76.8	88.1	94.7	99.0	101.6	100.0	98.5	101.3	111.5	124.4
Administrators		11.8	11.3	11.4	14.0	16.1	17.5	19.2	21.2	23.4	26.4	30.5	34.4
TU	3200.0	6.3	5.8	6.1	6.7	6.9	7.0	6.9	6.2	5.4	5.0	5.0	5.5
Private Campus	3200.0	5.5	5.5	4.0	4.4	4.4	4.3	3.9	3.6	3.2	2.5	1.1	0.2
Private HSS	3200.0	0.0	0.0	0.0	0.3	0.8	1.3	1.9	2.9	4.2	5.8	7.9	9.5
Community HSS	3200.0	0.0	0.0	1.3	2.6	3.9	4.9	6.5	8.5	10.6	13.1	16.4	19.2
Clerks		44.3	41.3	42.8	48.3	51.1	52.8	53.1	50.3	47.4	46.8	50.1	55.4
TU	2200.0	40.5	37.5	39.1	43.3	44.8	45.5	44.7	39.9	35.0	32.0	32.6	35.6
Private Campus	2200.0	3.8	3.8	2.8	3.0	3.0	3.0	2.7	2.5	2.2	1.7	0.8	0.1
Private HSS	2200.0	0.0	0.0	0.0	0.2	0.5	0.9	1.3	2.0	2.9	4.0	5.4	6.6
Community HSS	2200.0	0.0	0.0	0.9	1.8	2.7	3.4	4.4	5.8	7.3	9.0	11.3	13.2
Peon		23.1	21.6	22.3	25.3	26.8	27.7	28.0	26.7	25.4	25.2	27.1	30.1
TU	1300.0	20.9	19.3	20.2	22.3	23.1	23.5	23.0	20.6	18.0	16.5	16.8	18.3
Private Campus	1300.0	2.2	2.2	1.6	1.8	1.8	1.8	1.6	1.5	1.3	1.0	0.5	0.1
Private HSS	1300.0	0.0	0.0	0.0	0.1	0.3	0.5	0.8	1.2	1.7	2.4	3.2	3.9
Community HSS	1300.0	0.0	0.0	0.5	1.1	1.6	2.0	2.6	3.4	4.3	5.3	6.7	7.8
Supervisors	5000.0	0.0	0.0	0.2	0.5	0.7	1.0	1.3	1.8	2.3	3.0	3.8	4.5
6. Summary (Incl. Supervisors)		79.2	74.2	76.8	88.1	94.7	99.0	101.6	100.0	98.5	101.3	111.5	124.4
TU		67.6	62.6	65.4	72.3	74.8	76.1	74.6	66.7	58.5	53.5	54.5	59.4
Private Campus		11.6	11.6	8.4	9.2	9.2	9.0	8.2	7.6	6.8	5.3	2.4	0.5
Private HSS		0.0	0.0	0.0	0.6	1.7	2.7	4.0	6.1	8.8	12.2	16.5	20.0
Community HSS		0.0	0.0	2.8	5.5	8.3	10.2	13.5	17.8	22.1	27.4	34.4	40.1

OTHER REGULAR COSTS

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Stationary		1.6	1.5	1.6	1.9	2.1	2.2	2.3	2.4	2.5	2.6	2.9	3.2
TU	20.0	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.1	0.9	0.9	0.9	1.0
Private Campus	20.0	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.4	0.3	0.2	0.0
Private HSS	20.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.8	1.0
Community HSS	20.0	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.7	0.8	1.1	1.3
2. Service/Utility		3.0	3.0	2.9	3.5	4.1	4.4	4.8	5.3	5.8	6.5	7.5	8.4
TU	30.0	1.7	1.7	1.6	1.8	1.9	1.9	1.9	1.7	1.5	1.3	1.4	1.5
Private Campus	10.0	1.3	1.3	1.0	1.1	1.1	1.0	0.9	0.9	0.8	0.6	0.3	0.1
Private HSS	10.0	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.7	1.0	1.4	1.9	2.3
Community HSS	10.0	0.0	0.0	0.3	0.6	0.9	1.2	1.6	2.0	2.5	3.1	3.9	4.6
3. Maintenance		2.7	2.7	2.6	3.2	3.7	4.1	4.5	5.0	5.5	6.3	7.2	8.2
TU	25.0	1.4	1.4	1.4	1.5	1.5	1.6	1.5	1.4	1.2	1.1	1.1	1.2
Private Campus	10.0	1.3	1.3	1.0	1.1	1.1	1.0	0.9	0.9	0.8	0.6	0.3	0.1
Private HSS	10.0	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.7	1.0	1.4	1.9	2.3
Community HSS	10.0	0.0	0.0	0.3	0.6	0.9	1.2	1.6	2.0	2.5	3.1	3.9	4.6

OTHER REGULAR COSTS

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
4. Miscellaneous (Books, etc.)		0.9	0.9	0.9	1.2	1.4	1.6	1.8	2.1	2.4	2.8	3.3	3.7
TU	5.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Private Campus	5.0	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.1	0.0
Private HSS	5.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.5	0.7	0.9	1.1
Community HSS	5.0	0.0	0.0	0.2	0.3	0.5	0.6	0.8	1.0	1.3	1.6	2.0	2.3
5. Lab Material (science only)				0.1	0.1	0.2	0.2	0.2	0.4	0.4	0.5	0.6	0.7
TU	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private Campus	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private HSS	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3
Community HSS	5.0			0.0	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3
6. Summary				5.3	6.4	7.4	8.0	8.8	9.9	10.9	12.2	14.0	15.8
TU		2.8	2.7	2.7	3.0	3.1	3.2	3.1	2.8	2.4	2.2	2.3	2.5
Private Campus		2.5	2.5	2.0	2.2	2.2	2.2	1.9	1.8	1.6	1.2	0.6	0.1
Private HSS		0.0	0.0	0.0	0.1	0.4	0.6	0.9	1.4	2.1	2.9	3.9	4.7
Community HSS				0.6	1.1	1.7	2.1	2.8	3.8	4.7	5.9	7.3	8.5
7. Total Regular cost				315.5	365.4	395.0	413.3	425.7	426.9	426.0	438.7	472.1	517.7
TU		230.8	213.7	223.1	246.9	255.3	259.6	254.8	227.7	199.6	182.6	185.9	202.7
Private Campus		74.5	71.7	73.2	79.7	80.0	78.5	70.8	66.1	58.6	45.9	20.8	4.0
Private HSS		0.0	0.0	0.0	1.0	2.8	4.6	6.9	10.4	15.1	20.9	28.3	34.3
Community HSS				19.3	37.8	56.9	70.6	93.3	122.8	152.6	189.3	237.2	276.7

REVENUES

	Ratio		90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Student Fees Gen. (Net)			0.0	0.0	53.0	62.8	72.1	80.1	86.8	98.2	113.5	133.0	157.2	179.5
TU	0.75	700.0	0.0	0.0	23.9	26.4	27.3	27.8	27.3	24.4	21.4	19.6	19.9	21.7
Private Campus	0.95	1200.0	0.0	0.0	29.1	31.7	31.8	31.2	28.2	26.3	23.3	18.3	8.3	1.6
Private HSS	0.95	4000.0	0.0	0.0	0.0	4.7	12.9	21.1	31.3	47.5	68.8	95.2	129.0	156.1
Community HSS	0.90	1500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
2. Student Fees Science			0.0	0.0	10.9	14.0	17.4	20.1	23.3	38.6	45.3	53.4	63.0	71.6
TU	0.75	835.0	0.0	0.0	4.5	5.0	5.1	5.2	5.1	4.6	4.0	3.7	3.7	4.1
Private Campus	0.95	4000.0	0.0	0.0	4.9	5.4	5.4	5.3	4.8	4.5	4.0	3.1	1.4	0.3
Private HSS	0.95	6000.0	0.0	0.0	0.0	1.4	3.8	6.2	9.2	13.9	20.1	27.8	37.7	45.6
Community HSS	0.90	3000.0	0.0	0.0	1.5	2.3	3.1	3.5	4.2	15.7	17.2	18.8	20.2	21.6
3. Government. Grant			173.7	158.1	173.9	199.1	213.3	221.5	227.7	221.1	213.3	214.6	236.2	265.2
TU			160.4	148.4	155.0	171.5	177.4	180.4	177.0	158.2	138.7	126.9	129.1	140.9
Private Campus			13.3	9.7	10.5	10.6	10.4	9.4	8.7	7.7	6.1	2.7	0.5	0.0
Private HSS			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Community HSS			0.0	0.0	8.4	17.0	25.6	31.7	42.0	55.1	68.6	85.0	106.6	124.3

REVENUES

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
4. Total Revenue		173.7	158.1	237.8	275.9	302.8	321.7	337.8	357.9	372.1	401.1	456.4	516.3
TU		160.4	148.4	183.4	203.0	209.8	213.4	209.4	187.1	164.1	150.1	152.8	166.7
Private Campus		13.3	9.7	44.5	47.6	47.6	45.9	41.7	38.5	33.3	24.1	10.2	1.8
Private HSS		0.0	0.0	0.0	6.0	16.7	27.2	40.5	61.4	88.9	123.0	166.7	201.7
Community HSS		0.0	0.0	9.9	19.3	28.7	35.2	46.2	70.8	85.8	103.9	126.8	146.1
5. Surplus/Deficit				-77.7	-89.5	-92.2	-91.6	-88.0	-69.1	-53.8	-37.7	-15.7	-1.4
TU		-70.4	-65.3	-39.7	-43.9	-45.4	-46.2	-45.3	-40.5	-35.5	-32.5	-33.1	-36.1
Private Campus		-61.2	-62.0	-28.6	-32.1	-32.4	-32.6	-29.2	-27.6	-25.3	-21.8	-10.6	-2.1
Private HSS		0.0	0.0	0.0	5.0	13.9	22.6	33.6	51.0	73.8	102.1	138.4	167.5
Community HSS				-9.4	-18.5	-28.2	-35.4	-47.1	-51.9	-66.8	-85.4	-110.4	-130.7
6. Surplus/Deficit/Inst		-1.4	-1.3	-1.1	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.3
TU		-1.3	-1.2	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
Private Campus		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0
Private HSS					0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Community HSS				-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3

Development Costs

COSTS FOR IMPROVEMENT OF PHYSICAL FACILITIES

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. CHSE Construction				1.0	1.0	1.0							
2. Building Construction No													
Private HSS	1.0			0	7	12	12	15	24	31	39	50	40
Community HSS	1.0			32	31	32	23	38	49	50	61	80	66
3. Building Construction Cost													
Private HSS	1500.0			0	10	18	18	23	36	47	58	75	60
Community HSS	1500.0			48	47	48	34	57	73	75	92	119	99
4. Lab Construction no.													
Private HSS	1.0			0	2	3	3	4	6	8	10	13	10
Community HSS	1.0			10	1	1	1	2	38	4	4	3	4
5. Lab Construction Cost													
Private HSS	1000.0			0.0	1.7	3.1	3.0	3.8	6.0	7.9	9.8	12.6	10.1
Community HSS	1000.0			9.6	1.4	1.2	0.7	1.8	38.0	3.6	3.8	3.1	4.0
6. Hostel Construction No													
Private HSS	0.9			0	6	11	11	14	21	28	35	45	36
Community HSS	0.9			29	28	29	21	34	44	45	55	72	59
7. Hostel Construction Cost													
Private HSS	500.0			0	3	5	5	7	11	14	17	22	18
Community HSS	500.0			14	14	14	10	17	22	22	27	36	30

COSTS FOR IMPROVEMENT OF PHYSICAL FACILITIES

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
8. Library and Furniture Cost													
Private HSS	50.0			0	0	1	1	1	1	2	2	2	2
Community HSS	50.0			2	2	2	1	2	2	2	3	4	3
9. Govt. Development Cost				43.3	47.7	55.4	43.2	65.8	104.7	101.8	125.2	161.5	132.4
CHSE Building				1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private HSS	0.4			0.0	8.9	15.8	15.5	19.7	31.0	40.7	50.4	64.7	51.8
Community HSS	0.4			42.3	37.8	38.6	27.7	46.1	73.7	61.1	74.8	96.8	80.6
10. Total Development Cost				106.6	117.7	136.9	108.0	164.4	261.8	254.4	312.9	403.8	331.1
CHSE Building				1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private HSS				0.0	22.3	39.5	38.9	49.2	77.4	101.7	126.0	161.8	129.6
Community HSS				105.6	94.4	96.4	69.2	115.2	184.4	152.7	186.9	242.0	201.5

CHSE ADMINISTRATION COSTS

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Officers			2.0	21	21	21	21	21	26	26	26	26	26
2. Assistant			4.0	23	23	23	23	23	34	34	34	34	34
3. Peon No			4.0	12	12	12	12	12	24	24	24	24	24
4. Salary				2.0	2.0	2.0	2.0	2.0	2.7	2.7	2.7	2.7	2.7
Officers	4220.0			1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4
Assistant	2050.0			0.6	0.6	0.6	0.6	0.6	0.9	0.9	0.9	0.9	0.9
Peon	1200.0			0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.4
5. Rent				0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6. Subtotal				2.4	2.4	2.4	2.0	2.0	2.7	2.7	2.7	2.7	2.7
7. Other Overhead	0.1			0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
8. Total Cost				2.6	2.6	2.6	2.1	2.1	3.0	3.0	3.0	3.0	3.0

INCOME OF CHSE

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. HSS registration Fee	500.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
2. Student Registration Fee	50.0			4.3	4.9	5.4	5.7	5.9	6.1	6.4	6.8	7.5	8.3
3. Exam Fees	100.0			2.3	2.7	3.1	3.5	3.9	4.3	4.7	5.2	5.9	6.8
4. Other Certificate Fees (.01)	100.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
5. Answer Book Sale	0.05			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6. Re-totaling	100.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
7. Total Income				6.6	7.6	8.5	9.3	9.9	10.5	11.2	12.2	13.6	15.2
9. Administrative Cost Exam	125.0			2.9	3.3	3.8	4.4	4.9	5.3	5.9	6.5	7.3	8.4
10. Net Income (Exam)				3.7	4.3	4.7	4.9	5.1	5.2	5.3	5.7	6.2	6.8
11. CHSE Surplus/Deficit				-1.7	-1.6	-1.7	-1.6	-1.9	-3.1	-3.5	-3.8	-4.1	-4.6

TEACHER TRAINING AND ADVOCACY

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	
4. Training Required (in-service)					248	332	269	352	391	390	529	813	725	3323.9
5. Training Cost	75.0				19	25	20	26	29	29	40	61	54	249.3
6. Advocacy Programmes	10.0				7	4	3	5	7	8	10	13	11	
7. Advocacy Cost	20.0				0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	

TEXTBOOKS DEVELOPMENT AND SCHOLARSHIPS

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
1. Common Core (Eng+Nep)				2.0	2.0								
2. Humanities (elect)				3.0	3.0								
3. Education (9 Subjects)				3.0	3.0	3.0							
4. Management (3 Subjects)				3.0	3.0								
5. Science (4 Subjects)				2.0	2.0	2.0	2.0						
6. Total Books Required				13.0	13.0	5.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
7. Total Cost	100.0			1.3	1.3	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
8. Scholarship Programme													
Total CL Students				85	98	108	114	119	123	128	136	150	166
No of Scholarships	0.05			4251	4912	5379	5699	5941	6147	6380	6809	7505	8307
9. Government Cost Scholarship	500.0			21.3	24.6	26.9	28.5	29.7	30.7	31.9	34.0	37.5	41.5

TOTAL COST SUMMARY

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	FY93-FY02
1. Total Regular Cost				317.4	367.5	397.4	415.9	429.0	431.9	431.8	445.5	480.0	526.8	4243.2
Teacher's Salary				233.7	271.4	293.7	307.2	316.6	318.9	319.0	328.1	350.4	382.0	3121.0
Other Education Personnel				76.8	88.1	94.7	99.0	101.6	100.0	98.5	101.3	111.5	124.4	995.8
Other Regular Cost				5.3	6.4	7.4	8.0	8.8	9.9	10.9	12.2	14.0	15.8	98.6
CHSE Cost (net)				1.7	1.6	1.7	1.6	1.9	3.1	3.5	3.8	4.1	4.6	27.8
2. Development Cost				129.2	162.3	189.3	156.9	220.6	321.9	315.8	386.8	502.6	427.2	2812.6
Construction				106.6	117.7	136.9	108.0	164.4	261.8	254.4	312.9	403.8	331.1	2197.6
Teacher Training (Incl. Adv.)				0.0	18.8	25.0	20.2	26.5	29.4	29.4	39.9	61.2	54.6	305.0
Textbook Development				1.3	1.3	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	3.3
Scholarships				21.3	24.6	26.9	28.5	29.7	30.7	31.9	34.0	37.5	41.5	306.6
3. Total Cost				446.6	529.8	586.7	572.8	649.6	753.8	747.6	832.3	982.6	954.0	7055.8
Overhead	0.1			44.7	53.0	58.7	57.3	65.0	75.4	74.8	83.2	98.3	95.4	705.6
R & D	0.01			4.5	5.3	5.9	5.7	6.5	7.5	7.5	8.3	9.8	9.5	70.6
4. Grand Total Cost				495.8	588.1	651.3	635.8	721.1	836.7	829.8	923.9	1090.7	1058.9	7832.0
5. Financing														
Fees				63.9	76.8	89.4	100.2	110.1	136.8	158.8	186.4	220.2	251.1	1393.7
Government Grant				336.2	401.1	446.9	419.7	497.9	604.3	589.1	670.0	823.8	773.4	5562.5
Institutional/Community Contribution				95.7	110.2	114.9	115.9	113.1	95.6	81.9	67.4	46.6	34.5	875.7

GOVERNMENT COST SUMMARY

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	FY93-FY02
1. Regular				186.4	213.7	229.5	238.3	245.8	240.9	234.1	237.2	262.2	294.5	2382.6
Teachers' Salary				173.9	199.1	213.3	221.5	227.7	221.1	213.3	214.6	236.2	265.2	2186.0
TU				155.0	171.5	177.4	180.4	177.0	158.2	138.7	126.9	129.1	140.9	1555.0
Private Campus				10.5	10.6	10.4	9.4	8.7	7.7	6.1	2.7	0.5	0.0	66.6
Private HSS				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Community HSS				8.4	17.0	25.6	31.7	42.0	55.1	68.6	85.0	106.6	124.3	564.4
Education Personnel				6.7	8.0	8.9	9.5	10.1	10.4	10.7	11.5	13.3	15.1	104.2
TU				6.1	6.7	6.9	7.0	6.9	6.2	5.4	5.0	5.0	5.5	60.8
Community HSS	0.5			0.7	1.3	2.0	2.4	3.2	4.2	5.3	6.5	8.2	9.6	43.5
CHSE Admn .				2.6	2.6	2.6	2.1	2.1	3.0	3.0	3.0	3.0	3.0	26.9
Other Regular Cost				3.2	4.0	4.7	5.2	5.8	6.5	7.1	8.1	9.7	11.2	65.5
TU				2.7	3.0	3.1	3.2	3.1	2.8	2.4	2.2	2.3	2.5	27.2
Community HSS	0.5			0.3	0.6	0.8	1.0	1.4	1.9	2.4	2.9	3.7	4.3	19.2
Supervisors				0.2	0.5	0.7	1.0	1.3	1.8	2.3	3.0	3.8	4.5	19.0
2. Development cost				106.6	117.7	136.9	108.0	164.4	261.8	254.4	312.9	403.8	331.1	2197.6
Private HSS				0.0	22.3	39.5	38.9	49.2	77.4	101.7	126.0	161.8	129.6	746.2
Community HSS				105.6	94.4	96.4	69.2	115.2	184.4	152.7	186.9	242.0	201.5	1448.5
CHSE building				1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
3. Other Cost				9.8	29.9	36.2	31.8	38.4	41.7	42.2	53.5	76.2	71.2	431.0
Training				0.0	18.6	24.9	20.1	26.4	29.3	29.3	39.7	61.0	54.4	303.7
Advocacy				0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	1.4
Text book Development				1.3	1.3	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	3.3
Scholarship	0.4			8.5	9.8	10.8	11.4	11.9	12.3	12.8	13.6	15.0	16.6	122.7
4. TOTAL Cost				302.9	361.3	402.6	378.1	448.6	544.4	530.7	603.6	742.2	696.7	5011.3
Overhead	0.1			30.3	36.1	40.3	37.8	44.9	54.4	53.1	60.4	74.2	69.7	501.1
R and D	0.01			3.0	3.6	4.0	3.8	4.5	5.4	5.3	6.0	7.4	7.0	50.1
Grand Total				336.2	401.1	446.9	419.7	497.9	604.3	589.1	670.0	823.8	773.4	5562.5
5. Revenues				32.1	35.7	37.2	37.9	37.5	34.2	30.7	28.9	29.9	32.6	336.7
TU fees				28.4	31.4	32.5	33.0	32.4	29.0	25.4	23.2	23.6	25.8	284.7
CHSE income				3.7	4.3	4.7	4.9	5.1	5.2	5.3	5.7	6.2	6.8	52.0
6. Net Requirements Million Rs				304.1	365.4	409.8	381.8	460.5	570.1	558.4	641.1	794.0	740.8	5225.8
Million US$	49.0			6.2	7.5	8.4	7.8	9.4	11.6	11.4	13.1	16.2	15.1	106.6
7. Net Regular Cost				219.8	253.5	273.8	279.9	295.1	300.8	292.5	303.6	343.8	371.1	2933.9

COST COMPARISONS

WITHOUT 10+2 PROGRAM

	Ratio	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	FY93-FY02
1. Total CL General Students				85.0	98.2	107.6	114.0	118.8	122.9	127.6	136.2	150.1	166.1	1226.6
2. TU Students	0.7			58.7	67.8	74.2	78.6	82.0	84.8	88.0	94.0	103.6	114.6	846.3
3. Regular Cost, TU	2500.0			146.7	169.4	185.6	196.6	204.9	212.1	220.1	234.9	258.9	286.6	2115.8
4. No. of Students in Private Campus	0.3			26.4	30.5	33.4	35.3	36.8	38.1	39.6	42.2	46.5	51.5	380.2
5. No. of Private Campus	277.0			95.1	109.9	120.4	127.6	133.0	137.6	142.8	152.4	168.0	185.9	1372.7
6. Government Grant for Campus	150.0			14.3	16.5	18.1	19.1	19.9	20.6	21.4	22.9	25.2	27.9	205.9
7. TU fees	700.0			41.1	47.4	52.0	55.0	57.4	59.4	61.6	65.8	72.5	80.2	592.4
8. Net cost for Government				119.9	138.5	151.7	160.7	167.5	173.3	179.9	192.0	211.6	234.2	1729.3
9. Net TU Cost				105.6	122.0	133.6	141.6	147.6	152.7	158.5	169.1	186.4	206.3	1523.4
WITH 10+2 PROGRAM														
1. Net TU cost				135.4	149.8	154.9	157.6	154.6	138.2	121.1	110.8	112.8	123.0	1358.3
2. Grant to Private Campus				10.5	10.6	10.4	9.4	8.7	7.7	6.1	2.7	0.5	0.0	66.6
3. Grant to Private HSS				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4. Grant to General HSS				8.4	17.0	25.6	31.7	42.0	55.1	68.6	85.0	106.6	124.3	564.4
5. Net Cost for Government, Regular				154.3	177.4	190.9	198.7	205.3	201.0	195.8	198.6	219.9	247.4	1989.3
SAVINGS														
1. Net Savings				-34.5	-38.9	-39.2	-38.0	-37.8	-27.7	-15.9	-6.6	-8.3	-13.2	-260.0
2. Tranfer Money from TU				-29.8	-27.8	-21.3	-16.0	-7.0	14.5	37.3	58.3	73.6	83.3	165.1

TOTAL SUMMARY PHYSICAL AND FINANCIAL PROJECTIONS

	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Grade 10 Enrollment	112.0	112.0	132.4	146.0	143.0	151.9	153.1	162.6	181.9	204.7	220.0	228.7	238.4
Boys	81.1	80.0	95.0	103.3	99.9	104.3	102.6	107.4	118.0	130.6	137.8	141.3	146.0
Girls	30.9	32.0	37.5	42.7	43.1	47.7	50.5	55.2	63.9	74.1	82.2	87.5	92.4
SLC Appeared	158.8	159.7	174.8	186.4	203.4	209.1	219.1	225.0	235.3	256.8	286.2	313.2	333.7
Boys	113.8	116.1	124.2	133.2	144.5	147.2	152.0	153.2	157.5	168.7	184.8	198.7	208.5
Girls	45.0	43.6	50.5	53.2	58.9	61.9	67.1	71.8	77.8	88.0	101.4	114.5	125.2

TOTAL SUMMARY PHYSICAL AND FINANCIAL PROJECTIONS

	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
SLC Pass	83.3	53.2	74.2	78.6	85.7	88.4	92.5	95.1	99.3	108.1	120.4	131.9	140.7
Boys	61.4	40.8	52.7	56.1	60.9	62.2	64.2	64.8	66.5	71.1	77.8	83.8	88.0
Girls	21.9	12.4	21.5	22.5	24.8	26.1	28.3	30.3	32.8	37.0	42.6	48.2	52.7
Fresh Entry to XI	39.9	47.5	37.2	51.9	55.0	60.0	61.8	64.7	66.5	69.5	75.7	84.3	92.3
Boys	30.6	35.0	28.6	36.9	39.3	42.6	43.5	44.9	45.3	46.6	49.8	54.5	58.6
Girls	9.4	12.5	8.7	15.0	15.7	17.4	18.3	19.8	21.2	22.9	25.9	29.8	33.7
Total Enrollment	68.3	80.3	78.6	85.0	98.2	107.6	114.0	118.8	122.9	127.6	136.2	150.1	166.1
Grade 11	40.2	47.9	38.3	51.5	55.8	60.8	62.8	65.5	67.1	69.6	75.4	83.9	92.0
Grade 12	28.1	32.4	40.4	33.5	42.5	46.8	51.2	53.3	55.9	58.0	60.8	66.2	74.1
Enrollment by Institution	3.0	71.9	75.0	85.0	98.2	107.6	114.0	118.8	122.9	127.6	136.2	150.1	166.1
TU	1.0	47.1	50.4	52.7	58.3	60.3	61.3	60.2	53.8	47.1	43.1	43.9	47.9
Private Campus	1.0	24.8	24.6	26.8	29.2	29.3	28.8	26.0	24.2	21.5	16.8	7.6	1.5
Private HSS	1.0	0.0	0.0	0.0	1.5	4.1	6.6	9.9	14.9	21.6	29.9	40.6	49.1
Community HSS	0.0	0.0	0.0	5.5	9.3	13.9	17.3	22.9	30.0	37.3	46.3	58.0	67.7
Enrollment by Faculty	1.0	71.8	78.6	85.0	98.2	107.6	114.0	118.8	122.9	127.6	136.2	150.1	166.1
Science	0.1	7.6	8.3	9.0	10.4	11.4	12.1	12.6	16.7	17.4	18.5	20.4	22.6
Education	0.1	3.7	4.0	4.3	5.0	5.5	5.8	6.1	9.5	9.8	10.5	11.6	12.8
Management	0.3	22.7	24.8	26.9	31.0	34.0	36.0	37.5	31.1	32.3	34.5	38.0	42.0
Humanities	0.5	37.8	41.4	44.8	51.8	56.7	60.1	62.6	65.7	68.1	72.7	80.1	88.7
No of Institutions	0.0	189.0	189.0	182.8	235.0	281.3	315.2	356.8	416.5	480.9	559.7	656.6	744.2
TU	0.0	56.0	56.0	54.1	59.9	61.9	63.0	61.8	55.2	48.4	44.3	45.1	49.2
Private Campus	0.0	133.0	133.0	96.7	105.3	105.7	103.7	93.6	87.3	77.5	60.7	27.4	5.2
Private HSS	0.0	0.0	0.0	0.0	6.8	19.0	30.9	46.0	69.8	101.1	139.8	189.5	229.4
Commu. HSS	0.0	0.0	0.0	32.0	63.0	94.7	117.5	155.3	204.1	253.8	314.9	394.5	460.4
Community HSS by Region	0.0	0.0	0.0	32.0	63.0	94.7	117.5	155.3	204.1	253.8	314.9	394.5	460.4
Mountain	0.0	0.0	0.0	2.0	6.4	9.6	11.9	15.7	20.6	25.6	31.8	39.8	46.5
Hill	0.0	0.0	0.0	17.0	32.3	48.6	60.3	79.7	104.7	130.2	161.5	202.4	236.1
Valley	0.0	0.0	0.0	1.0	3.2	4.8	6.0	7.9	10.4	13.0	16.1	20.2	23.5
Terai	0.0	0.0	0.0	12.0	21.1	31.7	39.4	52.0	68.4	85.0	105.5	132.1	154.2
Private HSS by Region	0.0	0.0	0.0	0.0	6.8	19.0	30.9	46.0	69.8	101.1	139.8	189.5	229.4
Mountain	0.0	0.0	0.0	0.0	0.1	0.3	0.5	0.8	1.2	1.7	2.3	3.1	3.8
Hill	0.0	0.0	0.0	0.0	1.7	4.7	7.6	11.4	17.2	24.9	34.5	46.7	56.6
Valley	0.0	0.0	0.0	0.0	3.0	8.2	13.4	19.9	30.2	43.8	60.5	82.1	99.3
Terai	0.0	0.0	0.0	0.0	2.1	5.8	9.4	14.0	21.2	30.7	42.5	57.6	69.7
Total HSS by Region	0.0	0.0	0.0	32.0	69.9	113.7	148.5	201.4	274.0	354.9	454.7	584.1	689.7
Mountain	0.0	0.0	0.0	2.0	6.5	9.9	12.4	16.4	21.8	27.3	34.1	43.0	50.3
Hill	0.0	0.0	0.0	17.0	34.0	53.3	67.9	91.0	121.9	155.1	196.0	249.1	292.7
Valley	0.0	0.0	0.0	1.0	6.2	13.1	19.4	27.9	40.7	56.8	76.6	102.3	122.9
Terai	0.0	0.0	0.0	12.0	23.2	37.5	48.8	66.0	89.6	115.7	147.9	189.7	223.9

TOTAL SUMMARY PHYSICAL AND FINANCIAL PROJECTIONS

	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
HSS teachers Required	0.0	0.0	0.0	267.5	581.1	954.7	1253.1	1704.1	2326.0	3025.0	3886.3	5003.0	5914.2
Private HSS	0.0	0.0	0.0	0.0	63.7	176.6	287.7	428.2	649.5	940.2	1300.3	1762.8	2133.3
Community HSS	0.0	0.0	0.0	267.5	517.4	778.1	965.4	1275.9	1676.5	2084.8	2586.0	3240.2	3780.9
Additional Supply of HSS Teachers	0.0	0.0	0.0	267.5	313.6	373.6	298.4	451.0	621.9	699.0	861.4	1116.6	911.2
Secondary Master Techers	0.0	52.9	71.4	76.6	59.6	73.9	88.6	108.8	111.6	103.7	95.7	101.8	115.6
Transfer From TU	0.0	0.0	0.0	0.0	-41.3	-88.3	-103.5	-77.7	26.5	100.3	107.3	34.3	-66.0
Training Required (in Service)	0.0	0.0	0.0	0.0	248.2	331.9	268.6	352.3	390.5	390.2	529.1	813.0	724 9
Master Level Teacher (NEW)	0.2	0.0	0.0	40.1	47.0	56.0	44.8	67.7	93.3	104.8	129.2	167.5	136.7
Total HSE Enrollment	71.7	90.5	89.4	96.4	110.2	120.3	127.4	133.0	138.0	143.5	153.1	168.0	185.1
General Subjects	68.3	80.3	78.6	85.0	98.2	107.6	114.0	118.8	122.9	127.6	136.2	150.1	166.1
Technical Enrollment	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.1	4.2
Sanskrit Enrollment	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6
Law Enrollment	0.0	6.7	7.2	7.7	8.2	8.8	9.4	10.1	10.8	11.5	12.3	13.2	14.1
Grand Total Cost	0.0	0.0	0.0	495.8	588.1	651.3	635.8	721.1	836.7	829.8	923.9	1090.7	1058.9
Fees	0.0	0.0	0.0	63.9	76.8	89.4	100.2	110.1	136.8	158.8	186.4	220.2	251.1
Govt Grant	0.0	0.0	0.0	336.2	401.1	446.9	419.7	497.9	604.3	589.1	670.0	823.8	773.4
Institutional/Community Contribution	0.0	0.0	0.0	95.7	110.2	114.9	115.9	113.1	95.6	81.9	67.4	46.6	34.5
Net Requirements Million NRs	0.0	0.0	0.0	304.1	365.4	409.8	381.8	460.5	570.1	558.4	641.1	794.0	740.8
Million US$	49.0	0.0	0.0	6.2	7.5	8.4	7.8	9.4	11.6	11.4	13.1	16.2	15.1
Transfer Money from TU	0.0	0.0	0.0	-29.8	-27.8	-21.3	-16.0	-7.0	14.5	37.3	58.3	73.6	83.3