



Workforce Development in Nepal

Policies and Practices



Asian Development Bank Institute



Workforce Development in Nepal

Policies and Practices

Agni Prasad Kafle

Asian Development Bank Institute

Series Editor:

Jeoung-Keun Lee, Director, Capacity Building and Training, ADBI

Author:

Agni Prasad Kafle, Senior Consultant, Interstar Edu-Skill, Nepal

Published by Asian Development Bank Institute, 2007

ISBN: 978-4-89974-021-6

The Asian Development Bank Institute (ADBI) encourages the use of the material presented herein, with appropriate credit given to ADBI.

Please address inquiries for copies to:

Librarian
Asian Development Bank Institute
Kasumigaseki Building 8F
3-2-5 Kasumigaseki
Chiyoda-ku, Tokyo 100-6008
Japan

This report is available on the ADBI website (www.adbi.org) for free downloading.

The views expressed in this report are the views of the author and do not necessarily reflect the views or policies of the Asian Development Bank (ADB), ADBI, or its Board of Directors, or the governments they represent. ADBI does not guarantee the accuracy of the data included in this report and accepts no responsibility for any consequences of their use. Terminology used may not necessarily be consistent with ADB official terms.

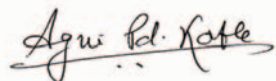
Preface

The main purpose of this report is to share knowledge and experiences in the field of workforce development for sustainable economic growth in Nepal and other countries in similar stages of development. All persons who are involved in workforce development as trainers, managers, users, policymakers, donors, and supporters may benefit from this report. Similarly, persons involved in economic development through human resource development may also find this work useful.

This report covers several areas relevant to workforce development: economic development trends and labor market demand; the education system; technical education and vocational training for sustainable development; skill training, skill testing, and standardization; and workforce development system and policies. Most of the content in this work comes from papers I have presented in workforce development seminars and training organized by the Asian Development Bank Institute.

The greatest source of ideas for this report was Dr. Jeoung-Keun Lee, who encouraged me to assemble the knowledge and experiences I have gained throughout my career in positions such as trainer, principal, project manager, instructor trainer, policymaker, chief administrator, and senior consultant. I am very much indebted to those who reviewed and corrected this work. I wish to thank my two daughters-in-law Junu and Manuja for their kind support in obtaining information related to this work. Finally, I thank my wife Dibyashwari and granddaughter Gauravi, who inspired me to concentrate my mind on this writing.

This book is dedicated to all those Nepali youths who lost their lives abroad while searching for work for the survival of their families and homeland.



Agni P. Kafle
Senior Consultant
Interstar Edu-Skill
Nepal

Table of Contents

I. Economic Development Trends and Labor Market Demand	1
A. Background	1
B. Socio-economic Situation	2
C. Poverty Situation	4
D. Economic Development Trends	4
E. Labor Market Demand in Nepal and Abroad	6
F. Employment and Labor Market Situation	8
G. Labor Market and Economy of Remittance	11
II. The Education System	13
A. Educational Institutions	13
B. Student Enrollment	14
C. School Teachers	14
D. Structure of Education	15
E. Literacy Rate	16
F. School Leaving Certificate (SLC) Examination	17
G. Schools Affiliated with Higher Secondary Education Board HSEB	18
H. Capacity of Skill Training Providers	19
I. Finance of Education	19
J. Concerns Raised by Education Reform Reports	22
III. Technical Education and Vocational Training for Sustainable Development	27
A. Types of Education	28
B. Present Status of Technical Education and Vocational Training (TEVT) in Nepal	31
C. Technical Education and Vocational Training Council	33
D. Annex Programs.....	35
E. TEVT at the School Level	36
F. Department of Cottage and Small Industries and Cottage and Small Industry Development Board	36
G. The Ministry of Labor and Transport Management	37

H.	Sustainable Development Agenda	38
I.	Vocational Skills Training from NGOs	40
J.	Plan Nepal	40
K.	International Labor Organization	41
L.	Future Directions for Sustainability	41
M.	Helvetas/F-Skill	42
N.	Federation of Nepalese Chambers of Commerce and Industry	43
O.	Relevance: Linkages between Sub-sectors of Education and the World of Work	44
P.	Employment Rate	45
Q.	Sustainable Economic Development through the Formal Education System	45
R.	Sustainable TEVT through the Non-formal and Informal Education Systems	46
IV.	Skill Training, Skill Testing and Standardization	49
A.	Government Viewpoint	49
B.	Employer Viewpoint	50
C.	Employee Viewpoint	50
D.	Skill Training and Testing	50
E.	Training Targeted to Identified Business/User's Needs	53
F.	Professional Environments	54
G.	Industry Specific Sector Initiatives	54
H.	Involving Established Employer Organizations and Business Coalitions.....	54
I.	Skill Standards	55
J.	National Occupational Skill Standards Available in Nepal	56
V.	Workforce Development System and Policies	61
A.	Challenges	62
B.	Nepal's National Policy	63
C.	Global Paradigm Shift	65
D.	Issues, Problems and Policy Statements	65
	1. Quality.....	65
	2. Relevance	67
	3. Efficiency	69
	4. Access, Affordability, and Inclusion	71
	5. Reengineering TEVT Governance	72
	References	75

LIST OF TABLES

Table 1	Country Profile: Nepal	2
Table 2	Growth Rates: Nepal and the World	7
Table 3	Population by Economic Sector	9
Table 4	Engagement Status of Economically Active Population	10
Table 5	Educational Institutions	13
Table 6	Student Enrollment.....	14
Table 7	School Teachers	14
Table 8	Structure of Education	15
Table 9	Literacy Rate	16
Table 10	School Leaving Certificate	17
Table 11	Schools Affiliated with the Higher Secondary Education Board	18
Table 12	Capacity of Skill Training Providers and CTEVT	19
Table 13	Share of Government Budget, Foreign Aid, GDP and GNP	20
Table 14	National Budget: Education vs. TEVT	20
Table 15	Global Trends in TEVT.....	32
Table 16	CTEVT and Affiliated Programs	34
Table 17	Regionwise Distribution of DOLEP Trainees	38
Table 18	Vocational Training Provided by Various Ministries and Departments	39
Table 19	Recent 50 Years Literacy Rate and Development Index	63

LIST OF FIGURES

Figure 1	Literacy Rate by Sex for Different Age Group and by Source of Literacy	16
Figure 2	Median Earnings of All Full Time Workers by Educational Attainment	45
Figure 3	Median Starting Salary of 1993 College Graduates by Major Field of Study	46

I. ECONOMIC DEVELOPMENT TRENDS AND LABOR MARKET DEMAND

A. Background

In the last two decades little economic development has taken place in Nepal. The economic growth rate was 3.9% per year against a 2.5% population growth rate, with per capita income growing by just 1.4%. A direct relationship exists between skilled work force training and education and economic development. Improvement in employment and income depends largely on the development of skills in workers and the introduction of new technology in skill training programs (Nepal South Asia Centre, 1998).

Nepal is a mountainous landlocked country with fragile mountains on the southern slopes of the Himalayas. The total area of Nepal is 147,181 sq. km. extending over 26° 22' N to 30° 27' N latitudes and 80° 4' E to 88° 12' E longitudes in a subtropical belt. Nepal has a variety of climates ranging from the tropical to the arctic. Topographically, the country is divided into three ecological regions: (i) mountains with 35.2% of the total land area and 7.3% of total population, (ii) hills with 41.7% of the total land area and 44.2% of total population, and (iii) Terai lowlands with 23.1% of the total land area and 48.5% of total population.

According to the 2001 census, the population of Nepal is estimated to be 23.15 million. More than 90% of the total population lives in rural parts of the country in a subsistence agriculture system. Of the total population, 42% are below the poverty level (Population Census 2001).

Nepal, considered worldwide to be a beautiful country, lies between the two major countries of India and the People's Republic of China (PRC). According to Population Census 2001, the total population of 23.15 million consists of 11.58 million females and 11.56 million males. With the total fertility rate of 4.1 children per woman, it has a crude birth rate of 33.1 (per 1,000) whereas its crude death rate is 9.6 (per 1,000). The Infant Mortality Rate is 64.4, which is much higher than its crude birth rate. The life expectancy of a Nepali averages 59.7 years of age. As regards the economic sector, Nepal has a GDP per capita equivalent to US\$269, which has increased in recent years.

Table 1. Country Profile: Nepal

Area	147,181 Sq. km	
Population (2001)		
Total	23,151,423	
Female	11,587,502	
Male	11,563,921	
Crude Birth Rate	33.1	Per 1,000
Crude Death Rate	9.6	Per 1,000
Total Fertility Rate	4.1	Per woman
Infant Mortality Rate	64.4	Per 1,000 live births
Life Expectancy at Birth	59.7	Average
GDP per Capita	269	US\$

Source: Nepal in Figures, 2003 (Central Bureau of Statistics)

Map of Nepal



B. Socio-economic Situation

Nepal, landlocked between India and the PRC, is a highly heterogeneous country in terms of geography, ethnicity, language and culture of the 23.15 million people comprising 102 different ethnic and caste groups. According to 2001 census data, nine million (approximately 40%) live below the poverty line, which is set at about \$77 per capita per annum; the poorest 20% get 12% of the national income. The gender development index ranks

121 out of 143 and the adult literacy rate is about 41.8% of the population above 15 years of age. The labor force of 11.2 million is increasing at a rate of 2.4%. Approximately 80% are engaged in agriculture, 3% in manufacturing industries and 17% in service industries.¹ The female labor force comprises 47% of the total labor force, but female workers account for only 4% of the formal sector.

The Nepalese industrial sector is in an infantile state. The non-agricultural sector, including services, accounted for 60.5% of GDP in 2001/02. The largest component of this sector has traditionally been tourism, although a fall in the industry in 2001/02 resulted in the finance and real estate sector becoming the largest component. Trade, restaurants and hotels accounted for 10% of the GDP in 2001/02.² Although individual tourists are not directly threatened, the tourism sector has been significantly disturbed. Recent information from the Nepal Tourism Board indicating an increase in the number of visitors in urban areas does not confirm an increase of tourism income in economically weak areas.

Agriculture, which is the backbone of Nepal's economy, has been crippled due to the national conflict. Besides this, the tendency toward increasing fragmentation of land holding is making the practice of agriculture using traditional technology economically unviable. The migrant youth forced to shelter in the urban areas are considered lucky if they somehow find a job and can afford to make their way into the foreign employment market, which is not always safe and gainful. Due to the difficulty encountered in the industrial and agriculture sectors, their contribution to the GDP has decreased. On the other hand, there is a significant increase in the defense budget at the cost of development projects.

Even after the political change in 1990, the country could not gain any momentum for a smooth take-off of economic development, largely due to political instability and conflict. As a result, not only have government services had difficulties in reaching the grassroots, but there also has been added insecurity in the lives of people in rural areas. Consequently, migration of a large number of the working age population has taken place from rural to urban areas and across international borders. In addition to this, the annual transition of children and youths from the educational system to the job market and migration of the workforce in search of new livelihoods to urban centers and abroad have presented a great challenge to the Government of Nepal in providing a sustainable livelihood to its people. The overall socio-economic situation of the country is very challenging to the leaders of Nepal.

C. Poverty Situation

Nepal is going through a crucial period of economic and socio-political transition. If the situation is not handled carefully, it may lead to an unexpected political and economic disaster. Poverty has become a very pathetic scene in present day Nepal. It is related to deprivation of, as well as inability to gain access to, resources necessary to emerge from the struggle for day-to-day subsistence. According to the National Planning Commission, five capabilities are important aspects of poverty reduction in a sustainable and effective manner. They are: (1) human capabilities (education, health, nutrition); (2) economic capabilities (consumption, income, assets); (3) political capabilities (rights, influence, freedom); (4) socio-cultural capabilities (status, dignity); and (5) protective capabilities (security, environment).

The major factors of poverty in Nepal are its geographic, demographic and social conditions. More than 90% of the population lives in rural areas. About 65% of the total population depends on agriculture, mostly subsistence farming. This occupation is rather challenging due to the difficult geographic conditions. The provision of mechanized transportation is minimal and difficult to sustain. Food production in the hills and mountains is inadequate to fulfill the year-round needs of the people. Consequently, seasonal and in many cases long-term, migration for labor has become a necessity for many people. The issue of poverty is especially acute in the case of disadvantaged and poor communities. Education, training and employment opportunities are far from the reach of people in these communities and they fall into a vicious cycle of on-going poverty.

D. Economic Development Trends

The economic development of Nepal is hindered by its topography, limited education and resources. Developing infrastructures for transportation, communication, drinking water supply, power supply, access to basic health service, and education is a long-term challenge for leaders in Nepal. More than four-fifths of the country's land is occupied by high mountains and snowy hills that cannot be cultivated. Hydro-power generation and transportation difficulties are complicated by a complex and difficult river system. As Nepal is a landlocked country, development tasks are more difficult, expensive, and dependent on external technical and monetary assistance. Although there are largely untapped massive water resources, irrigation for agriculture depends primarily on rain, rain-fed rivers, and

underground water. Wood remains the main source of fuel (Guhan, 1997), thus leading to massive deforestation.

Over the last four decades, one of the most striking problems in this development process has been the lack of availability and retention of a highly skilled workforce. Some efforts were made to provide skill training in the fields of technical education and vocational training. However, very little was achieved due to the unstable political situation, frequent changes in educational policy, lack of resources and poor resource management.

Today, Nepal's educational system is in a transitional period. Many trials and errors have occurred in policy formulation, education management, teacher development and education delivery in the classroom. Moreover, technical education and vocational training has lagged far behind the overall educational efforts in terms of resource allocation and investment.

Education and development appear to be two sides of the same coin. Schumacher (1973) noted, "Development does not start with goods; it starts with people and education" (p. 75). While analyzing Nepal's overall education system, it appears extremely unlikely that the development process can be faster and more productive. A formalized system of mass education in Nepal started in the 1940s. After 50 years of effort, only 40% of the people are literate. Although three-fourths of all children aged from 6 to 10 years are enrolled in primary schools, the National Planning Commission and United Nations Children's Education Fund (UNICEF) report (1996) found that almost one million Nepalese children lack access to primary education. Out of every 10 students attending primary school, six are boys and four are girls. Of age-appropriate Nepalese youngsters, 26% are enrolled at the lower secondary and 16% are enrolled at the secondary level (Nepal South Asia Centre, 1998). The major problems facing the entire educational system are: (a) a high rate of grade repetition, (b) a high dropout rate among students, and (c) a low quality of physical, academic, and pedagogical activities in public schools. Untrained teachers, high teacher absenteeism, and ineffective supervision are the primary causes of the low quality education (HLNEC, 1998; MOE, 1992). Due to these weaknesses in the public education system, commercially organized private schools have made rapid growth. The School Leaving Certificate (SLC) results of the last 10 years show that the examination pass rate of students in private schools is far higher than that of students in public schools. But private education alone may not be the best alternative to public education in a poor society such as that of Nepal.

Access to post-secondary education and vocational training is very limited. Many of the classrooms of technical schools and vocational training centers in Nepal are occupied by untrained instructors who lack professional

competencies (Belbase, 1981; Nepal South Asia Centre, 1998; Shrestha, 1991). Most of the teachers who are trained do not utilize their professional teaching skills properly, due, in part, to the lack of school-based support. If there is not a continuous reliable support system, irregular supervision may do “more harm than good” (Reiman and Thies-Sprinthall, 1998, p. 5).

Acquisition and transmission of knowledge, skills, information, and attitude of a skilled workforce are the fundamental elements for the economic development and smooth functioning of the newly re-established democratic society of Nepal (Nepal South Asia Centre, 1998; Rondinelli, Middleton, and Vespov, 1990). At this point in time, the whole education system, including Technical Education and Vocational Training (TEVT), is going through a transitional phase. For a successful transition to TEVT, significant changes are anticipated in technical education and vocational training. Although a considerable investment has been made to develop an infrastructure for TEVT in Nepal, there is still much to be accomplished.

One obvious limiting factor in the success of that occupational skill training effort has been the lack of a professionally competent teaching force in the institutions offering workforce preparation. This lack of a professionally competent teaching force has resulted from a convergence of several influences. One important negative influence is that most beginning TEVT instructors enter teaching with little or no professional preparation. Compounding this problem, when these untrained and unprepared teachers enter the school, there exists no structured professional support system within the school to assist the teachers in implementing pedagogically sound programs of instruction.

Seers (1979) defined economic development as the reduction of poverty, inequality, and unemployment while Sen (1999) believed economic development reduces hunger, illiteracy, illness, powerlessness, voicelessness, insecurity, humiliation and lack of access to information and infrastructure. Nepal’s economic development growth rate seems very poor, and, compared to the world and within South Asia, it is ranked at or near the bottom.

Although Nepal is situated between two of the fastest growing economies, India and China, Nepal’s growth rate has declined in the last three years.

E. Labor Market Demand in Nepal and Abroad

Nepal’s economic growth over the past decade has been affected by internal political conflict resulting in armed conflict. However, there is a dramatic increase in the demand for skilled workers in both domestic and international job markets.

Table 2. Growth Rates: Nepal and the World (Annual percentage change)

Economy	Year 2004			Forecast	
	2003	2004	2005	2006	2007
World Output	4.1	5.3	4.8	4.9	4.7
Developed Economies *	2.0	3.3	2.7	3.0	2.8
Major Developed Economies	1.9	3.1	2.6	2.8	2.6
Other Developed Economies	2.5	4.6	3.7	4.1	3.7
Developing Economies	6.7	7.6	7.2	6.9	6.6
Developing Asian Economies	8.4	8.8	8.6	8.2	8.0
Emerging European Economies	4.6	6.6	5.4	5.3	4.8
African Economies	4.6	5.5	5.2	5.7	5.5
Mid-east Economies	6.6	5.4	5.9	5.7	5.4
Petro-product Exporting Economies**	6.9	5.7	6.2	5.8	5.5
Emerging Asian Economies***	7.5	8.4	8.2	7.9	7.6
Emerging Industrial Asian Economies****	3.2	5.8	4.6	5.2	4.5
ASEAN4*****	5.8	5.4	5.2	5.1	5.7
People's Republic of China	10.0	10.1	9.9	9.5	9.0
South Asia*****	7.1	7.7	7.9	7.1	6.9
Bangladesh	5.8	5.9	5.8	6.0	6.3
India	7.2	8.1	8.3	7.3	7.0
Nepal	3.3	3.8	2.7	3.0	3.0
Pakistan	5.7	7.1	7.0	6.4	6.3

* Canada, France, Germany, Italy, Japan, United Kingdom, and United States

** Bahrain, Iraq, Iran, Kuwait, Libya, Oman, Qatar, Saudi Arabia, Syria, and Yemen

*** Developing Asian countries, Emerging Industrial Asian countries, and Mongolia

**** Republic of Korea; Taipei, China; Hong Kong, China; Singapore

***** Indonesia, Malaysia, Philippines, and Taipei, China

***** Bangladesh, India, Maldives, Nepal, Pakistan, and Sri Lanka

Source: World Economic Outlook, IMF, Washington, DC, Sep 2005, April 2006, pp. 16, 35, 43, 52, 117, and 186.

Nepal has a long history and tradition of foreign employment. Due to open borders and similar cultural backgrounds in India and Nepal, labor exchange between the two countries is very common. Moreover, world wars and industrialization in Indian cities have influenced Nepalese labor in India.

- The British East India Company employed Nepalese as Gurkhas in Lahore and they were called “Laures.”
- Over a period of time, Gurkha settlements in India increased in number and size; they also attracted Nepali workers seeking civilian employment in India.
- During World War I, Nepal provided hundreds of thousands of men to fight for Britain and the Allies.
- In World War II, Nepal again provided hundreds of thousands of men as soldiers.
- Today Nepalese workers are found virtually in all developed countries.

Various surveys and training needs assessments conducted by the Council for Technical Education and Vocational Training (CTEVT) and other agencies have shown a demand for a skilled workforce for the domestic job market in occupations such as carpentry, masonry, welding, hairstyling, cooking, veterinary skills, pest control skills, food preservation and processing, automobile maintenance, electrician, nursing, lab technicians, and so on.

F. Employment and Labor Market Situation

Of the total population of 23 million, 42% is aged 14 years or under. Of the total workforce, 92%, or about 10 million people, live in rural areas and are involved in agro-based activities. The 1998/99 National Labor Force Survey showed that some 4,225 manufacturing enterprises employ 385,000 workers. Self-employment in subsistence farming is the predominant form of employment in the country. About 20% of both rural and urban workers are wage laborers; most of them are in informal sectors. The following table shows the participation of the active labor force in major occupations.

Table 3. Population by Economic Sector

Economic Sector	1991 Census		2001 Census	
	No. of Active Population	% of total Active Labor	Number of Active Population	% of total Active Labor
Agriculture, Fisheries and Forestry	5,96,1788	81.2	6,504,688	65.7
Manufacturing and Recycling	150,051	2.0	872,254	8.8
Trade, Restaurant and Hotels	256,012	3.5	984,661	9.9
Community and Social Service	572,019	10.2	827,189	8.4
Other*	219,710	3.1	711,402	7.2
Total	7,339,580	100	9,900,194	100

*Compared to 1991, in 2001 there was a higher proportion of people working in construction, electricity and water supply and in transportation and communications.

Source: Central Bureau of Statistics (CBS), Population Census 1991, 2001

According to the 2001 census, agriculture remains the main employment sector. Compared to 1991, 2001 showed an increasing employment trend in manufacturing and service sectors but the increment is very gradual. It has to be noted here that the total employment accounts for all age groups. The population census also indicated that (a) youths in the 15–24 age group have higher employment than adults, (b) women have higher employment than men, the percentage of unemployed is higher in urban than rural areas, and unemployment among people with a formal education of 10th grade or above is higher than illiterate and simple literate people. However, the majority of the latter group falls in the category of underemployment. According to labor surveys, open unemployment decreased from 3.73% in 1997 to 3.26% in 2000. Underemployment is the next major problem of the country. The percentage of underemployment declined from 46.35% in 1997 to 43.44% in 2000.

Although 83% of the population appears to be engaged in more than eight months of employment, the majority of the people are engaged in subsistence agriculture.³ Out of 9.5 million who are currently employed, only 1.5 million (16%) are in paid employment. The remaining 8.0 million are self-employed. About 3.8 million (40% of the total) of the self-employed do not employ other employees and 4.1 million (43%) work as unpaid family members.⁴ In Nepalese living conditions, much time and energy needs to be spent in subsistence activities, which do not produce any real income. These activities are mostly carried out by women (ILO, 2001). The table below presents engagement of the economically active population by work type.

The listing of engagement includes engagement in any work including the informal sector, self-employment, or household work.

Table 4. Engagement Status of Economically Active Population

Economic Sector	Male	Female	Total	Percentage
Agriculture/Own Farm	2,689,221	2,457,361	5,146,582	33.8
Salary/Wages	174,141	448,559	622,700	4.1
Own Economic Enterprises*	722,137	245,944	968,081	6.4
Extended Economic Activities**	117,044	518,431	635,475	4.2
Job Seeking	137,004	33,226	170,230	1.1
Household Chores***	129,186	2,409,942	2,539,128	16.7
Students***	2,207,587	1,671,527	3,879,114	25.5
No Work****	586,987	654,714	124,1701	8.2
Grand Total	6,763,307	8,439,704	15,203,011	100

*Small shops, cottage industry, etc. ** Making straw mats, bamboo-work, food drying, etc. *** Housewife's work and students are considered engagement in this survey. **** Simply not engaged in any work.

Source: Central Bureau of Statistics (CBS), Population Census 2001.

Obviously, most of the engagement or employment is in the informal sector. There is a huge difference in the involvement of females in household chores and extended activities. The male population has high involvement in getting an education, seeking employment and owning economic enterprises. Currently, two areas of employment—self employment in the informal sector and employment abroad—are gaining much ground in Nepal.

The modern sector has a very narrow base of employment in the non-agriculture contexts of Nepal. Whether in rural or urban areas, most of the production and service related activities are organized by the households themselves. Self-employment and unorganized forms of employment are therefore dominant. Currently, movements to organize adults, particularly women, are contributing to further consolidation of employment in the informal sector. Mobilization and expansion of easy access to financial resources through Grameen Bank, Nirdhan Bank and similar programs have helped to provide an economic basis for such economic development. Therefore, TEVT should redirect its focus to address the emerging opportunities in the informal sector and employment abroad, supplemented with post-training support to enhance employment and earning opportunities of the majority of the poor population.

G. Labor Market and Economy of Remittance

Nepal has a long history of foreign labor migration, which started a century and half ago with recruitment of Nepalis in the British army as a Gurkha regiment. Besides this, Nepalis have been freely moving to India for both permanent and temporary migration in search of employment. Since the 1950s, the flow of Nepali migration to India has increased tremendously and India has often served as a transit point for migration to third countries. It is estimated that over six million Nepalis live and work in India and probably one million are routinely employed as migrant workers. It is also reported that there are now more than 600,000 Nepali migrant workers in Gulf Countries alone. (Kantipur Daily, Kathmandu September 3, 2004).

Inadequate employment opportunities at home, desire to see foreign lands and escape from the acute national political conflict are the motivations for Nepalis to migrate abroad. Nepali foreign migration has been of three kinds: (i) official migration to countries other than India through overseas employment companies recognized by the Ministry of Labor, (ii) free movement to India as permitted by the 1950 treaty and further movement from there to a third country through Indian or Nepali agents, and (iii) overstaying abroad after entry as visitors or students or unauthorized entry to countries like in Iraq via another country.

On August 31, 2004, 12 innocent Nepali migrant workers were mercilessly killed, without even a ransom demand, by Ansar al-Sunna, an Islamic extremist group, after being abducted while entering Iraq. It has been reported that there are still around 15,000 Nepalis working clandestinely in Iraq and thousands are still waiting in Amman, Kuwait and Mumbai to enter that country. As they have difficult conditions back home, Nepali workers tend to accept any kind of dangerous or menial work which people from other countries would not normally like to do. Regardless of the channels used, Nepali workers have serious problems before, during and after migration.

Traditionally, the rural economies in the eastern and western hills of Nepal have been supported by remittances coming from the Gurkha soldiers abroad and the mid-western and far-western hills have been dependent on the remittances from the migrant workers in India. Official records indicate that in the year 2000, only 27,000 Nepali workers went abroad for work; the figures increased to 55,000 in 2001 and to 105,000 in 2002. By 2003, the total number of Nepali foreign labor migrants is estimated to be 1.8 million—about 8% of the total population and 15% of the total labor force. The value and volume of remittances has been estimated to be NRs100 billion, which probably contributes more to Nepal's foreign exchange than do manufacturing, exports, tourism, foreign aid and other sources combined.

Study on foreign employment in Nepal shows that there was a huge demand for semi-skilled/skilled labor as well as some unskilled labor in 2002. In 2002, there was a demand for 99,519 Nepali laborers, mainly from Gulf countries and Malaysia. Of these, 56.2% were semi-skilled/skilled jobs, 41.8% unskilled jobs, 2% highly skilled (Europe and North America) and 0.15% were white-collar jobs. The survey data indicate that 94.46% of total labor outflow falls under the unskilled category whereas 5.44% comes under the semi-skilled/skilled category. The white collar and highly skilled outflows are negligible (0.4%).⁷ This suggests that the nation has not as yet utilized the available opportunities and falls far short of exploring the gainful international market. Yet the remittance provided by the unskilled migrant workers has been a blessing in disguise to keep the country's economy going at a time of acute political conflict, which is devastating to Nepal's economic and socio-cultural fabric. Even if the political conflict were to be resolved right away, given the country's current capacity for economic regeneration, a significant number of the Nepali workforce would have to migrate in search of employment for several more years to come. As migrant workers return with new knowledge, skills and earned capital, together with vocational/technical and entrepreneurial skills, they could be some of the best actors for economic regeneration in the country. This situation requires that Nepal fully utilize the labor migration opportunities in the country's favor.

II. THE EDUCATION SYSTEM

The history of mass education in Nepal is very short. In 1853, the first school was established for ruling class families; however, mass education started after 1951 when a popular movement ended the autocratic Rana family regime and initiated a democratic political system. Early education in Nepal was based on Hindu and Buddhist philosophy. In those days, education was not vocational in character. Within the Hindu caste system, (after the Verna System), vocational work such as metal works, leather crafts, and tailoring were considered the work of low caste people. Sanskrit education was based on the Vedas and Hindu Classics for proficiency in the Sanskrit language, while Buddhist Monastery schools (Gumbas) emphasized the practice of rituals, meditation, and a high proficiency in mathematics. Sanskrit Schools (Pathasala) were opened for the higher caste Hindus, whereas Buddhist Gumbas were opened liberally for all (Vir, 1988). Even today, this is evident in that Buddhist societies in Asia such as Japan, the PRC, Thailand, and Sri Lanka have much higher literacy rates and education levels than Hindu and Muslim societies. The education and status of women in Buddhist society is much higher than the women of Hindu and Muslim societies. In ancient Nepal, Sanskrit education was provided by Gurus in Gurukool whereas Buddhist education was taught by Lamas in Gumbas. A systematic formal modern education for the general masses started in the 1940s (Aryal, 1970; MOE, 1956; Vir, 1988).

A. Educational Institutions

Table 5. Educational Institutions

	Total	Public 1	Private	Private %
Early Childhood /Preprimary	4,032	1,692	2,340	58
Primary	24,746	21,888	2,858	11.5
Lower Secondary	7,436	5,664	1,772	23.8
Secondary	4,547	3,258	1,289	28.3
Higher Secondary 3	1,056	539	517	49
Higher Education 4	473	80	393	83.1

Source: Nepal in Figures, 2003 (Central Bureau of Statistics)

According to 2004 education statistics, there are 4,032 pre-primary schools. Among them, 58% are private. Among 24,746 primary schools, 11.5% are private. Likewise, at lower secondary level 23.8%, secondary level 28.3%, higher secondary level 49.0%, and at university level 83.0% are private institutions.

B. Student Enrollment

Table 6. Student Enrollment

	Female	Male	Total	Female %
Early Childhood / Pre Primary	235,512	276,639	512,151	46
Primary	1,865,012	2,165,033	4,030,045	46.3
Lower Secondary	653,159	791,838	1,444,997	45.2
Secondary	260,472	327,094	587,566	44.3
Higher Secondary 5	62,842	100,430	163,272	38.5
Higher Education 6	40,577	106,546	147,123	27.6

Source: Nepal in Figures, 2003 (Central Bureau of Statistics)

Total student enrollment from pre-primary to higher level are pre-primary 0.5 million, primary 4 million, 1.4 million in lower secondary, 0.5 million in secondary, 1.6 million in higher secondary, and 1.4 million in tertiary level.

C. School Teachers

Table 7. School Teachers

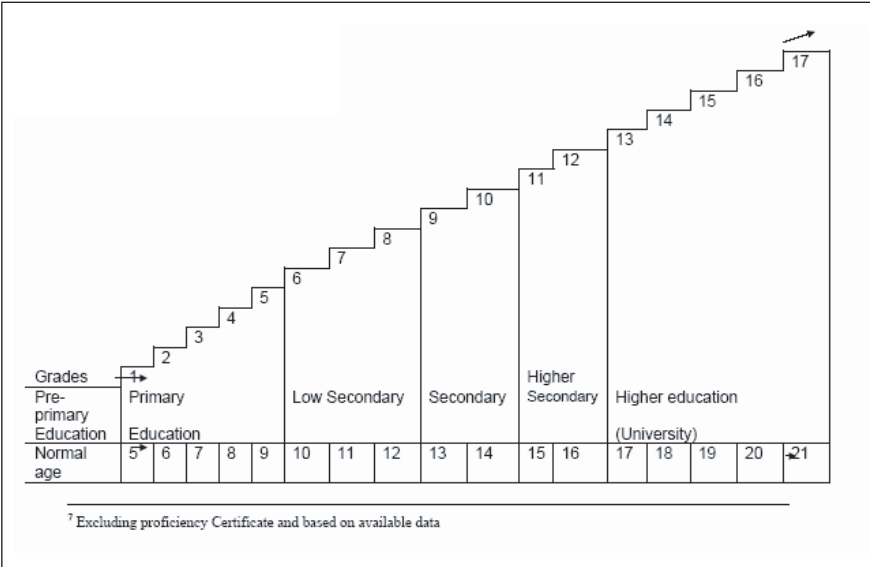
Level	Female	Male	Total	Female %
Primary	30,542	70,941	101,483	30.1
Lower Secondary	4,238	21,724	25,962	16.3
Secondary	1,732	18,500	20,232	8.6

Source: Nepal in Figures, 2003 (Central Bureau of Statistics)

Of the total number of teachers at the primary level, only 30.1% are women teachers. Similarly, 16.3% of female teachers work at lower secondary and only 8.6% at secondary level. The Government of Nepal has launched various projects and programs to increase the number of female teachers. Recruitment policies have been changed to recruit more female teachers and include them in the teacher training program.

D. Structure of Education

Table 8. Structure of Education



The widely accepted education structure in Nepal is academic oriented formal education. This national structure shows the formal education structure from the pre-primary to tertiary level: age 5–9 is primary, 10–12 lower secondary, 13–14 secondary and above 17 is tertiary level. This structure generally does not accept technical/vocational students in mainstream education. It severely restricts horizontal movement of students from technical/vocational to academics and from academics to technical/vocational. However, the recent amendment of Education Act 2006 has put the provision to move to a higher level in the technical/vocational stream. Practically speaking, at the implementation level, technical/vocational education will have to face considerable resistance from those inclined to the traditional education structure.

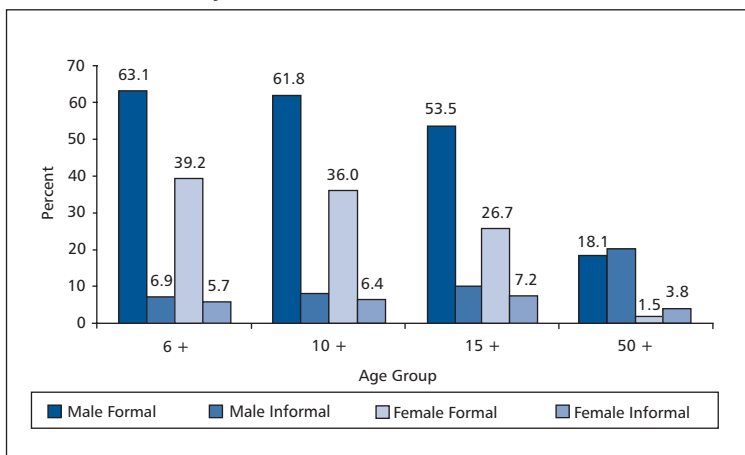
E. Literacy Rate

Table 9. Literacy Rate in Different Years (6 years and above)

Year (B.S.)	Year (A.D.)	Male	Female	Total	GPI	Gender gap (male-female)
2009	1952/54	9.5	0.7	5.3	0.07	8.8
2018	1961	16.3	1.8	8.9	0.11	14.5
2028	1971	23.6	3.9	14.0	0.17	19.7
2038	1981	34.0	12.0	23.3	0.35	22.0
2048	1991	54.5	25.0	39.6	0.46	29.5
2058	2001	65.1	42.5	53.7	0.65	22.6

Note: B.S. stands for Bikram Sambat, the date system used in Nepal

Figure 1. Literacy Rate by Sex for Different Age Group and by Source of Literacy



Source: CBS, 2000.

There is still a huge gap between the male and female literacy rates. The gap between males and females in formal education is also high. Young children have a better opportunity for literacy than older people.

Rapid increase in literacy is important for economic development. Similarly, knowledge, skills and a good attitude bring a high quality to life production and services.

F. School Leaving Certificate (SLC) Examination, 2060 (2003)

Table 10. School Leaving Certificate

Total Schools	Total	Female	Male
Appear	175,418	73,551	101,867
Pass	81,008	29,850	51,158
Pass %	46.2	40.6	50.2
Public	Total	Female	Male
Appear	138,636	58,821	79,815
Pass	50,511	18,106	32,405
Pass %	36.4	30.8	40.6
Private	Total	Female	Male
Appear	36,782	14,730	22,052
Pass	30,497	11,744	18,753
Pass %	82.9	79.7	85.0

Nepal's education system is controlled by examination rather than recruitment and teaching learning. The SLC examination is a painful hurdle for Nepali children. Every year hundreds of thousands of students appear for the test and barely 50% pass it. Table 10 shows that the majority of public school students (less than 45%) do not pass it. The examination pass rate of private schools is far better than the pass rate of public or government schools. This achievement is made against a huge investment of parents and the selective admission process of national catchments from well-to-do families. Even children from economically stable families lose the right to education for two reasons: first, inefficiency of public schools, and second, establishment of private schools in cities and towns with nationwide selection. Hence, a huge educational waste has been created due to the inefficiency and ineffectiveness in the total education system. The opportunity cost is high. The morale of the students is deteriorating. Therefore, such young people are easily influenced toward radical political activities or drug addiction. The irony of public education is that virtually all officers and teachers in the public education system send their children to private schools.

G. Schools Affiliated with Higher Secondary Education Board (HSEB), 2003

Table 11. Schools Affiliated with HSEB

Development Region	Public Schools	Private Schools	Private +2	Campus	Total
Eastern	102	14	38	19	173
Central	103	97	102	49	351
a) Within Kathmandu Valley	25	77	77	25	204
b) Outside Kathmandu Valley	78	20	25	24	147
Western	142	34	16	24	216
Mid-western	37	7	4	4	52
Far-western	52	5	4	3	64
Total	539	254	164	99	1,056
Percentage	51.0	24.1	15.5	9.4	100.0

Source: Economic Survey, 2004.

Against rapid growth in population, a huge demand for education and limited state resources hindered by political conflict and unstable government, Nepal could not make adequate investment at the higher secondary level. The government decided to give affiliation to communities and private organizations to run schools. Consequently, of the 1,056 higher secondary schools, 51% are community schools, 40% are private schools, and 9% are university attached colleges. At this level, the schooling cost is borne by students. At community public schools, the fee is moderate whereas in private schools the fee is comparatively higher.

H. Capacity of the Skill Training Providers per Year (Enrollment Capacity), Council for Technical Education and Vocational Training (CTEVT)

Table 12. Capacity of Skill Training Providers and CTEVT

S. No.	Program	Public			Private			Total
		Diploma 6 Institution	TSLC 26 Institution	Short Course 32 Institution	Diploma 73 Institution	TSLC 110 Institution	Short Course 34 Institution	
1	Agriculture	30	393		240	520		1,183
2	Health	132	257		2,743	5,050		8,182
3	Engineering	102	857		1,200	920		3,079
4	Others		62		576	520		1,158
	Total	264	1,569	4,000	4,759	7,010	4,000	21,602

Source: CTEVT, Nepal.

Basically, technical education and vocational training is given by CTEVT. CTEVT at present has a very limited infrastructure and resources to educate and train a huge number of youths who want job-oriented skill education and training. At present, CTEVT has 110 private and public technical schools, 73 polytechnics, 34 short term vocational training centers providing skill education and training in the field of agriculture, health, and engineering. CTEVT provides training at various levels such as Diploma, Technical SLC, and Short term Courses to 21,602 learners every year, which is a very small capacity for a large number of needy youths of Nepal. Presently, a non-formal skill training project has been started as the “Skills for Employment” project with ADB loan support. This project has targeted training more than 100,000 people focusing on disadvantaged groups (women, dalits and the poor).

I. Finance of Education

In Nepal, education is financed by the government and guardians directly. Public schools and colleges are supported by the government, while private schools, colleges and universities are supported by student fees. Both types of education are not free from criticism. Publicly supported schools are criticized for being inefficient and ineffective, and private schools are criticized for being extremely commercialized.

The financial figures here are only public figures. Between 16 and 18% of the total budget is invested in education. However, this amount has been

inadequate against the big demand for education and rapidly growing population.

The share of the total government budget, the share of Foreign Aid in the total education budget, and the shares of GDP and GNP in the education sector can be depicted in the following table:

Table 13. Share of Government Budget, Foreign Aid, GDP and GNP

Item	1990	1995	2000	2001	2002	2003
% of Government Budget	9.1	13.1	14.1	13.8	16.3	15.8
% of Foreign Aid in Education Budget	10.3	26.0	21.0	18.9	15.4	16.7
% of GDP	1.8	2.4	2.5	2.8	3.2	3.0
% of GNP	1.7	2.3	2.4	2.6	3.0	2.8

Source: MOF, Economic Survey, 2003 and 2004.

Table 14. National Budget: Education vs. TEVT

Fiscal Year	National Budget		Total Budget for Education		Amount	% National Budget	% TEVT
	Budget	%	Amount	%			
2000/02	91,621,335.00	100	11,749,579.00	12.824	117,990.00	0.12	1.0
2001/02	99,792,219.00	100	14,072,847.00	14.102	192,395.00	0.19	1.3
2002/03	96,124,796.00	100	14,402,421.00	14.983	92,540.00	0.09	0.6
2003/04	102,400,000.00	100	15,613,274.00	15.2473	160,000.00	0.15	1.0
2004/05	111,689,900.00	100	18,059,654.00	16.1695	138,100.00	0.12	0.7
2005/06	126,885,100.00	100	21,250,447.00	16.7478	152,700.00	0.12	0.7

Source: NSO (1980-2005). Population & Housing Census

Budget Investment in Total Education and Technical Education and Vocational Training

Comparison of the budget investment in the total education system and that for the Technical/Vocational system shows that vocational training got very little—less than 1% of the budget. Data from the last six years proves the limited investment in workforce development in Nepal.

Woodcraft and metal crafts reflected in the civilization of Kathmandu Valley show that vocational education in Nepal is centuries old. Only a few vocational programs were started following the Gandhian philosophy “Adhar Shikshya” in the 1940s and 1950s. But real structured vocational education

came into effect after the recommendation of the National Education Planning Commission (MOE, 1956). With the help of the United States Agency for International Development (USAID), multipurpose high schools were established in various parts of the country and vocational teachers were trained in the National Vocational Training Center (NVTC) in the fields of home science, industry, business, and agriculture. The objectives of NVTC as cited by Belbase (1981) were to:

- (a) provide facilities for training vocational teachers for the multipurpose school system;
- (b) serve as the national center for in-service training for vocational teachers;
- (c) train students in basic skilled-worker courses;
- (d) cooperate with the demonstration multipurpose secondary school for the purpose of practice teaching opportunities;
- (e) provide skill improvement courses for workers in the industry;
- (f) train students for supervisory and junior executive type positions; and
- (g) train students in various crafts courses for industry, agriculture, business and home economics. (p. 82-83)

However, there were always shortages of vocational teachers, teacher's guides, and instructional materials to support quality education in multipurpose schools. The shortage of well-qualified teachers was one of the major reasons for the failure of the multipurpose school system (Belbase, 1981; Ramse, 1993; Sharma, 1998; Shrestha, 1991).

Many notable improvements and systems were established by the National Education System Plan (NESP) in 1971. The strengths of NESP were "(a) nationwide goals and objectives were specified; (b) guidelines were developed for curriculum, textbooks and student evaluation; (c) vocational education was given special emphasis; (d) wide range of vocational courses were offered; (e) vocational education [was] offered at post secondary level" (Shrestha, 1991, p. 68). But this ambitious plan was not successful. In particular, vocational education suffered most due to inadequate resources. The weaknesses of the NESP as summarized by Shrestha (1991) were: "(a) shortage of qualified teachers; (b) shortage of educational materials including text books, laboratories, etc.; (c) inability to establish coordination between school and employing agencies; (d) inability to attract and motivate students to vocational programs; (e) expensive for the students and institutions" (p. 69).

In the 1980s a great change came in the field of technical education and vocational training. Vocational subjects in general schools and vocational schools were reduced by 50%, while, at the same time, separate technical schools were designed and established in various parts of the country covering the far and remote locations and industrial areas. The purpose of the rural technical school was to produce the skilled workforce needed for agriculture, health, rural construction, and mechanization. Likewise, the objective of the urban technical school was to produce the skilled workforce needed for cottage and modern industries. Virtually all technical schools were established with external assistance. Switzerland was then and still is now one of the major donors for the development of technical education and vocational training and vocational teacher's training in Nepal (Ramse, 1993; Sharma, 1998).

A very flexible policy was adopted to recruit teachers in technical schools. Various doors were opened for vocationally trained teachers and fresh university graduates in engineering, agriculture, health, and commerce. In special cases, technical school graduates, experienced technicians, craftsman, and artisans were also employed in teaching jobs.

The Council for Technical Education and Vocational Training (CTEVT) established the Technical Instructors Training Institute (TITI) to solve instructor related problems. TITI is still in its initial stage of setting up school-based training, systematizing standardization, certification, accreditation, and career progression of TEVT instructors (CTEVT, 1990; CTEVT, 1997; HLEC, 1998; MOE, 1992).

Regarding certification, accreditation, and making training compulsory for beginning instructors, CTEVT has called for a Training and Certification System but it has not yet been effective (Burkhardt and Baidya, 1998; CTEVT, 1997).

J. Concerns Raised by Education Reform Reports

In the last 50 years, various education reform commissions have studied the education problem in Nepal. The National Education Planning Commission (NEPC) in 1956, the Royal Higher Education Commission (RHEC) in 1986, the National Educational Commission (NEC) in 1992, and the High Level National Education Commission (HLNEC) in 1998 all produced intensive reform reports and provided guidelines for establishing and restructuring the education system of Nepal. In 1971, the National Education System Plan was implemented to bring overall educational reform and changes throughout Nepal (HLNEC, 1998; MOE, 1992; Wood, 1965).

The 1956 report of the NEPC highlighted the importance and role of teacher education for the newly established educational development of Nepal. The following major recommendations were made by the commission:

Teacher training should be based on sound principle[s] of education and democratic procedures... The objective[s] of teacher education should include (a) professional competency, (b) a broad general education, (c) competency in teaching [a] vocational craft, and (d) personal competency as an individual and a leader in [the] community.

A system of teachers' certification should be inaugurated which would ensure that only qualified teachers are permitted to teach. A salary scale based on training and experience, and provisions to leave, retirement, and amenities should be established immediately (MOE, 1956, p.176).

The Royal Higher Education Commission (MOE, 1986) made strong recommendations on the training of teachers in order to raise the quality of education in the schools of Nepal. The commission also suggested that an in-depth study be done on (a) level-wise objectives of education; (b) curriculum, textbook, and teaching materials; (c) standards of teaching; (d) teaching methodology and evaluation system; (e) service condition of teachers; (f) equitable expansion of education; (g) emphasis on vocational education; (i) trade schools and self terminating skill training programs; and (j) educational management, finance and peoples' participation.

The National Education System Plan (NESP) from 1971 to 1976 outlined a long range plan for teacher education. Some of the guidelines and principles given by the plan are: (a) All schools should recruit trained teachers, (b) all untrained in-service teachers should be trained, (c) an intensive training should be provided to vocational teachers to upgrade vocational skills, (d) the curriculum of the teacher education should be revised to meet the current needs, and (e) research should be conducted to examine the relevancy of the curriculum, effectiveness of teaching methodology, and evaluation system (MOEC, 1974). During the five years of operation of the NESP, level-wise objectives of education were formulated, the overall education system was restructured, curricula were revised, textbooks were written in national perspectives, government grants were provided to the schools, supervisory service was provided to the schools, and the national service condition of teachers was formulated

(MOEC, 1974). The damaging decision in this period was centralization of educational management, which created several unmanageable problems lasting until today (HLNEC, 1998; MOE, 1992). Sharma (1998) commented, “In a centralized bureaucratic management system, curricular, financial, and personnel decisions are controlled. As a result, local institutions are not able to respond quickly to the training needs of the local community” (p. 81). Before 1971, all schools were established and managed by local communities with their local initiatives and resources although they had limited resources and expertise. All teachers were selected, appointed, and retired by the local bodies.

The National Education Commission (MOE, 1992) and the High Level National Education Commission (1998) both recommended the adoption of the following points as national policy on teacher training: (a) make teacher training obligatory for teaching professionals at the school level, (b) provide training for in-service teachers, (c) increase the salaries of trained teachers, (d) give preference to women teachers, and (e) revise training programs suitable to teachers at each level.

Regarding vocational instructors, the NEC suggested that vocational instructors should be trained within the country, training should be focused on subject content and teaching methodology, and managerial and support staff should be trained to bring efficiency in training (MOE, 1992). The HLNEC (1998) suggested that in-service instructors be promoted based on their level of training. The preparation of vocational instructors cannot be improved in isolation or separate from the national education system because doing so may create a threat to the national system. Virtually all education reform reports raised concerns about overall teacher training programs and suggested that teacher training should be compulsory for all teachers. No specific requirements have been suggested for teacher licensure in Nepal. All reports argued that only professionally competent teachers can enhance the all round development of students and that only professionally competent teachers can produce the skilled workforce needed for economic development in the country (HLNEC, 1998; MOE, 1992; MOE, 1956; MOEC, 1971).

At present, many organizations such as the Ministry of Education, education faculties at the universities and other teacher training organizations are working in isolation without having a common vision and shared goals. The educational system has no nationally set standards, standardized certification, licensure, or accreditation system (MOE, 1992). Panday (1999) blamed previous education commissions. He said, “...the basic questions as to the why, what, and who of education are yet to be answered to guide the deployment of efforts and the allocation of resources. As a result, education

in Nepal has become, in many respects, an inefficient, inequalitarian, and in some ways, counter-productive enterprise” (p. 16-17).

Managing education reforms has been a critical factor in a less developed country such as Nepal. Although education is considered to be a primary means of human resource development for a nation’s long-term sustainable economic growth, the gap between proposed reforms and the ability to implement them is widening day by day in spite of the external assistance. According to Rondinelli, Middleton, and Vespoor (1990), the problems of education reforms in developing countries are rapid expansion of schools and student enrollment, uncertain and unstable economic and political conditions, and the lack of physical infrastructures and experienced skilled professionals to implement programs. In addition to difficulties in managing innovation, problems arising from personality clashes and behavior of the people involved in the project implementation, inadequate resources, managerial inabilities, and opposition from key groups of the society are the major vital issues for the effective implementation of education reform in developing countries (Rondinelli et al., 1990). Coombs (1985) observed that there is a huge problem of translating new reform policies into action. He further mentioned translating policies into action was a common problem for both recipient developing countries and international donors and international banks.

III. TECHNICAL EDUCATION AND VOCATIONAL TRAINING FOR SUSTAINABLE DEVELOPMENT

The quality of a skilled workforce depends on the quality of skill training in schools and in the workplace. Quality training at the school and the workplace depends on, among many factors, the quality of instructors, curriculum, instructional materials, and supervisors. A quality workforce plays a vital role in sustainable economic growth and social development. The quality of instruction at the technical education and vocational training (TEVT) level has been a major problem in attaining a quality workforce. In Nepal, education reform reports such as the National Education System Plan (Ministry of Education and Culture, HMG/Nepal [MOEC], 1971), the Report of the National Education Commission (Ministry of Education, HMG/Nepal [MOE], 1992), and the 1998 Report of the High Level National Education Commission (HLNEC) have highlighted the voices of criticism regarding low quality education and have demanded reform in TEVT for quality education and training in order to meet the future workforce demands of the society.

Over the last four decades, the most striking problems in this development process have been the lack of availability and retention of well-qualified and trained instructors, instructional materials, and relevant curriculum for the development of a quality workforce. At the same time, a large number of workers has been flowing abroad for work. Most of these workers are unskilled and form a physical-labor based workforce. Although Nepal is surviving on a remittance based economy, adequate value is not added to develop a skilled workforce. Consequently, many challenges have appeared in front of sustainable development in Nepal. Some efforts have been made in the past to develop a quality workforce by the public and private sectors envisioning a domestic and international skilled market. However, very little has been achieved. Additional negative factors for limited achievement are low public investment, frequent changes in government, educational policy, and administrative structures.

Sustainable socio-economic development depends on the skills and qualifications of the skilled workforce that are required for continuous

changes in the schools and workplaces. For this, employees as well as TEVT graduates should be willing to acquire challenging skills and competencies in industries and enterprises related to their occupations and professions. Such skills and competencies can be acquired through non-formal and informal learning. This paper suggests the following criteria for sustainable development:

1. Participation in TEVT needs to be linked to changes in thinking, competence development, and self-directed learning through informal and non-formal ways.
2. Technical employees should update their technical as well as generic competencies like planning, problem solving, communication, IT and management skills.
3. Incidental and systematic learning at the workplace is effective.
4. Public training institutions should design and implement policies to promote participation in training and learning.
5. Hybrid skills or competencies should be reflected in modern occupations and be accredited to improve the quality of TEVT.
6. Incentives should be provided to TEVT providers for those who offer self-directed learning to improve job performance.

A. Types of Education

Technical Education

Technical education is instruction designed to produce competent workers in mechanical, industrial arts, and other applied sciences at upper level and middle level work-force in technical studies and vocational skill training from technical schools, technical vocational training centers, and university campuses. It is education that enables trainees to acquire the required practical skills for occupations and jobs based on science and technology (European Training Foundation, 1997).

Vocational Education and Training

Vocational education and training includes specialized training activities designed to provide the knowledge, skills, and attitudes required for efficient and effective performance of an occupation or groups of occupations. It is a

prescribed body of studies constituting a curriculum or series of competencies which equips people with employable skills (European Training Foundation, 1997).

Technical Education and Vocational Training

Technical education and vocational training is an integration of education and training involving the transfer of psychomotor, affective and cognitive skills in learning and teaching which enables workers to access the vertical and horizontal mobility in jobs or occupations by adopting the new changes in technology. Such education and training is given in a long term regular basis or short term job oriented training (Asian Development Bank, 1990). The systems and networking of all technical education and vocational training institutions and stakeholders develop and maintain the system (European Training Foundation, 1997). In Nepal, TEVT is provided in formal, non-formal and informal channels of education and training system.

Formal Education

Formal education is an institutionalized chronologically structured educational system from pre-primary to tertiary level. Pre-primary education refers to education of children in the age group of three to five, and primary education encompassing grades one to five caters to children older than five years of age enrolled in the first grade. The third category is lower secondary education, which includes grades six, seven and eight. Grades 9 and 10 fall in the secondary level category. The School Leaving Certificate (SLC) examination conducted centrally is held at the end of grade 10. Recently, higher secondary education consisting of grades 11 and 12 has been introduced. Parallel to this, the universities still run a proficiency certificate program, two years after SLC.

The first level of higher education after grade 12 is either of three or four years' duration, depending upon the nature of the program. On completion of this level of education, students are awarded a Bachelor's Degree. However, the duration of this level in technical institutes many run even to five years. The Master's Degree, which follows the Bachelor's Degree, is of two years' duration. The university education also includes M. Phil. (Master of Philosophy) and Ph. D. (Doctor of Philosophy) in various disciplines. The graduation rate at primary (grades 1–5) level is 53%, primary to lower secondary (grades 6–8) is 97.9%, and lower secondary to secondary (9–10) level is 93.9% (Ministry of Education, 2000).

Non-formal Education and Training

Non-formal education (NFE) is instruction that is obligatory and structured and is learned outside the context of the formal system of education. It usually refers to adult literacy. In the modern world, it is applied beyond adult literacy. It is non-formal because it is obligatory it does not lead to a formal certification, and it may or may not be state supported. Non-formal education is any intentional and systematic educational enterprise usually outside of the formal schooling system in which content is adapted to the unique needs of the trainees in order to maximize learning and minimize other formal elements of schooling. Non-formal education is more learner-centered than formal education. NFE focuses on practical skills and knowledge while formal education focuses on information. NFE has a flexible structure in training, learning, content delivery and evaluation.

Informal Education and Training

Informal education deals with everyday learning experiences that are not planned or organized. Informal education is incidental learning as well as continuous learning without any plan or structure. Informal education is controlled by the learners who may drop out any time without penalties. The facilitator emphasizes the skills, knowledge and attitude which are desired by the learner. When everyday experiences are interpreted or facilitated by peers, parents, seniors or professionals, this is known as informal education. Informal education is as powerful as formal and non-formal education. Examples of informal education include, a baby learning language from her parents, a farmer's son learning farming from his parents, a carpenter's son learning carpentry from his father or an associated senior, etc. Many artisans learn in informal ways.

These days, many vocations, technologies, information technologies and other skills are learned equally in formal, non-formal and informal ways. For centuries, the tradition of informal learning as well as acquiring occupational skills from parents, senior professionals, and peers has been prevalent in Nepal. Informal learning has been an integral part of life as it is a source of survival skills in many crafts, trades, agriculture and modern industries. In many cases, a learner can acquire various skills at his/her own convenience through practical work, even with minimal theoretical knowledge. Such practices have been taking place in informal traditional learning situations in families and communities of peasants, farmers, artisans, artists, craftsmen and tradesmen.

B. Present Status of TEVT in Nepal

In Nepal, most of the TEVT activities focus on non-university technical education and vocational training programs through Council for Technical Education and Vocational Training (CTEVT), Department of Labor and Employment Promotion (DOLEP), Department of Cottage and Small Industry (DCSI) and Cottage and Small Industry Development Board (CSIDB). Other sector ministries, non-governmental agencies and private sector organizations also provide related skill training. The following describes in brief the existing TEVT provisions.

The TEVT system in Nepal is largely supply driven. There is no post-training support such as micro-credit and counseling services to generate employment and self-employment. Therefore, the present CTEVT/ADB Project “Skill for Employment” has focused on:

- Establishing a training market through funding of training for disadvantaged people in skill areas of need on the basis of achieving income generation.
- Piloting funding to districts to encourage decentralization of decision making and greater community involvement so that funding can quickly meet real needs.
- Mobilizing community and entrepreneur/employer networks in addressing their own needs and communicating those needs to training providers.
- Making skill standards a central focus of training and enhancing the existing set of standards in order to have training achieve outcomes in demand.
- Establishing standards for training delivery and making these a requirement for the allocation of funds and accreditation thus overall initiating ongoing quality improvement.
- Improving the capacity of training organizations to adapt to new frameworks and thus transform the TEVT system towards more innovative and responsive approaches.

In order to view the present status of TEVT of Nepal, examination of global trends and perspective can be helpful.

Table 15. Global Trends in TEVT

Trend	Comments
From TEVT to workforce development	TEVT is, in itself, one solution of many to solve national problems of workforce development, skills development or human resource development. Focusing only on TEVT can render results that are self-serving and ignore large issues.
From Government delivered formal training to private sector training delivery	Government TEVT delivery systems are heavily criticized for being terribly expensive while serving only a minute segment of the populace, being inequitable, often competing with private training organizations and lacking equal access for all. The role of the government should be to protect the public from unscrupulous training providers and insure training quality through systems of accreditation.
Voucher systems	Voucher systems have the advantage of responding to equity issues. Many countries allow the vouchers to be used not only for skills development but for adult basic literacy as well.
National qualifications authority	Many countries are providing a real service to the population by systems that recognize all forms of prior learning—formal, informal and non-formal. Such systems may involve a national skills testing authority as well.
Levy tax	Someone has to pay for skills development and the general trend is to have the beneficiaries pay for this service. Beneficiaries include employers as well as the persons receiving the skill development training.
Simple visions	A simple vision guiding national development can be very effective. Examples: “Skills for productive citizenship for all” - South Africa “The development of world-class, technically skilled and educated workers with positive work values, acting as the vital force in building a prosperous Philippines where citizens enjoy a life of greater economic security, social well being and personal dignity.” – Philippines
From pre-employment training to enterprise-based training	More and more, different forms of enterprise-based training are providing the lion’s share of national skills development efforts. However, access and equity issues must be carefully monitored.
Guiding principles of policy development	Five guiding principles for policy development often found in the literature are: <ul style="list-style-type: none"> • Equity • Demand-led • Flexibility and decentralization • Partnership and cooperation • Efficiency and effectiveness

Trend	Comments
Components of a national system	Solutions to workforce development typically require a multi-faceted approach to be effective. Many national systems include: <ul style="list-style-type: none"> • Competency-based training delivery • Open training market • Flexible delivery of training • National system for recognition of training • National qualifications framework
Towards systems for lifelong learning and a content shift towards the knowledge economy	Lifelong learning is becoming a necessity in many countries. It is more than just education and training beyond formal schooling. A lifelong learning framework encompasses learning throughout the lifecycle, from early childhood to retirement, and in different learning environments, formal and non-formal. Opportunities for learning throughout one's lifetime are becoming increasingly critical for countries to be competitive in the global knowledge economy. <p>Lifelong learning is education for the knowledge economy. Within this lifelong learning framework, formal education structures—primary, secondary, higher, vocational, and so on—are less important than learning and meeting learners' needs. It is essential to integrate learning programs better and to align different elements of the system. Learners should be able to enter and leave the system at different points. The learning system needs to include a multitude of players, such as learners, families, employers, providers, and the state. Governance in the lifelong learning framework therefore involves more than just ministries of education and labor.</p>

Source: CTEVT, Nepal.

C. Technical Education and Vocational Training Council (CTEVT)

Under the CTEVT system, there are currently eleven zonal level technical schools scattered around the country, three polytechnic schools, two village level Vocational Training and Community Development (VTCD) centers and one national level Training Institute for Technical Instruction (TITI). In addition to this, CTEVT has granted affiliation and recognition to over 110 private training institutions that offer 175 technical SLC level programs in more than 47 districts. It also conducts standardized skill tests and examinations to certify the skills learned through formal, informal and non-formal means. It is also involved in developing skill standards, revising and standardizing the curricula, developing textbooks and conducting research activities.

Table 16. CTEVT and Affiliated Programs

Program Areas	TSLC				Diploma				Short Term Training (Public)
	CTEVT		Private		CTEVT		Private		
	No. of Programs	No. of Students	No. of Programs	No. of Students	No. of Programs	No. of Students	No. of Programs	No. of Students	
Engineering	10	463	33	1,480	4	168	28	1420	1,079
Health	5	236	126	5,080	2	120	20	745	440
Agriculture	5	174	10	400	2	54	3	120	480
Office Management	1	30	3	120					
Food Technology			1	40			1	40	
Tourism									352
Community Development			2	80					
Others									
Total	21	903	175	7,200	8	342	52	2,325	2,351

Note: Engineering programs include mechanics, electrical engineering, civil construction, auto mechanics, computer studies, architecture, electronics, plumbing, refrigerator and air conditioning studies, etc. Health programs include general medicine, nursing, laboratory technician, ophthalmology, acupuncture, community oral health, etc.

The CTEVT affiliated technical institutes have been offering courses in community medical assistance (CMA), junior technical assistance (JTA), junior technicians (JT), auxiliary nurse midwife (ANM); electrical, mechanical, civil, naturopathy, therapy in acupuncture, Ayurvedic, dental and laboratory technicians; land surveyor (AMIN), carpet weaving, wood works, carpentry, welding, general mechanics, auto mechanics and food technical assistant.

The CTEVT affiliated technical diploma level courses from private institutions are offered in health, engineering, agriculture, and other technological occupations. Youths with school leaving certificates are admitted in diploma programs that require three years to complete. There are 57 such programs operating in the private institutions affiliated with CTEVT. Students in Technical School Leaving Certificate (TSLC) level need to pass the centrally administered entrance examination to get admission in these programs. At the end of the program, a final examination is administered and the successful students receive a nationally recognized certificate from CTEVT.

Since the private technical institutions charge very high fees and do not offer scholarships, it is obvious that youth from rural, poor and

disadvantaged backgrounds have very limited or no access to these institutions. Due to restrictive criteria required to pass the SLC exam and 10th grade exams in some cases, the majority of out-of-school youth who come from disadvantaged communities and have no high school education are restricted from entry into technical education and structured vocational training programs offered by technical schools and institutions operated by CTEVT or its affiliated institutions. CTEVT affiliated private training institutions provide long and/or short term courses using CTEVT approved curricula, and they are expected to operate within the framework of the CTEVT quality control system.

There are also several other training providers outside CTEVT's affiliation using their own curricula, program duration, and assessment system which do not fall under the jurisdiction of CTEVT. However, some of the programs have utilized CTEVT's skill testing and certification services. A large number of the enterprises and industries, visited during the stakeholders' consultation, are found to have conducted informal on the job training (OJT) to enhance the skills of their own workers to meet their individual requirements. Except for Butwal Technical Institute (BTI), no other training provider has been found to have a partnership with business and industries to offer apprenticeship training programs for youths. On the other hand, the enterprises are found to be reluctant to have partnerships with training institutions mainly due to their anxiety about possible over-politicization of their workforce.

D. Annex Programs

The Annex Program, started in 2002 by CTEVT in collaboration with the Department of Education, is an innovative technical education program offered on the premises of general secondary schools that shares part of the physical facilities and human resources including the management. It is operated in local schools through the initiative of the school and community under the cost sharing mechanism between the government and the local community. The program is expected to be highly cost effective as it has full ownership and support from the local community. Currently, on an experimental basis, there are 15 such schools—three in each development region—offering courses in auto mechanics, mechanical and electrical fields, veterinary science, general agriculture, electrical and information technology. After an evaluation of three years of operation, the Annex program, if found successful, is expected to be replicated in other secondary schools as well.

E. TEVT at the School Level

Vocational education is offered through the general secondary schools with a simple purpose of providing students a general orientation of various vocational areas. The curriculum of the general secondary schools consists of only one subject (a weightage of about 14%) as the vocational subject in areas such as agriculture, education, accounting, secretarial services, industrial arts, etc. The vocational courses are offered as optional subjects. As these courses do not promote any employment for school graduates, they have lost popularity among students, and their impact at the national level is minimal. This is one of the reasons why a separate TEVT stream is being demanded.

F. Department of Cottage and Small Industries (DCSI) and Cottage and Small Industry Development Board (CSIDB)

The Department of Cottage and Small Industries (DCSI) has a long history of vocational training, which started with the establishment of the Nepali Textile and Cottage Skills office in 1939. Records show that the real thrust in offering vocational training in various skill areas was initiated in 1956 with the establishment of Cottage Industry Centers. Currently, DCSI and the Cottage and Small Industry Development Board (CSIDB) organize skill training in all 75 districts of the country. Major activities of the Department and the Board include operation of skill oriented training programs, provision of post-training support to trained individuals to find jobs in related occupations, and assistance in operation of small enterprises and income generating activities. In 2001, DCSI, responsible for operating skill training in 27 districts, provided skill training to 9,774 individuals in 72 different skill areas (DCSI, 2001). More than 60% of the trainees were women. Some of the training areas are textile, tailoring, knitting, carpentry, batik painting, plumbing, house wiring, radio and TV maintenance, Thangka painting, natural fiber processing, paper making and ceramic production. Similarly, SIDC conducted skill training in the remaining 48 districts in the same year for 7,188 individuals. Altogether, 17,962 people received skill training from both DCSI and CSIDB.

The main focus of the skill training provided by DCSI and CSIDB is to facilitate self-employment and enterprise creation to support the informal sector. Expanding small enterprises and engaging people in income generation is a viable strategy for poverty reduction in Nepal. Both DCSI

and CSIDB have been playing a major role in expanding the skill training and facilitating the trained individuals to operate small enterprises or income generating activities all over the country through their established training and service network in all districts. Since 1996, the Department has initiated loan provisions to those trained individuals who want to start a small enterprise in the area of their skills. Such micro-credits are available to trainees to start small businesses through the Agricultural Development Bank based on the recommendation of the respective district office of the Department or of the Committee. More than Rs2.7 million was loaned to the training completers to operate small micro-enterprises.

In training networks in all the districts and a large number of skill training programs, special focus on developing skills for women and the disadvantaged, small enterprise promotion, provision for loan and entrepreneurship training, post-training follow-up and marketing support are some of the strengths of the skill training programs operated by DCSI and CSIDB. However, the effectiveness and relevance of the programs are in question. The recent follow-up study of the skill training completers in Morang and Rupandehi districts revealed that only 30% of the trainees were engaged in productive activities utilizing the skills they learned. This shows that rigorous efforts are needed to improve the external efficiency of the skill training programs offered by both of these organizations.

G. The Ministry of Labor and Transport Management (MOLT)

On behalf of the Ministry of Labor and Transport Management (MOLT), the Department of Labor and Employment Promotion (DOLEP), with its two training center systems, Skill Development Training Centers (SDTCs) and Vocational Training Centers (VTCs), has been responsible for looking after skill training of workers.

At present, 14 Skill Development Training Centres (SDTC) are operating throughout the kingdom spread across different zones. These centers have been established to increase employability of the Nepali labor force by providing workers with basic skills in various trades. All 14 SDTCs are also involved in labor market information collection, skill survey and employment services activities in their respective areas. The SDTCs also help the unemployed to become self-employed. This involves helping such persons in establishing their own business by obtaining necessary financial assistance and bank loans. The skill-training programme of the SDTCs has proven to be very successful as it delivers the outputs as planned.

The two Vocational Training Centres are in Kathmandu and Biratnagar. They provide training in trades such as hairstyling, leather works (sewing upper part of leather shoes), house wiring and some mechanical trades. The Biratnagar Vocational Training Center produces 30 mechanics and fitters every year. The Kathmandu Vocational Training Center provides six-month long training in hairstyling. This Center was initially started to impart hair cutting training to men. But with the change in fashion, there is an increased demand for training in women's hairstyling. In fiscal year 1992/1993, the center provided training in leather sewing (upper part of leather shoes) to 40 persons over nine months and in fiscal year 1993/1994 it added general mechanics (a one year course) and house wiring (six month course) to the course list. These training courses require a minimum entrance level of having passed grade five. These training centers impart the training in 26 different trades, identified on the basis of the labor market information and training needs assessment.

Table 17. Regionwise Distribution of DOLEP Trainees

Region	No. of Trainees (2001/2002)
Eastern	1,545
Central	3,077
Western	1,286
Mid-western	602
Far-western	848
Total	7,358

Source: Department of Labor and Employment Promotion, 2003.

The progress and outputs of the SDTCs and VTCS of fiscal year 2002/2003 are given in Annex II. The general breakdown of all the training provided by the SDTCs and VTCs in different trades since their establishment up to the end of fiscal year 2059/60 is shown in Annex III.

H. Sustainable Development Agenda

Sustainable Development Agenda for Nepal (NPC, 2003) has stated an objective as increasing the vocational training choices available to all who are unwilling or unable to continue formal education.⁸ In order to achieve this objective there will be the need for:

- Establishment of the widespread system of stipend-paying, monitored and accredited apprenticeships in the private

sector which provide young women and men with the skills necessary to advance in occupations of their choice.

- Avoid fragmentation of scarce resources, promotion of synergies, and encouragement of annexing vocational wings to existing schools. It will be important to keep access open to people of all ages by facilitating retraining.

Table 18. Vocational Training Provided by Various Ministries and Departments

SN	Ministries	Target	Cost NRs000	Unit Cost	Duration
1	Agriculture	916	6,272	6,847	2 weeks to 6 months
2	Industry, Trade and Supplies	20,672	103,020	4,983	2 weeks to 6 months
3	Science and Technology	10,100	176,500	17,475	2 weeks to 6 months
4	Land reform and management	580	5,320	9,172	2 weeks to 6 months
5	Women, Children and Social Welfare	4,125	3,619	877	2 weeks to 6 months
6	Ministry of Education and Sports (CTEVT)	2,868	4,380	1,527	2 weeks to 6 months
7	Labor and Transportation Management	5,635	15,244	2,705	2 weeks to 6 months
8	Employment Promotion Commission	2,700	55,000	20,370	2 weeks to 6 months
Total		47,596	369,355	7,760	

Source: Employment Promotion Commission (2002).

The focus of the training programs was on assisting the country's lower income groups and rural poor. Although these training programs under various ministries do contribute to expanding access to training, the question of efficiency and effectiveness still remains unanswered. Furthermore, it has often been pointed out that institutionalization of training is lacking and the various training programs under the different ministries are at different levels and conducted for different purposes. Due to the variation in standards, quality and ineffective preparation, a significant percentage of the trained people are neither successful in getting employment nor engaged in gainful activities.

I. Vocational Skills Training from International/National Non-Governmental Organizations

National NGOs, such as Training for Employment (TfE), Skill Nepal, World Education, Maiti Nepal, Women Entrepreneurs Association of Nepal (WEAN), Community Learning Centers (CLC) and many others are involved in skill training activities. Several UN agencies (ILO, UNFPA, UNNESO), bi-lateral agencies as GTZ, SDC, SNV/Nepal, and international non-governmental organizations (INGOs) such as Helvetas, Plan Nepal, Action Aid, UMN, Care Nepal, and various Save the Children organizations are involved in supporting technical and vocational training programs. In most cases, their involvement is the provision of funding and material support to undertake skill training and capacity building necessary to support their ongoing programs and projects. This support is mainly targeted towards poverty reduction and is provided in a piece-meal approach not coordinated at the national level. This practice has questionable transparency in terms of information of resource amount, its utilization and impact.

The INGOs and NGOs are program supporters and are Kathmandu-based but they have support centers at regional levels. They work in collaboration with national training providers. Each INGO and NGO has its own expectations from the TEVT national policy. However, they expect the national TEVT Policy to focus on decent work, which brings together the basic fundamental principles and rights at work, employment, social protection and social dialogue in an integrated and cohesive manner. Decent work provides a universal development goal for social inclusion and poverty reduction.

J. Plan Nepal

Plan Nepal is a child-centered INGO based in Kathmandu and acts as training provider as well as supporter mainly in life skills and some vocational skills at the grassroots level with its own curriculum and financial sources such as sponsorship and grants. Child development, child-centered community development, income generation through savings and credit schemes, and skill training in poultry, fisheries, kitchen gardening, leasehold forestry, child rights and gender and NGO/CBO capacity building in bookkeeping, and proposal and report writing skills are the main programs of Plan Nepal.

Plan Nepal operates from Kathmandu as well as from three support centers at the regional level and four program units at the district level with 80% of the programs implemented with local partnership and 20% implemented directly. Plan Nepal has sufficient national and international human resources with sufficient international financing coming from grants

and sponsorships. The constraint in operating the program as indicated by Plan Nepal was limited openness in program approach and flexibility due to too many international corporate requirements. Plan Nepal expects to be considered as a partner of the TEVT system in providing life and vocational skills at the grassroots level.

K. International Labor Organization (ILO)

The International Labor Organization (ILO) is a training provider as well as supporter. It provides technical assistance primarily in the fields of vocational training and vocational rehabilitation, employment policy, and labor administration. Nepal joined the ILO in 1966.

The following programs are executed in Nepal by the ILO:

1. Time Bound Program (TBP) on the Elimination of the Worst Forms of Child Labor
2. Prevention of HIV/AIDS in the World of Work in Nepal
3. Capacity Building of Employer's Organizations in Productivity and Competitiveness
4. Sustainable Elimination of Bonded Labor in Nepal
5. Combating Child Trafficking for Labor Sexual Exploitation
6. Extending Social Protection to Workers in the Informal Economy
7. Community Action for the Elimination of Child (bonded) Labor from Exploitive and Hazardous Work

L. Future Directions for Sustainability

Technical co-operation to Nepal is expected to increase in the years to come, as there are a number of pipeline projects. The forthcoming projects will possibly be on the prevention and elimination of bonded labor, youth employment, regulating foreign migration and skill development for employment generation, labor law reform, application of labor based technologies in collaboration with the Asian Development Bank, as well as activities to promote decent work for disadvantaged groups.

ILO emphasized that National TEVT Policy should focus on decent work because in 1998, ILO put forward the central theme of decent work, which brings together the basic fundamental principles and rights at work, employment, social protection and social dialogue in an integrated and cohesive manner. Decent work provides a universal development goal for social inclusion and poverty reduction.

The following major strategic elements are identified for creating a decent work atmosphere in Nepal:

1. Enhancing employment opportunities by job creation for meeting the demand side of the labor, supporting skill training for auguring the supply side of the labor, supporting labor market research for collecting, maintaining, analyzing and disseminating information on the supply and demand of labor in the country, supporting employment service for matching demand and supply, advocating fair wage provision and assisting in managing labor migration both inter- and intra-country.
2. Protecting rights at work by supporting workers' associations, employers' associations, elimination of gender discrimination at work, elimination of child workers and helping elimination of forced labor.
3. Enhancing social protection by supporting occupational safety and health, protective environment regarding working time, maternity, childcare, canteen, medical, accommodation, etc. and advocating for social security including security provision at risk times, retirement, time of sickness, and promoting zero accidents, etc.
4. Improve social dialogue by promoting bipartite dialogue between management and workers, tripartite dialogue among the state, management and workers, and multipartite dialogue among state, local government, management, workers, non-government activists, consumer society, cooperatives, etc.

M. Helvetas/F-Skill

Helvetas is an INGO primarily supported by the Swiss government working in Nepal since the 1950s, and F-Skill is one of its innovative projects. F-Skill is both a training provider and supporter, basically in training of both life and vocational skills. The Swiss Government Institution for Development and Cooperation (SDC) is the major financer for F-Skill.

F-Skill policy is to ensure employment after skill training and apply the franchising model in skill training. The F-Skill Program basically uses a mobile training approach in rural, semi-urban and urban areas of mid-hills and the terai, works for conflict affected people and disadvantaged populations, attempts to reach Nepali migrant workers in India, and attempts to promote private sector participation in the franchising model in skill training. F-Skill

KTM Office manages and implements programs at the regional and local level. Its Dhangadhi Office has just started managing programs in the mid-west and far-west regions. It provides training through NGO and private partners based upon the franchising model. F-Skill has very positive results as 80% of the trained persons have obtained employment.

In the coming years, F-Skill expects to link skill training with the domestic and international labor market by means of training/orienting local NGOs and private sectors in the franchising model. Informal skill development in the formal and informal/private sector is the common approach in Nepal. Industries and enterprises prepare some skilled workers by teaching skills while working.

N. Federation of Nepalese Chambers of Commerce and Industry (FNCCI)

Since 2003, the Federation of Nepalese Chambers of Commerce and Industry (FNCCI) has institutionalized a skill training program by establishing three Trade Schools (Ilam Kendra) under the public-private partnership scheme.

Objectives

With the aims of promoting business and industry while protecting the rights and interests of business and industrial communities, FNCCI has adopted the following set of objectives:

- Play a catalytic role in the business and industrial development of the country
- Reinforce the business community's commitment to the society
- Provide advisory services to government and lobby as and when required in formulation and execution of business and industry related policies, acts and programs
- Foster cooperation with related national and foreign organizations
- Provide up-to-date information services to business and government and the community at large
- Create awareness and support for business and industry efforts on issues affecting business like quality, social responsibility, corporate governance, HIV/AIDS, child labor, environment, etc. (For detailed information on the Current Provision in TEVT, please refer to Annex: TEVT Stakeholders' Analysis.)

O. Relevance: Linkages Between Sub-sectors of Education and the World of Work

The Stakeholder Consultation carried out during the regional meetings in Summer 2004 indicated that the main problems observed in the TEVT sub-sector with regard to the relations between the sub-sectors of education and the world of work are:

- Mismatch between skill training and world of work.
- There is no functional collateral relationship among sub-sectors of the education and labor markets that could allow for both horizontal and vertical development.

More specifically, the problems identified during the consultation are:

- TEVT programs are static and often supply oriented, which are target trapped and often decided from the top (top down, target trap approach).
- Most of the training programs are designed based only on the available skills within the training centers and not on the labor market needs.
- Lack of information on the needs for trained human resources among the enterprises as there is a lack of a reliable labor market information system.
- Insufficient government investment in establishing a labor market information system.
- There is no system for finding out local level needs and consequently skill training opportunities in rural and remote areas are not available.
- Due to lack of long term industrial policy projections, human resource needs based on labor market information are not available.
- Tendency of closing down of industries is observed due to national political conflict.
- Little orientation and facilitation for linking TEVT with enterprises development sector.
- Other sub-sectors of education like informal and non-formal are not functionally linked with formal education and the TEVT sub-sector.
- Present practice of TEVT is restricted in upward mobility to its graduates.

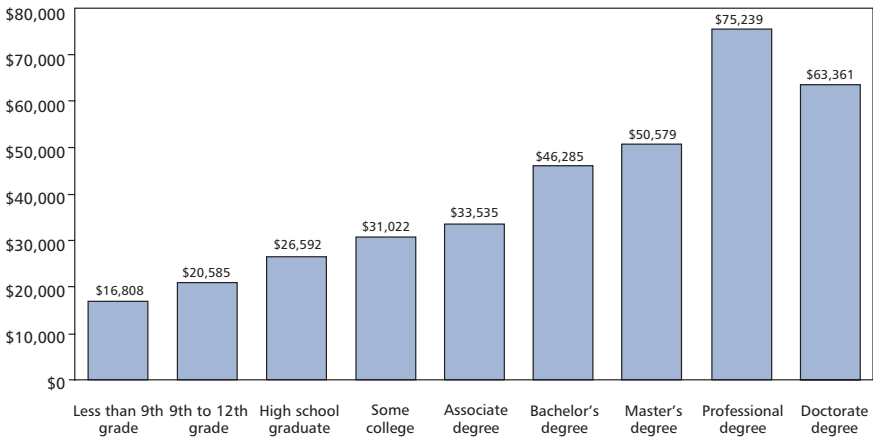
P. Employment Rate

The employment rate of the graduates of technical schools is one of the most significant criteria for external efficiency. Although up-to-date and comprehensive data are not available, technical schools have shown that the employment rate of graduates dropped from 87% to 55%, and 90% to 56%, respectively. However, technical school reports presented at the Management Conference, which is held once a year, showed that on average, about 50–60% of the graduates are employed in government and non-government organizations.

Q. Sustainable Economic Development through the Formal Education System

Formal education can play a vital role in sustainable economic development.

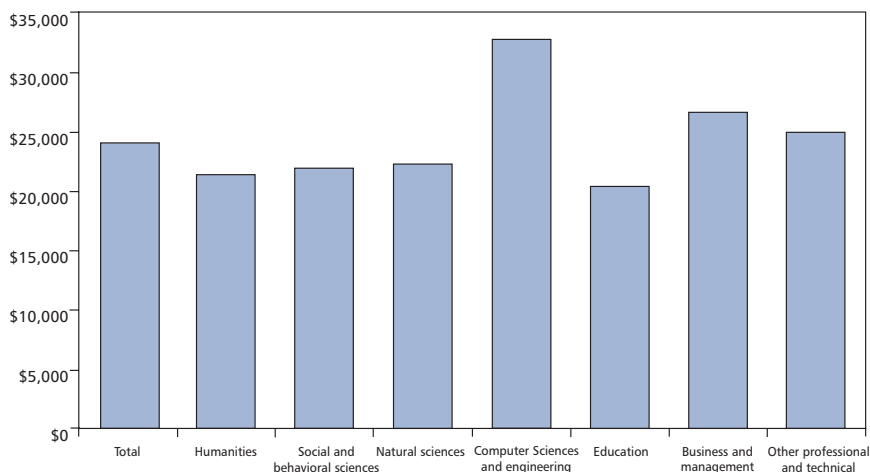
Figure 2. Median Earnings of all Full-Time Workers, by Educational Attainment in 1998*



*The income estimates in this table are based solely on money earnings before taxes. Noncash benefits are not included. The population is both sexes, 25 years and over, who worked full-time all year in 1998. Source: U.S. Census Bureau, *Current Population Reports*, P-60 Series, Table P-06.

Figure 2 shows that the higher the education the higher the income. The professional degrees gave more returns than doctoral degrees in the USA. Figure 3 shows that technical education and vocational subject graduates earn more than general education graduates.

Figure 3. Median Starting Salary of 1993 College Graduates by Major Field of Study



Source: U.S. Department of Education, National Center for Education Statistics. *The Condition of Education 1998* (NCES 98-013), 106.

R. Sustainable TEVT Development through the Non-formal and Informal Education Systems

An Inter-Agency Panel Discussion for Sustainable Development of TEVT (Bonn, 26 October 2004 organized by ILO) has highlighted many aspects of sustainability of TEVT in developing countries. ILO mentioned that poor people’s only asset is their labor. If poverty is to be eliminated from the developing world, skills should be provided for those poor people to use throughout their lives. Training is not a one time activity. It is a process of lifelong learning in which skills are acquired, renewed and adapted to the situation of the learner and the workplace.

In order to empower learners, ILO/UNESCO have emphasized two issues: first, concerned governments should rethink their workforce development policies, and second, new delivery techniques should be applied based on the needs of the working people. To empower economically vulnerable and socially excluded working people, education and training should be easier to access and be provided throughout their working life. For this, the ILO/UNESCO highlighted the following key issues:

- The government, enterprises and individuals should work together to link education and training to economy and employment.

- Immediate reforms are needed in the poorest countries to improve adult literacy and develop core work skills so that a knowledge and skill-based society can be created.
- Training should be responsive to the changing needs of the economy and workplace. Learning should be focused on occupational categories. School learning should be focused on workplace learning.
- Social partners should be involved in discussions on training policies, skills development, and investment through a powerful political system.
- Skill training should be recognized within a national framework so that skilled people can be certified for employment.
- Since 1963, the World Bank supported the sustainability of TEVT investing in classrooms and workshops. However the concept of TEVT for sustainable development is not widely understood as a goal in the developing world.
- Sustainable development is achieved when there is learning throughout an education system—from the policy to individual level.
- TEVT reforms should be system driven rather than project driven. Sustainability continues when reforms are based on established policy and owned by local stakeholders and their institutions.
- TEVT should address disadvantaged populations and people involved in conflict for their re-integration in the society.
- TEVT should contribute to greater democratization and social, cultural and economic development by utilizing the potentiality of all men and women equally irrespective of caste, religion, race and region.
- People working in all occupations should protect their environment for sound sustainable development.
- Good health is good business. A healthy workforce promotes sustainable development.
- The Peace and Governance Program enables political leaders to examine the roots, nature, outbreaks, tools and consequences of conflict, conflict management and post conflict reconstruction.

IV. SKILL TRAINING, SKILL TESTING AND STANDARDIZATION

Skill training is defined as expertise or competencies needed to perform a task or do a job. In everyday life, skills are needed for different types of activities/occupational roles in a specific organization/sector, national economy or international skill market. Skills are acquired through formal, non-formal and informal learning or training.

The vision of skill training, testing and standardization is to excel at providing workforce services that assist workers and businesses to achieve success in the global economy.

The Council for Technical Education and Vocational Training (CTEVT) was designed to enable all elements of vocational education and training within the country to work together as a harmonious whole. CTEVT activities are directed towards the creation of a workforce suited to the national economy as well as international skill market. Moreover, the National Skill Testing Board (NSTB) has been responsible for skill testing and standardization of skills. The primary role of NSTB is to develop a system of skill testing and standardization in an autonomous way so that a fair and equitable certification system is established. The certificates must be recognized by government authorities, private organizations and international labor market organizations. As a result, the system should enable skilled people to access better opportunities and jobs in the global market. National skill standardization, testing and certification have become important from three viewpoints: the Government, employer and employee.

A. Government Viewpoint

Good governance includes a concern for public welfare in terms of health, safety, and a person's ability to demonstrate a certain level of skills in a job. The government, therefore, is expected to contribute in the following aspects:

- Make investment in training to develop its workforce for local and global markets
- Ensure the safety and health of its citizens

- Recognize a person's ability with a certain level of skills and certify those skills
- Gradually raise the level of skills of the workforce as well as their living standard and quality of life.

B. Employer Viewpoint

From the employer's perspective, the benefits of skill training, testing, standardization and certification are as follows:

- Recruitment of a technical workforce
- Developing and using job specifications and standards to perform particular occupations
- Promotions and salary negotiations
- Availability of a more skilled workforce for production and service organizations

C. Employee Viewpoint

The employee benefits most from the system. The skilled and certified person can move from one job to another with opportunities for a better career and higher salaries. In summary, the direct visible benefits are:

- Proof of achievement in his/her occupation
- Freedom to move freely in response to career opportunities
- Increased opportunities to join labor organizations
- Increased pride and status through efficient and effective training, testing and certification (Kafle, 1989)

D. Skill Training and Testing

Skill testing and certification is an effective means of ensuring quality of skills acquired by formal, informal and non-formal means. The Skill Testing Board under CTEVT develops skill standards and administers performance tests to artisans who have little or no formal training. It operates 35 skill testing centers across the country, including 12 in Kathmandu. Work is underway on the development of a Nepal Standard Classification of Occupations. The Skill Testing Committee offers skill testing services to other training providers outside the CTEVT system. The lack of a national system of occupational analysis, job analysis and development of skills standards has hindered the quality of assurance measures and appropriate needs-based

curriculum and has delayed assuring the quality of the skills acquisition through the non-formal training sector. Hence, this sector needs to be developed to the optimum standard to assure quality through reliable and valid testing methods. With the assistance of SDC, this division is being upgraded as an autonomous national skill testing system (NSTS) that can cater to the skill testing and certification needs of the whole country.

According to CTEVT, a skill test is a corresponding test based on a skill standard which must be met in order to obtain a national certificate. It indicates that the certificate holder meets the requirements of a particular trade/occupation. The tests are open to all workers including the ones with no formal education. The advantages of the skill test are given below:

- Traditional skills and crafts persons will be nationally recognized.
- Demand of the labor market can be met without formal training.
- Level of the technician can be certified as per the demand of domestic and international markets.
- Increased productivity will result from the above.

The eligibility criteria for a national skills test are specified. According to the set definition, a limited skill in the relevant occupation and minimum of one year's experience in a related occupation are required to be eligible for Level 1. Likewise, the applicants for Level 2 are required to be literate enough to be able to read and write, and have knowledge and skill in the relevant occupation. A minimum of three years' work experience in a related occupation is a must. Finally, to be eligible for Level 3, the candidate should be literate and have knowledge and skill in the relevant occupation. The person is required to have a minimum of five years' work experience in a related occupation.

As reported by the Skill Testing Committee of CTEVT, to date 106 occupational standards are developed and 7,423 people have passed various tests. More than 99% are employed in paid jobs and self-employed micro enterprises. The Government is concerned about preparing a skilled work force required for industrial development. Although skills acquired outside of the formal technical training system may be of a very high quality, they are not recognized formally as such, simply because people are often unable to show a formal certificate. The whole Skill Testing System and activities are for non-formal and informal sectors. People who acquired skills informally at their workplace or non-formal and formal settings can take a skill test and be certified. The workforce development system, through partnerships

and a continuous quality improvement approach, provides job seekers and business with:

- Comprehensive labor market and training information
- Convenient points of access
- Comprehensive services
- An array of choices
- Lifelong learning opportunities
- Streamlined processes
- Increased educational and occupational skills, employment, and earnings
- Development of a more skilled workforce which meets local employers' needs
- Generation of greater economic productivity and competitiveness on the local and international national levels

In its broadest sense, workforce development is about:

- Ensuring a K-12 education system that equips students with skills to excel
- Developing a system of training providers that responds effectively to employers' needs
- Ensuring a postsecondary education system that works closely with business
- Promoting the importance of lifelong learning
- Increasing employer-sponsored training and education opportunities for workers

The CTEVT and NSTB are expected to manage a workforce development system that provides funding, direction, and a commitment of support where services have fundamental characteristics which:

- Are focused on the customer, while organized to meet the needs of job seekers, trainees and other program participants, workers, and businesses
- Are designed so that people can move easily among and between programs and the workplace
- Meet the needs of learners, including those who have been underserved in the past due to the caste system, racial, ethnic, or cultural differences, gender, disability, or learning style

- Provide customized support services such as career counseling, childcare and financial aid to those who need them
- Are competency based using Workforce Skill Standards and Essential Academic Learning Requirements so that all students and other trainees are able to master the skills and knowledge they require in as much or as little time as they need to do so
- Are coordinated with private sector training programs, public education entities, social and other services, and economic development strategies
- Rely on the accurate and current labor market information so that people acquire the skills and knowledge local employers need to remain competitive and productive
- Provide trainees and workers with a foundation of basic skills as well as the higher levels of skills and knowledge to equip them to be lifelong learners

CTEVT/NSTB should involve public and private sectors as well as business organizations in:

- Recruitment and applicant screening and referral
- Applicant assessment and testing
- Incumbent worker training and pre-employment training
- On-site interviewing (facilities, reception, coordination)
- Hiring events (job fairs, employment expo)
- Seminars on workforce and human resource issues
- Self-employment seminars, books and software
- Technical assistance on disability related issues
- Employer tax and wage reimbursement incentives
- Assistance with business closures and downsizing (rapid response)
- Access to labor market information
- Other services to address unique local needs (Kafle, Pradhan, Adhikari, 2002)

E. Training Targeted to Identified Business/User's Needs

Training programs for job seekers are developed to address workforce needs that business and industry have identified. The alignment of institutional training providers' programs with industry needs in identified sectors has taken on increased importance. Industry sector projects in Health and

Allied Services, Construction, Manufacturing, and Information Technology all seek to employ practices in assessing and responding to business needs. This knowledge has been used to develop effective strategies for assessing changing business skill needs, providing comprehensive employer services and training targeted towards identified needs.

F. Professional Environments

Employers use Work Source Centers for on-site recruitment, candidate interviews, and applicant and employee training. Facility design provides professional, business-like surroundings employers can readily fully utilize. Efficient, ergonomic training facilities coupled with active and open lobbies reassure business customers. Work Source is focused on outcomes and success. The Work Source–Whatcom computer lab is available for businesses on a rental basis for skills upgrade training and has been leased to business entities for staff training.

G. Industry Specific Sector Initiatives

Noting the success in the US of the Northwest Alliance for Health Care Skills, a model alliance of key industry leaders recognized both for its design and its accomplishments, the Council continues its efforts to align training and service delivery with high demand occupations and skill clusters. Research has identified three additional industry sectors: (1) marine manufacturing where a three Workforce Development Alliance (WDA) regional skill panel has been established, (2) wood product manufacturing where efforts are underway to establish an alliance, and (3) construction where links with existing industry associations, labor unions and businesses are being established.

H. Involving Established Employer Organizations and Business Coalitions

Alliances with local Chambers of Commerce, Economic Development Associations, and the Port Authority are an important market-based connection for workforce development. For example, the CTEVT worked closely with partnership for a sustainable economy to develop a comprehensive economic development plan. The Council is developing a comprehensive Business Services Operational Plan focused on defining levels of services to businesses, setting eligibility criteria for business services, measuring success system-wide, and creating dedicated positions for business services.

I. Skill Standards

Many related terms are used to define skill standards such as skill standards, occupational standards, vocational standards, qualification standards, job specifications and so on.

- (1) Skill standards are measures of the extent to which an individual can meet the demands of performance.
- (2) National occupational standards are those set for all those employed in specific work within a sector. In Nepal, job specifications are developed and applied as national standards.
- (3) Vocational standards are the measures of the readiness of an individual to enter a vocational area or to advance to a higher level within a vocational area.
- (4) National vocational standards are those set for all practitioners within a vocation in a country.

All these standards are useful for training providers, government, employers and employees.

- (1) Training providers can benefit from skill standards in the following areas:
 - Design a curriculum
 - Develop course material and teaching texts
 - Chose an appropriate delivery technique
 - Set workshop practices and procedures
 - Conduct a skill test for formal, non-formal and informal learners and certify skills
- (2) The Government of any country is responsible for the welfare of its citizens in the following areas:
 - Creating job opportunities
 - Providing training recognition
 - Setting work standards
 - Creating career paths
 - Providing safety rules and standards
- (3) Employers can benefit from skill standards in such ways as the following:
 - Developing job descriptions
 - Setting recruitment criteria
 - Developing training policies

- Developing staff/skilled workers
- Increasing productivity and quality
- Supporting government to develop skill standards (Sapkota, 2002)

J. National Occupational Skill Standards Available in Nepal

SECTOR: AGRICULTURE

1. Agriculture Junior Technical Assistant	L-2
2. Livestock Junior Technical Assistant	L-2
3. Junior Technical Assistant Dairy	L-2
4. Junior Technical Assistant (Poultry)	L-2
5. Livestock Service Technician	L-3
6. Mushroom Grower	L-1
7. Vegetable production	L-2
8. Veterinary Junior Technical Assistant	L-2
9. Village Animal Health Worker	L-1

SECTOR: AUTOMOBILE

1. Heavy Vehicle Electrical Mechanic	L-2
2. Heavy Vehicle Mechanic	L-2/3
3. Light Vehicle Engine Mechanic	L-2
4. Light Vehicle Service Mechanic	L-1
5. Light Vehicle Transmission Mechanic	L-2
6. Light Vehicle Electrical Mechanic	L-2
7. Light Vehicle Brake Mechanic	L-2
8. Light Vehicle Steering and Suspension Mechanic	L-2
9. Light Vehicle Mechanic	L-2\3
10. Middle and Heavy Vehicle Service Mechanic	L-1
11. Motor Cycle Mechanic	L-2
12. Motor Cycle Service Mechanic	L-1
13. Pump Set Operator	L-2
14. Tractor Mechanic	L-2

SECTOR: COMPUTER

1. Computer Operator	L-2
2. Computer Programmer	L-3
3. Computer Repair and Maintenance Technician	L-3
4. Junior Computer Hardware Technician	L-1
5. Computer Network Technician	L-3

SECTOR: CONSTRUCTION

1. Bar Bender	L-1
2. Brick Molder (Ita Pathera)	L-El.
3. Building Painter	L-1
4. Concrete Layer	L-1
5. Construction Bricklayer/Mason	L-1/2
6. Construction Carpenter	L-1/2/3
7. Drafting Technician	L-2
8. Furniture Maker	L-1/2/3
9. Household Plumber	L-2/3
10. Pipe Fitter	L-2
11. Plasterer	L-1/2
12. Plumber	L-1
13. Polishing and Finishing Wooden Furniture	L-1
14. Scaffolder (Bamboo/ Timber)	L-1
15. Shuttering Carpentry	L-1
16. Scaffolder (Tubular)	L-1
17. Stone Layer	L-1/2
18. Wood Carver	L-1

SECTOR: CONSTRUCTION EQUIPMENT

1. Backhoe Loader Operator	L-2/3
2. Bulldozer Operator	L-2
3. Excavator Operator	L-2/3
4. Heavy Equipment Electrician	L-2
5. Heavy Equipment Mechanic	L-2
6. Motor Grader Operator	L-2
7. Wheel Loader Operator	L-2/3

SECTOR: ELECTRICAL

1. Armature Rewinding	L-2
2. Building Electrician	L-1/2/3
3. Cable Jointer	L-1
4. Electrical Appliances Repairer	L-2
5. Electrical Lineman	L-1
6. Electrical Lineman, Electrical Distribution and Transmission	L-2
7. Electrical Motor Repairer	L-2
8. Electrical Motor Rewinder	L-1
9. Industrial Electrician	L-1/2/3
10. Switchboard Operator	L-1
11. Transformer Repair Technician	L-2

SECTOR: ELECTRONICS

- | | |
|--|-----|
| 1. B/W Television Receiver Repair Technician | L-2 |
| 2. Color Television Receiver Technician | L-2 |
| 3. Radio Technician | L-2 |
| 4. Radio Repair Technician | L-3 |
| 5. Tape Recorder Repair Technician | L-2 |

SECTOR: FORESTRY

- | | |
|-----------------------------------|-------|
| 1. Community Forestry Facilitator | L-1/2 |
|-----------------------------------|-------|

SECTOR: HANDICRAFTS

- | | |
|-----------------------------------|-----|
| 1. Metal Sculpture | L-3 |
| 2. Paubha Artist | L-3 |
| 3. Reposse (Metal Sheet Embosser) | L-3 |

SECTOR: HEALTH

- | | |
|--------------------------------|---------|
| 1. Assistant Beautician | L-1 |
| 2. Barber | L-1 |
| 3. Community Health Worker CHW | L-1 |
| 4. Eye Health worker | L-2 |
| 5. Hair and Beauty Apprentice | L-2 |
| 6. Lab Assistant | L-2 |
| 7. Ophthalmic Assistant | L-3 |
| 8. Orthoptist | L-4 |
| 9. Physiotherapy | L-1/2/3 |

SECTOR: HOSPITALITY

- | | |
|-------------------------|-----|
| 1. Assistant Waiter | L-1 |
| 2. Bell Boy | L-1 |
| 3. Commis (II) | L-2 |
| 4. Commis (III) | L-1 |
| 5. Housekeeping/Cleaner | L-1 |
| 6. Waiter | L-2 |

SECTOR: MECHANICAL

- | | |
|--------------------------------|---------|
| 1. Arc Welder | L-1 |
| 2. Boiler Operator | L-1/2 |
| 3. Lathe Setter Operator | L-1/2/3 |
| 4. Mechanical Fitter | L-1/2 |
| 5. Maintenance Fitter | L-3 |
| 6. Milling M/C Setter Operator | L-2/3 |

- | | |
|--|-------|
| 7. Production Forman, Cement Plant | L-3 |
| 8. Refrigeration and Air conditioning Service Mechanic | L-1 |
| 9. Refrigeration and Air conditioning Mechanic | L-2 |
| 10. Refrigeration and Air conditioning Technician | L-3 |
| 11. Sheet Metal Worker | L-2 |
| 12. Structural Fabricator | L-2/3 |

SECTOR: OTHERS

- | | |
|-----------------------------|-----|
| 1. Music and Dance | L-2 |
| 2. Senior Library Assistant | L-3 |

SECTOR: PRINTING

- | | |
|----------------------------|-------|
| 1. Book Binding Technician | L-3 |
| 2. Printing Technician | L-2/3 |

SECTOR: RENEWABLE ENERGY

- | | |
|------------------------------|-----|
| 1. Micro Hydro Operator | L-2 |
| 2. Solar Electric Technician | L-1 |
| 3. Solar Technician | L-2 |

SECTOR: TAILORING/GARMENT

- | | |
|---------------------------------------|-------|
| 1. Assistant Leather Goods Technician | L-2 |
| 2. Tailoring | L-1/2 |
| 3. Tailor (Dress Maker) | L-3 |

Source: CTEVT, NSTB, Nepal

Standards are to ensure a skilled person’s ability, motivation, performance, and organizational productivity/service. This can be illustrated by the following equations:

- Ability = Knowledge X Skills
 Motivation = Attitude X Situation
 Performance = Motivation X Ability
 Organizational Productivity/Service = Performance X Resources

V. WORKFORCE DEVELOPMENT SYSTEM AND POLICIES

Among the many factors related to economic development, a dynamic creation of a workforce development system for decent and productive employment is a crucial matter. For meaningful economic development, Nepal's economically active people should have some marketable skills through which they can secure paid-employment or self-employment in the global job market. In today's economy, the competition is across the ocean not just beyond the country's borderlines. In order to meet this challenge, the TEVT sub-sector of the country has to be streamlined through a process of examining the existing context and formulating a comprehensive nationally agreed and internationally acceptable policy in order to meet the needs of both the national job market as well as the international job market.

Even in the global market, sources of technical skills available in the past century are no longer available today, and many of those skills no longer apply to today's equipment and controls. There is always a shortage of a competent workforce. Many industries in developed regions can no longer draw from a large pool of applicants and expect to pull people with a depth of skills and appropriate experience. Today's employers can no longer rely on the sources of skill training they once were able to take for granted. In the twentieth century, skill training was provided in the form of apprentices, immigrants, and industrial workers. Although these sources still exist, they are not adequate and appropriate for the future market. A dynamic creation of a workforce development system with an updated policy is essential today.

A considerable investment in both money and effort has been made by the public and private sectors to develop the workforce in Nepal. The Council for Technical Education and Vocational Training (CTEVT) offers full-fledged specialist training for 5,500 regular students and 10,000 short-term trainees from its 19 public technical schools in agriculture, health, construction, tourism, and industry related trades. More than 118 CTEVT affiliated private technical schools provide vocational training for about 10,000 students in virtually all districts of Nepal. About 3,000 technicians receive post-secondary education from 22 campuses of Tribhuvan University in health, agriculture, engineering, and forestry. In the Ministry of Education, 14% of the vocational subjects have been provided by 2,309 secondary schools

for 290,143 students at the secondary level. Apart from CTEVT, MOE, and university campuses, other ministries, including the Ministry of Labor, Ministry of Women and Social Welfare, Ministry of Industries, Ministry of Communication, Ministry of Tourism, and Ministry of Water Resources, also provide technical and vocational training. After the political change towards democracy in 1990, many international and national non-governmental organizations (NGOs) have been involved in human resource development through vocational training in the districts, towns, and villages of Nepal (The Planning Commission, HMG/Nepal, 1998; Nepal South Asia Centre, 1998; Sharma, 1998).

A. Challenges

Challenges faced in workforce development:

TEVT quality assurance

- Examination
- Supervision, monitoring
- Accreditation affiliation
- Skill testing
- Curriculum
- Training of trainers
- Research and communication

Relevance: Relevance workforce development and the world of work.

Mismatch between skill training and the world of work.

- TEVT programs are static and often supply oriented
- Lack of information on the needs of trained human resources
- Insufficient investment in establishing a labor market information system
- Rural and remote area needs not addressed adequately
- Skills for foreign employment not addressed adequately

Other generic challenges are:

Demographic trends

Population growth rate

- immigrant population
- brain and muscle drain
 - Lack of resources for basic quality training
 - Poverty, inequality, unemployment
 - Widening gap between rich and poor

- Hunger, illiteracy, illness, domination, powerlessness, insecurity, humiliation
- Idea gap, knowledge gap, skill gap and technology gap

Table 19. Recent 50 Years Literacy Rate and Development Index

Year	Male Literacy %	Female Literacy %	Average %	Life Expectancy	Population below Poverty Line %	Human Development Index
1952	9.5	0.7	5.3	—	—	—
1962	16.3	1.8	8.9	—	—	—
1972	23.6	3.9	14	44	—	—
1982	34	12	23.3	44	33	0.296
1992	51.8	18	38.8	44	42	0.333
1997	54.5	25	39.6	59	42	0.376
2002	65.1	42	53.7	61.5	38	0.423
2005	65	43	65	62	38	0.466

Source: CBS (1999–2000) and Human Development Report 2001 and 2005

In the last 40 years, although some literacy rates increased, human development activities did not increase significantly. The human development index over the last 20 years shows that very little development was achieved.

B. Nepal's National Policy

Based on the above information, CTEVT Nepal has developed and implemented the following policies for workforce development in Nepal.

In view of the need for national economic regeneration, every Nepali citizen with or without basic primary and secondary level education, must have equal opportunity, without prejudice, to participate in TEVT programs regardless of her/his socio-economic, cultural or geographic background. The main focus of the vocational training (VT) will be on the large section of the out-of-school population having less than 10 years of education, while that of the technical education (TE) will be on the specialized skill requirements of the middle level technical workforce. The career pathways for semi-skilled and skilled workers as well as that for the technical workforce should be open based upon their demonstrated competencies, for both domestic and international labor markets as well as for their further enhancement through education and training leading all the way to the tertiary level.

The National TEVT Policy Framework will have the following hierarchy of objectives as expressed by the purpose, developmental goal, overall goal and results.

Purpose, Goals and Results

Purpose

The purpose of the National TEVT Policy Framework as its focal point and as the cumulative effect of all the achievements of the implementation of the Policy is:

All Nepalese will have access to employment oriented skill development opportunities.

Developmental Goal

The developmental goal of the National TEVT Policy Framework is to contribute to:

Improve gainful employability of all sectors of the economically active population.

Overall Goal

The overall goal of the National TEVT Policy Framework is to contribute to:

Reduce all forms of poverty in the country.

Thus the overall goal and purpose are in line with the country's 10th Five Year Plan and Poverty Reduction Strategy Paper (PRSP 2002), Sustainable Development Agenda of Nepal (2003), Millennium Development Goals (MDG) of the United Nations and Decent Work Agenda (2005).

Results

In order to achieve the above purpose, the National TEVT Policy Framework will be geared to bring about the following results:

1. Ensured TEVT quality assurance, standardization and recognition
2. training institution system for TEVT professionals
3. Enhanced linkages among skill development, education and the world of work aiming for improved relevance
4. Strengthened career guidance and post-training support services
5. Enhanced social recognition and protection of artisan and craft persons

6. Strengthened TEVT financing by stakeholders for improved efficiency
7. Transformed Government role in TEVT (a shift from delivery to facilitation for increased stakeholder participation)
8. Increased access, affordability and equity for women, dalit, disabled, poor and marginalized groups
9. Restructured TEVT governance
10. Improved coordination, communication and networking systems
11. Strengthened research and development

C. Global Paradigm Shift

While responding to the overall issues of relevance, effectiveness and efficiency of the training system and formulating the Nepal National TEVT Policy Framework, which takes into account of the following global trends in TEVT Policy Reform, a paradigm shift is taking place in the following aspects:

- Decentralization, devolution and privatization
- Public-private partnership
- Giving enterprise a greater role
- Cost sharing from the beneficiaries
- Reduced specialization in pre-employment training
- Shift towards competency based, life long learning
- Recognition and certification of competence
- Post training support

D. Issues, Problems and Policy Statements

In order to accomplish the stated purpose, goals and anticipated results of national TEVT, the following major issues and problems are presented along with the National Policy Statement for that issue followed by specific policies to be implemented.

1. Quality

Major problem and issues

For many years, the products of TEVT, the graduates of TEVT institutions, have been questioned in terms of their performance quality. More specifically, the quality of TEVT products has been criticized and questioned due to such problems as, lack of standard curricula; inadequate availability of competent

professionals (trainers, managers, supervisors, curriculum developers); ineffective standardization of skill levels and training programs; inadequate and ineffective measures for quality assurance; and inappropriate system for monitoring and accreditation of training intuitions/programs and ineffective instructional support services. The issues within this problem area are:

- Quality assurance, standardization and recognition
- Training of TEVT professionals (trainers, managers, supervisors, instructors, curriculum developers, etc.)
- Instructional supervision and support services to training providers

National Policy

TEVT quality will be ensured by strengthening accreditation, monitoring and evaluation, standardization, assessment, testing and certification, mechanisms and training professionals and providing instructional support services in order to prepare a globally competent and competitive skilled workforce.

Specific Policies

A national system responsible for TEVT quality assurance will look after accreditation of training institutions and programs, monitoring and supervision of training providers, development of national standards and a qualification framework based on the classification of occupation, and testing and certification of skills. More specifically, the system will have sub-systems for:

- Fair and transparent accreditation of TEVT institutions and programs
- Skill Testing, Examination and Certification of a broad range of occupations within the national standard and qualification framework
- Periodical participatory monitoring and evaluation of performance of TEVT programs and institutions based upon quality standards and indicators

A national system will be responsible to train and develop TEVT professionals (trainers, managers, supervisors, instructors, curriculum developers) and to provide continuous professional support at the institutional level. More specifically the system will have sub-systems for:

- Training of professionals at national, regional and local levels
- Building a pool of licensed instructors and trainers with adequate hands on experience and competence at various levels
- Providing regular and continuous professional support to institutions at various levels

The system will be based upon participation of key stakeholders comprising representatives of industries, employers, training providers, related ministries, professional organizations, training graduates, local bodies and communities based upon their specific needs.

The system will introduce licensing the occupational skilled workers based upon satisfaction of skill users.

The system will provide the required services to enhance the quality of TEVT instructions through relevant curriculum guides, and instructional materials including textbooks.

Under the national apex body, the following independent Boards (with respective units at the regional and local level for implementation) will be constituted involving key stakeholders to ensure TEVT quality and standards:

- National Board of Accreditation to grant recognition and equivalency of TEVT institutions and programs
- National Skill Testing and Examination Board to standardize and certify skills learned from formal, non-formal and informal means
- National Curriculum Board to develop occupational standards, develop and improve curricula based on the needs and requirements of the labor market, grant equivalency and monitor and supervise curricula implementation

2. Relevance

Major Problems

A mismatch between skill training and the world of work has contributed to unemployment and waste of national resources. There is no system as yet to assess the labor market demands and skill requirements for Nepali workers at home and abroad. Nor has there been adequate attention to vocational guidance and post-training services to facilitate smooth transition from training to employment. There has been no participation of potential employers in training design and implementation. There are

insufficient informal/non-formal education programs for the mass of out-of-school youth that could link them to skill training programs and then to “decent work” in employment opportunities. Also there are no functional relationships among formal, non-formal and skill development education and training which would allow the possibility of entry from one stream of education or training to another for horizontal and vertical development of skilled workers. Furthermore, there is no provision to guarantee consumers’ rights in skill use, which reinforces the already low social image of skilled workers and craft persons. The major issues are:

- Linkages among education, training and the world of work
- Program structure and curricula
- Career guidance and post-training services
- Social recognition and protection

National Policy

TEVT programs will be made relevant to national and international labor market demands and at the same time promote linkages among education, skill training and the world of work to facilitate “decent work” as well as horizontal and vertical development of skilled workers.

Specific Policies

Skill training programs will be designed based upon national and international labor market demands to promote “decent work” of the Nepali workforce.

Enterprise based training or on-the-job training will be made an essential element in the training delivery process to allow trainees adequate opportunity for hands on experience and practical skills. Local coordination bodies represented by the employers, local bodies and training providers will facilitate training institutions and enterprises in bridging institutional training with work-based learning and promoting apprenticeship training programs.

TEVT will be restructured to address the skill development needs of the various levels of the workforce ranging from semi-skilled to high-tech levels to meet the demands of changing economic reality. This need will be fulfilled through varieties of skill training programs based on assessed labor market demands by providing access to people of various levels of educational background (e.g. literates, people with basic and primary education, lower secondary and secondary education, post-secondary education, etc.).

TEVT curricula will adopt modular and spiral approaches for the maximum number of youths to participate in basic courses to prepare them

to land in the labor market, with a provision for upgrading their occupational skills based on job requirements. The modular courses will have a built in provision for earning various levels of recognized certificates through skill testing measures.

A system of career guidance and employment support services will be in place to allow youth to take up training and employment opportunities based upon their aptitude, interests and competence. Such services should be made available at the school, community and employment exchange centers.

Skilled workers will have sufficient opportunities to upgrade their skills through the established linkages among informal, non-formal, formal education and the TEVT system to allow their horizontal and vertical development based upon entry and exit competence and criteria.

Job placement and post-training support services such as advisement on micro enterprise creation, linking micro-credit provisions, and marketing support for TEVT graduates will be mandated for all TEVT providers to promote employment and self-employment of graduates.

Skill mismatch will be reduced by developing programs based on the labor market information, increasing flexibility in training systems, developing curricula responsive to the labor market needs, receiving feedback for program improvement by conducting periodic follow-up studies of the graduates and their employers.

A system for recognition of outstanding performance of artisans, craft persons and skilled workers and their related training institutions will be in place by using an established code of conduct. The system will also promote adoption of appropriate technology to improve their skills and production methods to make them relevant to changing market needs.

Every TEVT institute will have linkage with skill users including local bodies, industries, small and medium enterprises, and foreign employment agencies.

3. Efficiency

Major Problems

Questions have often been raised on the efficiency and sustainability of the present TEVT system. The current system has been, in general, inappropriate as well as insufficient to support programs to match the skill training requirements of a vast number of out-of-school youth including the disadvantaged groups. There is too much of dependency on government funds, which on the one hand is insufficient and on the other inflexible, causing uneven distribution of resources. The private sector, which could be the main beneficiary of a TEVT system, is not yet sufficiently oriented

to support the TEVT system. Local bodies and NGOs, which have their own funds for human resource development, are not adequately connected as yet in TEVT financing. Moreover, public TEVT institutions/providers operating under various ministries and skill development programs supported by international agencies are operating in their own ways without being coordinated through the appropriate national agency. This has caused variation in training programs, inefficient use of available resources, and duplication of training efforts. The main issues under this area are:

- Modalities of TEVT Financing
- Partnership in TEVT

National Policy

A participatory financing system of TEVT will be institutionalized at all levels by mobilizing the resources of the public sector, the private sector, communities, NGOs and individual trainees to improve the relevance, effectiveness, efficiency, sustainability, and equity of the TEVT system.

Specific Policies

A National Training Fund flow system will be established to coordinate the funding of the TEVT system and to ensure that the first priority for such funds goes to the disadvantaged groups.

A training voucher system will be initiated to provide access to all out-of-school youth for their skill development. Based upon the tested results, the system will be consolidated to cover the maximum number of out-of-school youth.

A performance-based financing system including the franchising of skill training and testing programs will be institutionalized to guarantee the employment of graduates.

A skill development levy tax will be implemented and managed in a decentralized manner at local and regional levels to strengthen private-public partnership to support development of skilled workers needed for business, industries and the private sector. This provision should also facilitate partnership between regional and district centers.

A special support program and incentive system (e.g. grants, low interest rate loans, tax rebates, etc.) will be provided to training institutions working in remote and rural areas as well as those serving disadvantaged groups.

Efficient TEVT institutions will be improved to make better use of available facilities and resources by maximizing capacity utilization and built in partnership among public, private and community.

Training institutions will be assessed based on the quality measuring indicators such as enrolment and program completion rate, job placement rate (employment/self employment rates), level of earning of graduates, graduates' satisfaction rate and employers' satisfaction rate. Public funding decisions shall be made based on their periodic performance assessment.

4. Access, Affordability and Inclusion

Major Problems

Available evidence suggests that less than 20% of the entire workforce has some formal education and of these people, only about 3% have passed high school. A recent survey has indicated that out of 11 students enrolled in class one, only one passed the School Leaving (SLC) Certificate Examination—indicating that about 90% of all the youth entering the labor market do so without completing secondary education. Similarly, 77% of women and disadvantaged populations in the labor market have had no schooling. The majority of the out-of-school youth comprise women, disabled, dalits, marginalized groups from the remote and isolated rural areas, and conflict victims, who have been deprived of general education and vocational training. There is no systematic provision available so far for any affirmative action to allow inclusion of such population in the TEVT programs. The major issues in this area are:

- Increasing access to TEVT
- Improving equity and inclusion
- Improving affordability

National Policy

Special efforts will be made to increase access and affordability in TEVT of the majority of Nepali population including the disadvantaged groups (e.g., women, the poor, the disabled, dalits, Janajatis, Haliyas, ex-Kamaiyas, Badis, and other disadvantaged groups from isolated and remote areas) through affirmative action.

Specific Policies

Sufficient TEVT institutions will be in place with various levels of market based skill training and technology education programs covering a range of occupations and maximum geographical coverage to ensure that TEVT opportunities are available to the majority of the population.

Business and industries, local government, community service organizations will be encouraged and supported to make TEVT programs affordable for disadvantaged groups and to broaden the access of wider

segments of the population. Incentives (e.g. tax rebate, training subsidy) and rewards will be provided to the private sector for offering skill training to the disadvantaged groups.

A reservation system will be institutionalized in TEVT programs to increase proportionate participation by the disadvantaged population.

Incentives such as vouchers, loans and scholarships will be provided to ensure access by the disadvantaged groups who deserve and are willing to go through TEVT programs. A Special Training Fund (NTF) will be established at various level to facilitate such incentives.

Affordable skill development access and opportunities for youths will be increased by annexing and/or integrating appropriate technical/vocational training components in selected secondary and higher secondary schools.

Access to TEVT for the special needs population and conflict victims will be increased by consciously targeting intakes, offering incentives, arranging client friendly materials and environments including mobile training programs to reach the unreached.

Skill development programs will be linked with community learning centers as envisaged by the Education for All (EFA) program to address its objective of life skills and appropriate learning.

5. Reengineering TEVT Governance

Major Problems

For many years, training programs in government institutions have often been designed in a top down approach, often resulting in supply oriented programs—designed mainly on the available skills of the instructors in the training institutions and not based on market demand. Government training institutions having mostly pre-service programs, cannot afford to keep workshops and lab equipment updated to industry standards. The usual static training programs have difficulties matching with the dynamic labor market. Duplication in the training programs offered by the various training institutions is another phenomenon. Very limited research in the TEVT and labor market hinders quality improvement and relevancy of training programs. There has been inadequate communication and networking among them. With each government agency having its own training unit and its own resources to spend on skill training, the entire sector remains basically uncoordinated. Bureaucratic bottlenecks have often hindered innovations in training institutions. Consequently, the relevancy of the training, as well as the efficiency and effectiveness of the training providers, have been questioned by employers, trainees, parents and other stakeholders. The major issues in this area are:

- Government role in TEVT delivery
- Autonomy and decentralization
- Research and development
- Information, communication and networking
- Coordination and extended support
- Monitoring and evaluation

National Policy

TEVT sub-sector will be restructured to allow its management to operate in a decentralized, accountable and autonomous manner so as to make it relevant to the dynamic labor market needs as well as skill development requirements of the work force. The restructured system will shift the government's role in TEVT from delivery to facilitation for increased stakeholder participation with adequate coordination and extended support supplemented with up to date information, communication and networking.

Specific Policies

The management of government-run training agencies, schools or institutes will be decentralized and handed over to the appropriate management board or bodies constituting local bodies (DDC, VDC, Municipalities), NGOs, the private sector, academic institutions and TEVT professionals. Their participation in the management, development, delivery and financing of skill development programs will enhance their ownership in skill development training programs.

The government will shift its focus from its current emphasis on direct delivery of TEVT programs to their facilitation but take up assured responsibility of quality control, accreditation, capacity building, curriculum standardization and certification.

A system of coordination, communication and networking at national, regional and local levels will be in place for adequate facilitation and extended support to implement TEVT programs efficiently. A national apex body will look after the entire TEVT sub-sector for quality control and support services.

Networking with TEVT authorities in South Asia and beyond will be institutionalized for sharing experiences.

Research and Development will be strengthened in support of TEVT policy development and implementation. The research approach will focus on identification of successes and failures of various models, parameters for replication of successful approaches and models, action research and tracer studies for program improvement, assessing training requirements of the special needs people including that of indigenous technologies and skills,

and scaling-up niche products. Research will be conducted on devising an efficient means of identifying domestic and international labor market signals.

Labor market information system (LMIS) will be institutionalized for proper diagnosis of domestic and international employment opportunities and feed in of information to TEVT program institutions.

Adequate monitoring and evaluation system will be in place to assure accountability of the TEVT program management, development and delivery at all levels (CTEVT, 1997).

References

- Aryal, K. R. (1970). *Education for the Development of Nepal*. Kathmandu: Shanti Prakashan.
- Asian Development Bank. (1990). *Technical and Vocational Education and Training: Proceedings of Regional Seminar on Technical and Vocational Education and Training*. Manila, Philippines.
- Belbase, L. N. (1981). *Problems of Planning and Implementing Vocational Educational in Developing Countries: A Case of Nepal*. Unpublished doctoral dissertation, Southern Illinois University, Carbondale.
- Burkhardt, M., and Baidya, B. (1998). *External Evaluation Technical Instructors Training Institute (TITI)*, Kathmandu, Nepal. Kathmandu: New ERA.
- Council for Technical Education and Vocational Training. (1997) *Technical Instructors Training Institute By-laws*. Kathmandu: Author.
- Coombs, P. H. (1985). *The World Crisis in Education*. New York: Oxford University Press.
- European Training Foundation. (1997). *Glossary of Labor Market Terms and Standard and Curriculum Development Terms*. Brussels.
- Guhan, S. (1997). *The World Bank's Lending in South Asia*. In D. Kapur, J. P. Lewis, and R. Webb (Eds.), *The World Bank Its First Half Century, Volume 2: Perspectives* (pp.317-385). Washington, DC: Brookings Institution Press.
- High Level National Education Commission. (1998). *Report of the High Level National Commission*. Kathmandu: Ministry of Education, HMG/Nepal.

- HMG Nepal. (2003). Nepal Economic Review: Ministry of Finance Data. www.mof.gov.np
- HMG. (2001). Population Census. Central Bureau of Statistics, Kathmandu, Nepal. High Level National Education Commission. (1998). Report of the High Level National Commission. Kathmandu: Ministry of Education, HMG/Nepal.
- HMG. (2003). Sustainable Development Agenda for Nepal. National Planning Commission, Kathmandu, Nepal.
- ILO. (2003). Decent Work for Poverty Reduction: An ILO Contribution the PRSP in Nepal.
- ILO. (2003). Report of the ILO Program Design Mission, Kathmandu, Nepal. Overseas Development Group, Norwich, UK.
- Kafle, A. P.; Pradhan H.; Adhikari, P. K. (2001). Skills Development for Informal Economic Sector. Report Submitted to UNESCO, Institute of Education, Hamburg. Communication and Management Institute, Nepal.
- Kafle, A. P. (1989). Operations Manual for the National Skill Testing Board and the Skill Testing Division, Nepal. CTEVT.
- Ministry of Education, HMG/Nepal. (1956). The Report of the National Education Planning Commission. Kathmandu: Author.
- Ministry of Education and Culture, HMG/Nepal. (1971). National Education System Plan (1971-1976). Kathmandu: Author.
- Ministry of Education, HMG/Nepal. (1986). Royal Higher Education Commission Report. Kathmandu: Author.
- Ministry of Education, HMG/Nepal. (1992). The Report of the National Education Commission. Kathmandu: Author.
- Nepal South Asia Centre. (1998). Nepal Human Development Report 1998. Kathmandu: Author.
- National Planning Commission, HMG/Nepal and United Nations Children's Fund. (1996). Primary Education. NMIS Second Cycle Report. Kathmandu: Author.

- Panday, D. R. (1999). *Nepal's Failed Development. Reflections on the Mission and Maladies*. Kathmandu: Nepal South Asia Centre.
- Ramse, D. A. (1993). *A Follow up Evaluation Model for Technical Education in Nepal*. Unpublished doctoral dissertation, University of Minnesota, Minneapolis.
- Reiman, A. J., and Thies-Sprinthall, L. (1998). *Mentoring and supervision for teacher development*. New York: Longman.
- Rondinelli, D. A., Middleton, J., and Verspoor, A. M. (1990). *Planning Education Reforms in Developing Countries: The Contingency Approach*. Durham: Duke University Press.
- Sapkota, K. P. (2002). *National Standard Classification of Occupation: A Concept Paper*. Submitted to a Workshop on National Skill Classifications of Occupation organized by CTEVT, NSTB.
- Saxton, J. 2000. *Investment in Education: Joint economic committee*, Longworth House. Washington DC.
- Schumacher E. F. (1973). *Small is Beautiful: A Study of Economics as if People Mattered*. New York: Harper and Row.
- SDC/NIDC. (2003). *A Study of Foreign Employment in Nepal with Particular Emphasis on Skill Requirements*, Kathmandu, Nepal.
- Sharma, T. N. (1998). *The Role of Technical Education and Vocational Training in the Broader Perspective of Nepal's Employment and Training System*. Unpublished doctoral dissertation, University of Southern Illinois, Carbondale.
- Shrestha, S. M. (1991). *Historical Analysis of Vocational Educational in Nepal*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg.
- Vir, D. (1988). *Education and Politics in Nepal: An Asian Experiment*. New Delhi: Northern Book Center.
- “Participation in Continuing Vocational Education and Training: a Need for a Sustainable Employability.” Final report December 2004. The project web site can be accessed at: <http://www.academus.pt/public/EstudosPlanmnt/ProjCurs/PARTICIPA.doc>

About the Asian Development Bank Institute

The Asian Development Bank Institute (ADBI), located in Tokyo, is a subsidiary of the Asian Development Bank (ADB). It was established in December 1997 to respond to two needs of developing member countries: identification of effective development strategies and improvement of the capacity for sound development management of agencies and organizations in developing member countries. As a provider of knowledge for development and a training center, the Institute serves a region stretching from the Central Asian republics to the Pacific islands.

ADBI carries out research and capacity building and training to help the people and governments of Asian and Pacific countries. The Institute aims to provide services with significant relevance to problems of development in these countries. In line with this aim, the approach is demand-led; ADBI's Capacity Building and Training (CBT) group seeks to respond to demand for sustainable, wide-reaching training of government officials in ADB's developing member countries.

Asian Development Bank Institute
Kasumigaseki Building 8F
3-2-5, Kasumigaseki, Chiyoda-ku
Tokyo 100-6008, Japan
www.adbi.org
Tel +81 3 3593 5500
Fax +81 3 3593 5571
ISBN 978-4-89974-021-6

Printed in the Philippines