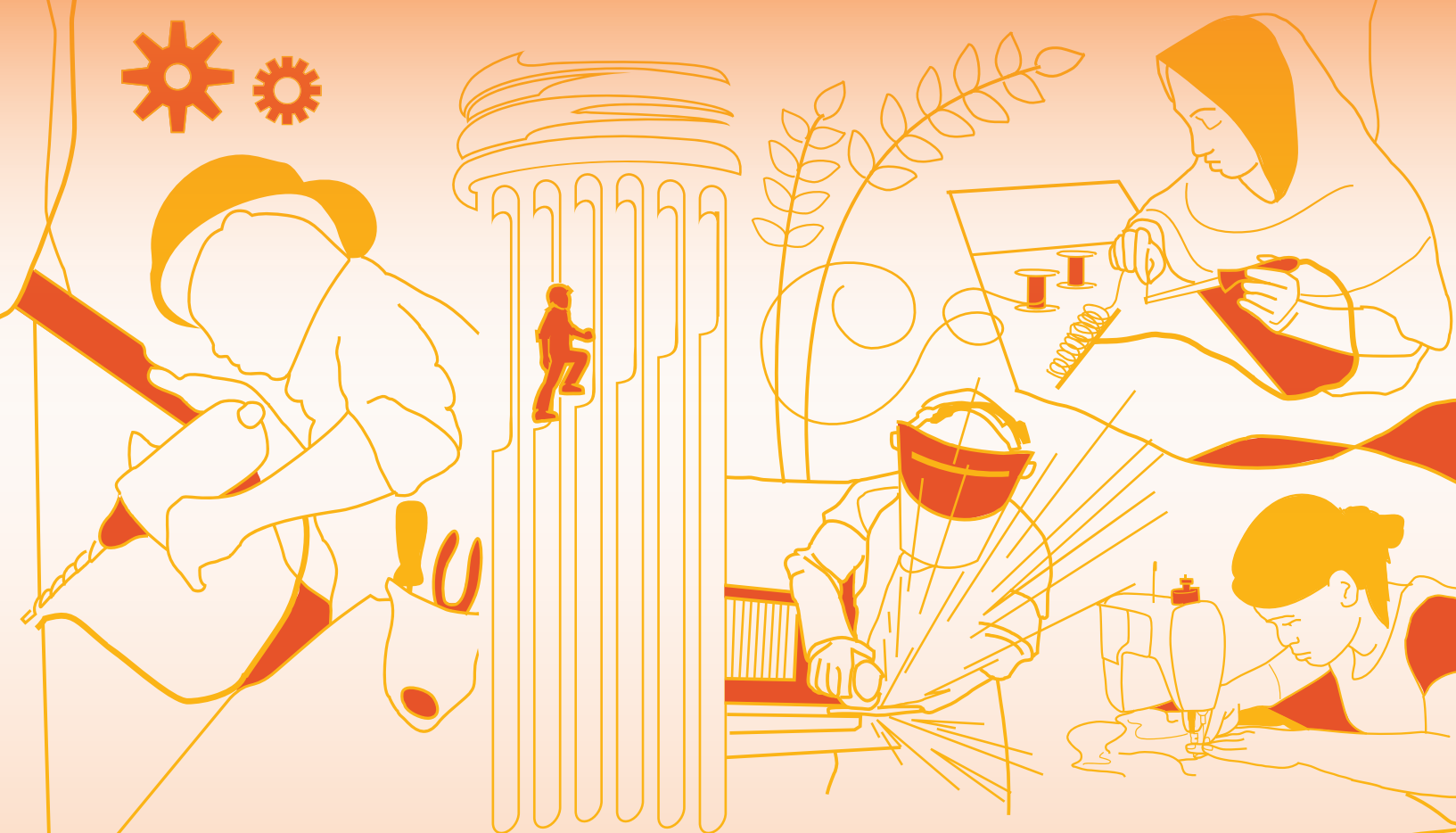




**INNOVATIVE STRATEGIES IN
TECHNICAL AND VOCATIONAL
EDUCATION AND TRAINING
FOR ACCELERATED HUMAN RESOURCE
DEVELOPMENT IN SOUTH ASIA
NEPAL**

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Foreword

South Asia's contributions to the Asian economy and the global labor force are substantial and will continue to grow. The Asian Development Bank's priority in the region is to complement infrastructure investments with strategic support to human resource development to help people move up the value chain. The objective of the Innovative Strategies for Accelerated Human Resource Development in South Asia (Subproject 11) under the Development Partnership Program for South Asia (RETA 6337) is to support emerging opportunities in priority human resource development through targeted policy dialogue grounded on relevant analytical work on technical and vocational education and training (TVET) and higher education.

Financial support from the Government of Australia's Department of Foreign Affairs and Trade—Australian Aid (formerly the Australian Agency for International Development) has helped to prepare six country-level reports on TVET and higher education for Bangladesh, Nepal, and Sri Lanka. The reports identify each country's human resource development priorities, examine issues and constraints, and recommend possible interventions to realize the full potential of their respective labor force. Overall, common issues revolve around equitable access, quality and relevance, and financing. Increasing the number of graduates with relevant skills has been a persistent challenge rooted in systemic quality assurance policies and practices such as the actual provision of market-responsive training and credible assessment and certification. Equitable access does not only depend on availability of funds to provide education and training but equally on efficient use of available resources and effective mobilization of and synergy between public and private institutions in each country.

South Asia's huge opportunities arising from demographic dividend could be harnessed fully only if it is able to skill a large number of new entrants to the labor market every year and upskill the expanding labor force that is still undereducated and inadequately trained compared with their counterparts in other regions. South Asia must capitalize on innovations, knowledge, and skills anchored on high-quality TVET and higher education. Investments in high-quality TVET and selectively in higher education will be crucial for South Asian countries to transition from low-skilled labor to higher productivity and globally competitive labor. There are ample reasons to be optimistic since all countries in South Asia consider investments in human capital development a critical pillar of overall sustainable development.

Hun Kim
Director General
South Asia Department, ADB

Preface

The reports herein provide in-depth analyses of the state of technical and vocational education and training (TVET) and higher education in Bangladesh, Nepal, and Sri Lanka. Each country has two reports covering TVET and higher education which were presented in the three country-level workshops during the first week of December 2012: Sri Lanka (1 December), Nepal (3 December), and Bangladesh (5 December). Participants from government, the private sector, academe, and development partners discussed and validated the findings, and supported the recommendations as well as identified additional next steps.

In TVET, issues range from insufficient teachers and trainers in Bangladesh to lack of quality monitoring system in Nepal, and to inadequate industry participation in Sri Lanka. Among the common issues identified are weak quality assurance mechanisms, low employment rate of graduates, lack of information about demand (leading to a mismatch between training and available jobs), expensive and long-term training that excludes the poor and marginalized, weak institutional arrangements, and inadequate provision of high-quality TVET to manage and scale up training programs.

Higher education is equally affected by various constraints ranging from lack of accountability for performance among institutions in Bangladesh to high politicization in Nepal, and to weak quality assurance mechanisms in Sri Lanka. Common issues identified are regional disparities in access, high cost in private higher education institutions, and poor quality and relevance as well as lack of emphasis on courses that promote entrepreneurship.

Key recommendations of the reports include implementation of a national quality assurance system, establishing a reliable skills data and labor market information system, effective financing schemes, encouraging public-private partnerships, and international benchmarking and mutual recognition for global competitiveness. In TVET, the key priorities are strengthening private training provision with clearly identified and mandated apex agency to effectively coordinate and scale up training programs, development of national competency standards, and building the capacity of TVET institutions. In higher education, the key priorities are developing research capacity, improved targeting of financial assistance to students, adopting formula funding in allocating public funding to universities, promoting accountability and autonomy among higher education institutions, and depoliticization of the higher education system.

The reports were prepared by a group of national consultants: Md. Mohiuzzaman for TVET and M.A. Mannan for higher education in Bangladesh, Devi Dahal for TVET and Hridaya Bajracharya for higher education in Nepal, and Sunil Chandrasiri for TVET and higher education with initial inputs from Dayantha Wijeyesekara on TVET in Sri Lanka. Richard Johanson, the international consultant and main author of the regional report on TVET, reviewed and guided the TVET national reports. William Saint, the international consultant and main author of the regional report on higher education, reviewed and guided the national reports on higher education. The country reports should be read in conjunction with the two regional reports (Innovative Strategies in Technical and Vocational Education and Training for Accelerated Human Resource Development in South Asia, and Innovative Strategies in Higher Education for Accelerated Human Resource Development in South Asia), which were published earlier in 2014.

The reports also benefited from comments from Brian Chin, Gi-Soon Song, and Karina Veal of South Asia Human and Social Development Division (SAHS), as well as from David Ablett and Sofia Shakil who at that time were also from SAHS; Rudi Van Dael from Bangladesh Resident Mission; Smita Gyawali from Nepal Resident Mission; and K.M. Tilakaratne and Nelun Gunasekara from Sri Lanka Resident Mission. Brajesh Panth, lead education Specialist from SAHS, managed and coordinated the studies with support from Rhona Caoli-Rodriguez, the national coordinator who replaced Nicholas Tenazas. Brajesh Panth and Brian Chin also made presentations at the country-level workshops. Administrative assistance was provided by Criselda Rufino, Erwin Salaveria, and Rosalia Baeza.

Sungsup Ra

Director, Human and Social Development Division
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Executive Summary

Nepal opened itself to the world in 1951 when it became a democratic country. Development planning started in 1956 with the implementation of the first periodic plan. Although Nepal has implemented 10 periodic plans since then, it still ranks lowest in South Asia on the Human Development Index.

Nepal's population reached 26.5 million in 2011. About 34.9% of the population is 0–14 years old; 59.8% is 15–64 years; and 5.3% is 65 years and above.¹ According to the Nepal Living Standard Survey (NLSS III) 2010–2011, literacy rates were at 61% among Nepalese aged 6 years and older, and 57% among those aged 15 years and older.

Nepal's transition to modern education began in 1951, when less than 1% of the school children attended school. With subsequent government efforts, the overall education system expanded, and participation rose rapidly. Recent statistics indicate a net enrollment rate of 93.7% in primary education and about 63.2% in lower secondary education. Nepal's near-gender parity in enrollment is a major achievement in school education. Although rising, cycle completion remains low due to high dropout rates, particularly in grades 1 and 2. Only a low percentage of students reach grade 10, and only about 50% of those taking the school leaving certificate (SLC) examination at the end of grade 10 pass it. Only 10%–15% of children enrolled in grade 1 complete grade 10 with a SLC.²

Despite the decade-long civil strife and political instability, Nepal has recorded an impressive reduction in the overall poverty rate—from more than 40% of people living on less than \$1 a day in 2003 to 25% by 2010—largely due to rising remittances from a rapidly increasing number of people who work overseas. With less than 5% growth in gross domestic product (GDP), Nepal has been unable to significantly improve the living standards of its people. More than 70% of inhabitants are directly or indirectly employed in the agriculture sector, even as its contribution to GDP continues to shrink, sinking to less than 30% in 2010. Manufacturing has stagnated at less than 20% of GDP, while the services sector continues to expand and contributes more than 50% to GDP.³

The labor force is estimated to be at 14.5 million workers in 2011, up from 11.9 million in 2000.⁴ Based on the Nepal Labor Force Survey (NLFS) 2010–2011, the country's labor force participation rate was 80.1%, up from 77.2% in 2003–2004. Although unemployment

¹ Government of Nepal, National Planning Commission, Central Bureau of Statistics. 2012. National Population and Housing Census 2011.

² Government of Nepal, Ministry of Education. 2009a. Department of Education Data 2005–2009.

³ World Bank. 2010. *Enhanced Vocational Education and Training, Project Information Document*.

⁴ The World Bank Data: <http://data.worldbank.org/indicator/SL.TLF.TOTL.IN?display=default>

was estimated at 5% in urban areas and 2% in rural areas, youth unemployment may be much higher. Underemployment is estimated at 43%. Of the total employed in agriculture and nonagriculture sectors, 15.4% were engaged in wage employment and 74% were self-employed. Meanwhile, 64.1% of those employed worked in agriculture, compared with 25.1% in nonagriculture.

Every year, about 450,000 youth enter the labor market, most of them lacking marketable skills. A large proportion of them seek employment in India, Malaysia, or the Middle Eastern countries, mostly in low-skilled jobs.⁵ Remittances from emigrant labor constitutes 23% of GDP.⁶

The Government of Nepal faces numerous challenges to put the country on a higher economic growth trajectory. Education and training will play a major role in promoting inclusive and sustainable growth. Nepal's young population provides an opportunity, but this window of demographic dividend is available only for the next 3–4 decades. Preparing the youth with appropriate education and skills to meet emerging demands through partnership approaches will be crucial. Aligning education and training with economic policies and ensuring strong coordination in skills development will be vital.

Graduates of various long-term technical and vocational education and training (TVET) programs and courses have lower employment rate compared with graduates of short-term vocational skills training. This is because short-term courses focus on development of specific skills and competencies in one or two core occupations and the skills acquired can easily fit available jobs and skills needed by employers.⁷

The involvement of industry and business are critical to a market-responsive TVET to enhance the employability and productivity of the work force. However, the linkage between industry and TVET providers in Nepal is weak and often missing. Industries and businesses generally hire trained people who meet their standards and competencies. Hence, the relevance of the TVET system depends on a dynamic interaction between industry and TVET providers.

Structure of TVET in Nepal

The TVET structure in Nepal comprises formal, informal, and nonformal education. In terms of organized provision through a technical school system, the Nepali TVET system is about 30 years old. Students enter the formal TVET program at a technical school after completing grade 10 of general school education. The formal TVET system in Nepal includes: (i) vocational training (3–6 months of training courses for youths age 16 years and older); (ii) a technical SLC program (15 months to SLC pass and 29 months to grade 10 pass students); and (iii) diploma and technical certificate programs (additional 3 years following grade 10 completion or SLC pass).

⁵ Government of Nepal, National Planning Commission, Central Bureau of Statistics. 2008. *Nepal Labor Force Survey 2007-2008*.

⁶ World Bank. 2011. *Migration and Remittance Fact Book*.

⁷ Government of Nepal, Ministry of Education, CTEVT. 2010c. *A Model of TEVT Quality Framework for Nepal*. Technical and Vocational Education and Training Development Journal, Vol. 1, No. 10.

Additionally, informal and nonformal skills training takes various forms (on-the-job, apprenticeship, etc.), timing (mornings, evenings, weekends, etc.), and environments (home, training centers, different project-supported locations, etc.). The duration of such training is not fixed, and there are no sufficient data for tracking participation and post-training activities.

Management

Established through the Technical Education and Vocational Training Council Act of 1989 (amended in 1993), the Council for Technical Education and Vocational Training (CTEVT) is the apex body responsible for policy formulation, program coordination, program development and expansion, and quality assurance of TVET throughout the country. Specific mandates of CTEVT include (i) regulating and upgrading the standard of TVET; (ii) maintaining coordination among different agencies providing TVET programs; (iii) assuring TVET quality by producing qualified instructors, curriculum developers, managers, and professionals for TVET institutions; and (iv) assessing students and issuing certificates.

CTEVT is both a regulator and a major provider of TVET in Nepal. Concerns have been raised about the potential conflict of interest resulting from both roles.

Financing

Private schools for technical education are financed through fees paid by students and their parents. On the other hand, the government finances most of the program costs in public schools. More than 90% of vocational skills training programs are financed by public sources from government or external agencies. Financing of TVET activities at CTEVT is mainly from government grants, with only 3% from foreign grants; internal sources comprise about 20% of the total annual expenditure. CTEVT's internal resources increase 15%–36% annually. This is a positive trend in terms of sustainability because it lessens TVET's heavy reliance on public funds.

Good Practices

Nepali has noteworthy examples of success in some interventions for the quality and accessibility of TVET, including: (i) technical school system which operates in remote locations and opens access to out-of-school youth at affordable cost; (ii) skills testing and certification system which is evolving as a reliable pathway for acquiring skills and competencies through informal means; (iii) local-level financing through local TVET funds which were established and managed to develop a skilled workforce at the district level, independent of external support and without burdening the national treasury; (iv) vocational pathway concept recognizes all forms and pathways of education and training, and provides for horizontal and vertical movements; and (v) annex school concept which utilizes the existing general school infrastructure, administration, and logistics to produce skilled workers at one-third of the total regular cost of training the same person in a technical school.

Challenges Confronting the System

In terms of policies, the TVET subsector in Nepal is highly fragmented, and so the government has made several attempts and initiatives to streamline TVET. In June 2012, the government approved the Nepal National Skills Development Policy, which emphasizes TVET expansion. Although training services for all relevant occupations and at all levels of competence are provided, there is an urgent need to remove existing access barriers and facilitate smooth pathways into productive employment, self-employment, and the subsistence economy. Therefore, this policy focuses on both expansion and inclusion, thereby increasing the chances for decent and equally provided work throughout the society.

Public TVET is characterized by weak institutional leadership. CTEVT is overburdened with providing direct training services, and the roles of the various TVET stakeholders lack clear definition and organization. For example, it is unclear whether CTEVT should focus on policy and program coordination and quality assurance, or on training provision. In addition, other government ministries and departments, nongovernment organizations, aid projects, and local initiatives organize skills development. Nepal has no mechanism for effective coordination among these various actors and their respective activities, leading to duplication of activities and lack of standardization of curricula. Most training providers work to their own benchmarks and curricula, producing varied outcomes. Most TVET-related decisions occur at the central level within each respective line ministry, with little consultation with key stakeholders (e.g., industry, the private sector, and local communities).

Government funding for training is based on the needs of specific departments rather than priorities and needs identified by employers. Incentives and rewards for well-performing institutions are lacking, as are sanctions for nonperforming institutions. Every year, about 280,000 youths cannot access TVET programs.⁸ Qualified and trained instructors comprise only about 30% of the total 30,000 instructors.⁹ On-the-job training slots are inadequate, and support systems for TVET trainees and graduates are insufficient. Without political consensus and commitment to a set of key priorities, the TVET system will become moribund and lead to major dissatisfaction among the youth population, resulting to migration of unskilled labor and an increasingly unproductive labor force, constraining Nepal's progress.

Numerous young Nepalese leave school without marketable skills and may have difficulty finding employment. However, TVET provides a range of opportunities to equip students with skills for productive activities such as taking advantage of available jobs abroad, being more competitive locally, and engaging in self-employment activities. Hence, greater access to relevant and effective skills training programs is crucial for Nepal's development agenda.

⁸ Based on the final draft of National TVET Policy Document, 2009.

⁹ Estimated data at Training Institute for Technical Instruction (TITI) resource, Annual Report 2010.

The TVET sector in Nepal needs carefully implemented reforms to address

- its relevance, by promoting effective linkages between education and training and the world of work;
- the quality and effectiveness of instruction, graduates' employment, examinations, and TVET certification;
- efficiency, by promoting partnerships and efficiently utilizing available resources;
- access, equity, affordability, and inclusion in TVET courses and programs for all levels and forms of TVET offered to the people;
- financing mechanisms and sustainability of TVET operations pertaining to government prioritization and support, industry participation, private incentives, and responsibility; and
- better coordination, communication, and networking for the development of TVET.

Areas for Reform and Investment

Considering the importance of skills development through a well-established, competitive TVET system, and in consideration of the issues earlier discussed, three broad areas need substantial investment and reforms:

Restructuring and repositioning authorities as autonomous bodies with distinct and clear roles and responsibilities that complement rather than duplicate functions and activities. The goals are to (i) enhance coordination of the currently fragmented TVET system; (ii) improve transparency and accountability among agencies; and (iii) improve TVET management and delivery to respond to the demands of national, regional, and international labor markets.

Implementing the Nepal National Skills Development Policy 2012 by incorporation of clear national TVET goals, priorities, qualifications framework, directives, detailed action plan, and horizontal and vertical linkages or pathways between different streams of education and training. Implementation likely will result in substantially expanded access and significantly improved quality of TVET services, leading to improved global competitiveness among TVET graduates.

Devising and implementing an improved finance system for TVET sustainability to resolve financing issues that hinder the growth and development of TVET in Nepal. To reduce dependence on government resources for TVET, other options must be explored, including (i) new levies that could draw on overseas employment; (ii) tax credits to those who invest in skills development; and (iii) external financing linked to performance-based funding to improve the outcomes of skills development and support endowment funds for skills training programs.

Abbreviations

CSIDB	Cottage and Small Industry Development Board
CTEVT	Council for Technical Education and Vocational Training
DCSI	Department of Cottage and Small Industries
DTVE	Directorate of Technical and Vocational Education
FNCCI	Federation of Nepalese Chambers of Commerce and Industry
GDP	gross domestic product
HDI	Human Development Index
INGO	international nongovernment organization
IT	information technology
MOE	Ministry of Education
NATHM	Nepal Academy for Tourism and Hotel Management
NER	net enrollment ratio
NLFS	Nepal Labor Force Survey
NLSS	Nepal Living Standard Survey
NPC	National Planning Commission
NSTB	National Skills Testing Board
NVQF	National Vocational Qualifications Framework
SDC	Swiss Agency for Development Cooperation
SEP	Skills for Employment Project
SLC	School Leaving Certificate
SSRP	School Sector Reform Program
TfE	Training for Employment
TITI	Training Institute for Technical Instruction
TSLC	Technical School Leaving Certificate
TU	Tribhuvan University
TVET	Technical and Vocational Education and Training
VSDTD	Vocational Skills Development and Training Department

In this report, “\$” refers to US dollars.

\$1.00 = NRs95.62 (as of 15 July 2013)

CHAPTER 1

Socioeconomic Background

Nepal is situated in the southern part of the Himalayas between the People's Republic of China and India. Covering a total land area of 147,181 square kilometers, the country is full of hills and mountains. Its geography varies greatly, from an elevation of 70 meters to as much as 8,848 meters within a distance of a mere 170 kilometers. Coupled with a dense network of rivers and streams, this topography makes life in the upper hills and mountains very difficult. Only about 17% of the land area is comprised of plains, known as the *terai*.

Administratively, Nepal is divided into five development regions and 75 administrative districts. The districts are further divided into smaller administrative units called municipalities and village development committees (VDCs). Municipalities are urban or urbanizing areas having relatively higher population densities and better public facilities than VDCs. Currently, Nepal has 58 municipalities and 3,915 VDCs. The smallest administrative unit is the ward; municipalities contain 9–35 wards, compared with nine in each VDC.

Nepal opened to the rest of the world when it became a democratic state in 1951. Development planning began in 1956, when the first periodic plan was formulated. Since then, 10 periodic plans have been developed and implemented. However, Nepal still ranks lowest among the South Asian Association for Regional Cooperation (SAARC) countries in terms of the Human Development Index (HDI).

A. Population

With about 125 ethnic and caste groups, Nepal is a social mosaic of cultural, religious, and linguistic diversity. The largest population group is comprised of the indigenous nationalities known popularly as Janajatis. The advantaged classes, Brahman/Chhetris, account for about one-third of the population, but slightly less than the Janajatis, and the Dalits and the *terai* middle caste each account for about one-eighth of the total population.

According to Nepal's Population and Housing Census of 2011, the country's population rose from 23.2 million in 2001 to 26.5 million in 2011, and its annual population growth rate is 1.35%. Projections suggest that population will reach 38.8 million by 2025. Nepal's working age population (15–64 years old) increased from 56.4% in 2001 to 59.8% in 2011.

The 0–14-year-old age group is 34.9%, decreased from 39.3% in 2001. On the other hand, individuals aged 60 years and above increased from 4.2% to 5.3% of the population.

A significant percentage of the population is concentrated in the *terai* and mid-hills. Nepal's urban population is about 17% of the total population. Of this, 24.3% lives in Kathmandu Metropolitan City, which also has the country's fastest population growth rate. Nepal's urban population is much smaller than its rural population. However, this is expected to change as more people migrate to the urban centers, a trend that started during the first decade of the 21st century.

According to the Nepal Living Standards Survey (NLSS) 2010–2011, 61% of Nepalese aged 6 years and above and 57% of those aged 15 years and above are literate. The literacy rate is higher for males (72%) than for females (45%) among those 6 years and above.

The Department of Education Report (2009–2010) showed that 4.9 million of the 6.5 million students enrolled in the basic level (grades 1–8) were in the primary level (grades 1–5) and 1.6 million were in the lower secondary level (grades 6–8). Net enrollment ratios (NERs) for the primary, lower secondary, and secondary levels improved dramatically between 1995 and 2009 (Table 1). The NER for primary education increased from 57% to 93.7%, for lower secondary from 19% to 63.2%, and for secondary from 9% to 23.9%.

Table 1: Net Enrollment Ratios at Different Levels of Schooling

Level	Net Enrollment Ratio (%)		
	1995–1996	2003–2004	2009–2010
Primary (grades 1–5)	57.0	72.4	93.7
Lower secondary (grades 6–8)	19.0	29.0	63.2
Secondary (grades 9–10)	9.0	15.1	23.9

Source: Government of Nepal, Ministry of Education. 2010a. *Department of Education Report (2009–2010)*.

B. Economy

Nepal experienced sluggish economic growth during 2007–2009, with only 4.7% growth in the average annual gross domestic product (GDP). Agriculture contributes 35% to the GDP, services 49% and industry 16%.¹ Despite low economic performance and sluggish growth compared with its neighbors (e.g., Bhutan, India, and Sri Lanka), Nepal made some progress in GDP per capita, gross national income, gross capital formation, labor force participation, and industry sector employment in 2011 compared with 2005 and 2008. Female labor force participation has also increased substantially (Appendix 1).

Nepal needs to boost its investments in education and training; introduce new technology and mechanization; strengthen the capacity of the workforce; extend market opportunities;

¹ Government of Nepal, Ministry of Finance. 2010. *Economic Survey - Fiscal Year 2009/10*.

and diversify products and services that will increase productivity, particularly in its main contributing sectors. In addition, Nepal has growth potential in agroprocessing, tourism, hydropower, high-value herbs processing, education, and health. Both domestic and foreign investments will be instrumental in harnessing economic potential in these areas.

According to the Human Development Report 2010, Nepal ranked 138th of 169 countries on the HDI and ranked fifth among the South Asian Association for Regional Cooperation (SAARC) countries, largely due to its low GDP per capita (average = \$1,597/person). Within Nepal, the disparity in per capita figures among various caste and ethnic groups is significant. The GDP per capita of Newars and Brahmin/Chhetri (\$3,097 and \$2,027, respectively) exceeds the national average, is lower among Janajatis (\$1,405) and *terai* (\$1,119), and lower still among Dalits (\$977) and Muslims (\$890).²

The NLSS III 2010–2011 also revealed that about 25% of the population lives below \$1 per day. Nepal's geographic, demographic, and social conditions make the challenge of reducing poverty rather difficult. Most people living in the rural areas depend on subsistence farming. Foreign employment, whether seasonal or long-term, has become the most popular means of employment. Overseas remittances became a major source of income for the national economy.

C. Labor Force

Based on the Nepal Labor Force Survey (NLFS) 2010–2011, the country's labor force participation rate was 80.1%, up from 77.2% in 2003–2004. Of the total employed in agriculture and nonagriculture sectors, 15.4% were engaged in wage employment and 74% were self-employed. Meanwhile, 64.1% of those employed worked in agriculture, compared with 25.1% in nonagriculture.

1. Employment

Employment in the formal sector is very limited and accounts for only a small fraction of total employment. Meanwhile, more than 90% of the country's 11.8 million workers are in the informal sector.³ Appendix 2 shows the breakdown of employment by occupation in 2009.

Of the total labor force participants, 46.2% work 40 hours or more per week, 22.1% work 20–40 hours, and 31.7% work fewer than 20 hours. The unemployment rate is 5% in urban areas and 2% in rural areas. Estimates suggest that youth unemployment is much higher. About 43% of the total labor force in Nepal is underemployed.

The agriculture sector's share in wage employment decreased from 37% in 2004 to 35% in 2011 (Table 2). On the other hand, wage employment increased from 63% to 65% in the nonagriculture sector. In nonagriculture industries, wage earners are concentrated in

² UNDP. 2009. *Nepal Human Development Report: State Transformation and Human Development*.

³ Government of Nepal. 2008. *Political, Economic and Social Development Report*.

Table 2: Agriculture and Nonagriculture Sector Shares in Wage Employment

Share in Wage Employment	2003–2004 (%)	2010–2011 (%)
Agriculture	37	35
Nonagriculture	63	65
Manufacturing	24	17
Construction	35	37
Personal Services	26	25
Others	15	21

Sources: Government of Nepal, National Planning Commission, Central Bureau of Statistics. *Nepal Living Standards Survey 2003–2004 and 2010–2011*.

manufacturing, construction, and personal services. The share of construction increased relatively while that of manufacturing decreased substantially and personal services decreased marginally.⁴

Despite its status as the major contributor to job creation, employment in the agriculture sector has decreased. The sector is not mechanized⁵ and depends largely on rainwater, and the tendency toward increasingly fragmented landholdings is making traditional agricultural practices economically unviable.

Meanwhile, industry has its own limitations including failure to create an environment that can attract additional investments. Additionally, load shedding (power cuts), industry–labor relationships, and frequently changing industrial and labor policies make industry less productive. Consequently, Nepal’s employment opportunities force thousands of youths to opt for foreign employment.

Estimates suggest that 450,000 youths enter the labor market every year, but most lack marketable skills. Still, limited employment opportunities force a large proportion of youths to take jobs in India, Malaysia, and the Middle Eastern countries, among others, where most work in low-skilled or semiskilled occupations. Reports⁶ show that almost 715 youths leave Nepal for work every day, of which 85% land in the construction sector.⁷ As such, some 270,000 Nepalese youths go abroad annually to work, representing about 22.5% of the current labor force.

The NLSS 2010–2011 also revealed that about 56% of Nepal’s households receive overseas remittances, a dramatic increase from 23% in 1995–1996. The World Bank’s *Migration and Remittance Fact Book 2011* reported that remittances account for 23% of Nepal’s GDP. However, Nepal spends a huge portion of this income to import basic household goods.

⁴ Based on wage employment data from *Nepal Living Standards Surveys (NLSS) 2003–2004 and 2010–2011*.

⁵ This means agriculture sector does not use improved technology, agro-machines, tools and techniques for higher efficiency and productivity from the land.

⁶ Bulletins of Foreign Employment Promotion Board and national dailies, including *The Himalayan Times* and *The Kantipur Daily*.

⁷ P.B. KC. 2007. *Current Trends in the Employment Market (A report for Skills for Employment Project)*. (These data do not include the number of youths going to India for work.)

Reusing these funds to enhance the production process would have helped increase economic competitiveness, thereby supporting sustainable development.⁸

About 54% of graduates of various long-term technical and vocational education and training (TVET) programs and courses are employed on the average, compared with 85% for graduates of short-term vocational skills training. Employment rates for graduates of long-term technical and vocational education and training (TVET) programs and courses average 62% in health trades, 55% for engineering, 45.6% for agriculture, and 54.2% for information technology (IT).⁹

Higher employment rate for short-term TVET courses can be attributed to an immediate need for a skilled workforce in many small and medium-sized enterprises. Graduates of short-term skills training also work for lower salaries. Because short-term training focuses on specific skills and competencies in one or two core occupations, it is readily useful for employers' skill requirements. Therefore, employers can easily and immediately absorb graduates of these programs.

On the other hand, most long-term TVET programs do not meet the actual needs of the job market due to the following: (i) TVET programs are not based on the needs of industry and the job market; (ii) training providers do not implement job-oriented training; (iii) training providers do not have industry-experienced instructors to provide good instruction; (iv) training curricula do not specify and demand on-the-job training; and (v) most new graduates need to become team players, possess a good personal attitude, be honest, and be disciplined at work.¹⁰

Nevertheless, a few long-term TVET programs have shown promise. Employment among graduates of the certificate of nursing program attain nearly 100% employment, and graduates of mechanical and civil engineering programs report average employment of 67% and 70%, respectively.¹¹

2. Demand for Qualified Workers

The demand for qualified workers in Nepal is determined by national priorities for work, recent development initiatives (e.g., development projects, construction, new industries, new areas of physical development, mechanization and modernization, growth of new sectors like ICT sector in Nepal are booming), and technological changes.¹² Currently, the demand is high for qualified workers in construction (roads, bridges, buildings, fabrication, canals, water supply, and sanitation), services (food and beverages), transport, automobiles, IT (computers, mobiles), diversified and mechanized agriculture, tourism and hotel

⁸ Government of Nepal, Ministry of Finance. *Economic Survey (Fiscal Years 2007/08 and 2008/09)*.

⁹ Government of Nepal, Ministry of Education, CTEVT. 2010c. *A Model of TEVT Quality Framework for Nepal*. Technical and Vocational Education and Training Development Journal, Vol. 1, No. 10.

¹⁰ D. Dahal. 2007–2008. *Employers' Needs and Expectations from the Skilled Workers' for the Employment*. Kathmandu.

¹¹ Government of Nepal, Ministry of Education, CTEVT. 2010a. *A Profile of Technical and Vocational Education and Training Providers*.

¹² Uses of computers for producing and storing documents, managing databases, self-learning means, and vehicle of communication with the world are increasing day by day in most parts of the country. Uses of new IT in organizations (banks, corporate houses, businesses and industries, government offices, travel and tourism sector) have become mandatory. Mobile telephone users in Nepal total 8.4 million, about 33% of the total population (*The Kantipur Daily*, 25 August 2010).

management, hydropower projects (construction, including civil, electrical, mechanical, environment, plant operation and maintenance), and health and hygiene.¹³

However, while Nepali industries and employers regularly seek skilled and experienced workers, skilled and trained youths are scattered and compelled to leave the country because of the lack of information on locally available employment opportunities. A mechanism such as an updated and reliable labor market information system, that will serve as a link between skilled human resources and industries with available jobs, is urgently needed.¹⁴

3. Main Skills Gaps

Findings from a survey conducted in 2006–2007 revealed gaps in both main and soft skills that demand proper attention and serious planning before the implementation of TVET programs.¹⁵ Respondents reported gaps as follows:

- high expertise in the subject matter (68%),
- ability to perform well in work (65%),
- trained and oriented with work management skills (61%),
- sound knowledge of the subject (54%),
- exposure to business skills and knowledge (39%), and
- proactive behavior at work (37%).

Employers expressed concern that many TVET graduates lack confidence. Employers also identified other qualities they considered important among new graduates, such as ability to be a team player, good personal attitude, honesty, and discipline at work. These are known as soft skills—on-the-job attitudes and behaviors that support workplace effectiveness.

Various sources, including surveys and publications, report that employers are concerned about the short supply of skilled workers, specifically plumbers, builders, industrial electricians, commercial furniture makers, steel fabricators, designers, mosaic and tile fitters, power plant operators, mechanical fitters, high quality welders, auto mechanics for new vehicles in the market, engine fitters, IT technicians, mobile technicians, plant operation and maintenance technicians, health professionals, modern cooks, and hotel service technicians.

Worker quality must improve. Employers require knowledge and skills to cope with the new technological development in various industries. For too long, Nepal's TVET schools focused on training a workforce for formal wage employment, but the manufacturing sector has witnessed a dramatic downturn, with little sign of revival in the near future.¹⁶

¹³ Based on various government publications, including National Planning Commission, Ministry of Housing and Physical Planning and Ministry of Peace and Reconstruction.

¹⁴ P.B. Amatya, and I.K. Shrestha. 2010. *Research Study Report on Industrial Relations and Enterprise Economic Survey Nepal*. Federation of Nepalese Chambers of Commerce and Industry (FNCCI).

¹⁵ D. Dahal. 2008. *Employers' Needs and Expectations from the Skilled Workers' for the Employment*. (Survey conducted among more than 25 employers.)

¹⁶ P.B. KC. 2007. *Current Trends in the Employment Market (A report for Skills for Employment Project)*.

CHAPTER 2

The Technical and Vocational Education and Training System in Nepal

Nepal's organized education system began after 1951, when the Rana regime ended. The country had only 203 primary schools, 200 middle schools, 11 secondary schools, one college, and one technical school; less than 1% of school-aged children attended school. Currently, there are 33,881 primary schools, 13,791 lower secondary schools, 7,938 secondary schools, 3,382 higher secondary schools, more than 500 colleges (including diploma-level polytechnics), and more than 350 technical schools.¹⁷

Integration of skills training in school education started in 1945. After 10 years, however, the basic education system had made no substantial contribution to the development of vocational education in Nepal. Following the recommendations of the National Education Planning Commission of 1954, some secondary schools were developed into multipurpose high schools, which were much better equipped and taught four basic vocational subjects—home science, secretarial science, trade, and industrial education. At the peak of the multipurpose education program in 1970, there were 29 multipurpose schools. The National Vocational Training Center at Sanothimi provided training to vocational teachers.

Emphasis on vocational education increased with the formulation and implementation of the National Education System Plan of 1971; a wing for vocational subjects was established in every secondary school. Vocational subjects were allotted 20% of school time in general schools, compared with 40% in vocational schools. The concept of integrating general and vocational subjects into the general education curriculum prevailed until 1979, when it became clear that the majority of vocational students could not find jobs related to their training. They needed more skills-intensive training for employment which the system could not implement on such a massive scale. After a 1978 evaluation of the efficiency and effectiveness of the vocational education program, Nepal phased out integrated vocational education and created a technical school system that offered separate technical and vocational courses and programs to out-of-school youths and those who could not continue general school education after grade 7 or 8. This system emphasized intensive skills, with related knowledge in particular occupations.

¹⁷ Government of Nepal, Ministry of Education, CTEVT.2011a. *A Profile of TVET Providers (Volume II)*.

A. Structure of General Education

In Nepal, education is comprised of formal, nonformal, and informal modalities. Formal education starts at the primary level and continues all the way up to the university level. (Table 3).

Table 3: Structure of General Education

Level and Type	Entry Requirements	Duration (years)	Final Examination	Qualification Granted
Primary	ECD complete	5 (grades 1-5)	School-managed	
Lower secondary	Grade 5 passed	3 (grades 6-8)	School-managed	
Upper secondary	Grade 8 passed	2 (grades 9-10)	SLC board	SLC
Postsecondary (certificate)	SLC passed	2	HSEB/University	Certificate
Postsecondary (diploma)	SLC passed	3	University/CTEVT	Diploma
University (degree)	Certificate, + 2 passed, Diploma	3 or 4 and above	University	Bachelor's, Master's, PhD

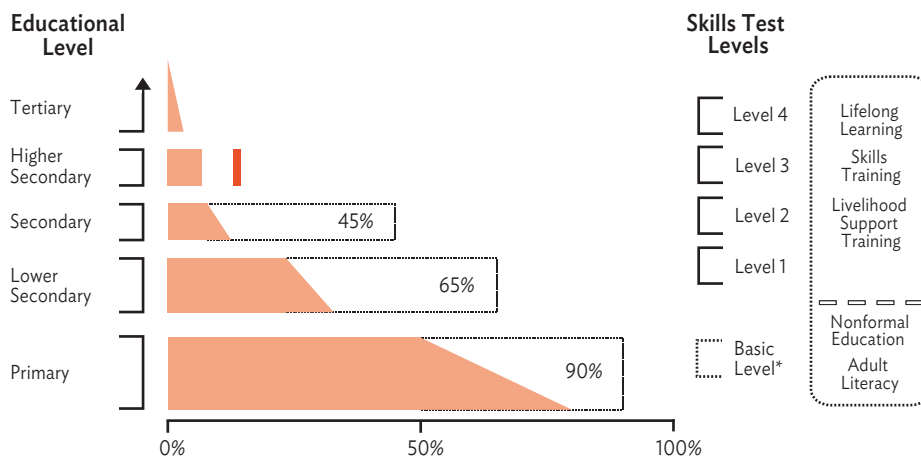
CTEVT = Council for Technical Education and Vocational Training, ECD = early childhood development, HSEB = Higher Secondary Education Board, PhD = Doctor of Philosophy, SLC = School Leaving Certificate. Source: Government of Nepal, Ministry of Education. 2009d. *School Sector Reform Plan (2009–2015)*.

B. Educational Framework

The Nepalese education system offers structured and career-oriented general education. Aside from preprimary education and differentiation at the tertiary level, the general education system comprises four levels: (i) primary education (5 years); (ii) lower secondary education (3 years); (iii) secondary education leading to SLC (2 years); and (iv) higher secondary education (2 years). This is the current 10+2 system (Figure 1). Technical and vocational education and training (TVET) includes two levels: grade 10 pass and above, and below grade 10 pass. The lower level does not link career-oriented TVET with the job market.

According to the Tenth Plan, the net enrollment ratio (NER) in primary school and lower secondary schools should reach 90% and 65%, respectively, by 2007. Currently, about 80% of the age cohort enters primary school. About 62% of the primary age cohort complete primary education, and only 25% of the age cohort complete lower secondary education. About 3% of the age cohort participate in formal technical education, which occurs exclusively at the postsecondary or higher secondary level. According to the Tenth Plan, the NER at the secondary level should have reached 45% in 2007. Approximately 8% of the age cohort completes secondary education with SLC.

Figure 1: The Present Frameworks for Education, Training, and Learning in Nepal



* New level being added.

Source: Swiss Agency for Development and Cooperation (SDC)/Alliance Nepal/Training for Employment (TfE). 2006. *Vocational Pathways, A concept for Nepal's TVET System Development*.

The present skills testing system comprises five testing/qualification levels:

- The elementary level is the basic skills test for anyone willing to seek skills competence certification by the national system. This level has no entry requirements, and test completers qualify for skilled labor jobs.
- Level 1 is unspecific, open to all candidates with any entrance qualification below secondary education. Passing level 1 is equivalent to grade 8 of general education.
- Level 2 provides formal technical education at the secondary level
- Level 3 provides formal technical education at the higher secondary level. It also corresponds to diploma-level qualifications (3-year technician certificate after SLC, or technical school leaving certificate [TSLC]).
- Few occupations require Level 4 education, which theoretically equals to a bachelor's degree.

Outside the general education and TVET system, the government and donors offer adult literacy programs, nonformal education programs, livelihood support training, employment-oriented skills training, and lifelong learning opportunities. Apart from government-financed programs or programs conducted through special arrangements with donors, some skills training programs are implemented through the Ministry of Labour and Transport Management.¹⁸

¹⁸ Neither consolidated figures relating to these programs nor data on their impact are available.

The School Sector Reform Program (SSRP) 2009–2012 proposed to introduce change to the existing education structure, to be instituted by the 8th Amendment to the Education Act of 2009. The proposed structure seeks compulsory education for grades 1–8 among others (Table 4). Appendix 3 includes comparative charts of the existing and proposed formal education systems. The new structure was scheduled for implementation starting in 2010 and to be completed until 2012. However, the Parliament has not passed the amendment, and due to a number of reasons (technical, political, structural), the implementation of new structure is delayed.

Table 4: Proposed New Structure of Education

Level	Grades	Description
Basic education	1– 8	Compulsory for all
School education (secondary and higher secondary)	9–12	Grade 8 is the first exit point, from which one can opt for (i) general education stream, or (ii) TVET stream.
University or higher education	Beyond grade 12	Grade 12 is the second exit point—entering into higher education or looking into other options.

TVET = technical and vocational education and training.

Source: Government of Nepal, Ministry of Education. 2009d. *School Sector Reform Plan (2009–2015)*.

C. Structure of Technical and Vocational Education and Training

The Nepali TVET system is about 30 years old, dating back to the technical school system. Entry to a formal TVET program at a technical school commenced in grade 10 of general school education.

In the current system, vocational training courses range in duration from 3 months to 6 months for youths 16 years and above. The Technical School Leaving Certificate (TSLC) Program varies from 15 months to 29 months for grade 10 and SLC pass students. Diploma and technical certificate programs for SLC pass students last 3 years (Table 5).

Only a limited number of deserving TSLC graduates can pursue diploma and technician certificates.¹⁹ A similar situation exists for diploma holders seeking to enter bachelor's degree programs in universities. In the existing system, TVET ends at the polytechnic diploma level.

Like general education, TVET in Nepal is provided in three modalities: formal, nonformal, and informal (Table 6).

¹⁹ To progress further, TSLC graduates have to score at least 67% on the final examination and must pass the entrance test for diploma program enrollment.

Table 5: Simplified Structure for Technical and Vocational Education and Training, Up to the Diploma Level

Programs	Entry Criteria	Duration	Certification	Career (Further education, training)	Career (Job)
Diploma or Technician Certificate	School Leaving Certificate (SLC) holders (10 years of general school education completers - national exam) who pass the entrance test	3 years full-time	Diploma in..... Awarded by CTEVT	Through entrance exam can enroll in bachelor level	Supervisor Or Foreman Or Senior Technician
Diploma or Technician Certificate	Technical School Leaving Certificate (TSLC) completers with score above 68% and who pass the entrance test <i>[This is a special provision for technical school graduates]</i>	3 years full-time	Diploma in..... Awarded by CTEVT		Supervisor Or Foreman Or Senior Technician
Technical SLC	School Leaving Certificate (SLC) holders who pass the entrance test	15 months	TSLC in..... Awarded by CTEVT.		Technician
Technical SLC	Grade 10 general education from school who pass the entrance test	29 months	TSLC in..... Awarded by CTEVT.		Technician
Vocational Training	Youth aged 16 years having aptitude of developing career through skills training	3–6 months	Skill Certificates awarded by the training institutes		Skill Worker, Skill Helper

CTEVT = Council for Technical Education and Vocational Training.

Source: Government of Nepal. Ministry of Education, CTEVT. <http://ctevt.org.np>

Table 6: Overview of the Structure for Technical and Vocational Education and Training

Level and Type	Entry Requirements	Duration	Final Examination	Qualification Granted
A. Formal				
1. Middle Level				
Technical Schools of CTEVT Annex Schools	Test pass (grade 10 pass: school level exam for 10th grade, also called pre-SLC)	29 months	CTEVT-managed Office of the Examination Controller	TSLC
Technical Schools of CTEVT Annex Schools Private Technical Institutes (Affiliated with CTEVT)	SLC pass (national-level exam for 10 years of schooling)	15 months	CTEVT-managed Office of the Examination Controller	TSLC
Technical Schools of CTEVT Private Technical Institutes (Affiliated with CTEVT)	Test pass	23 months	CTEVT-managed Office of the Examination Controller	TSLC
2. Postsecondary				
- CTEVT technical schools and polytechnics - Private technical colleges and institutes (CTEVT-affiliated)	SLC pass	3 years	CTEVT-managed Office of the Examination Controller	Diploma

continued on next page

Table 6 continued

Level and Type	Entry Requirements	Duration	Final Examination	Qualification Granted
Institutes of Engineering, Medicine, Health Science/Medicine of Tribhuvan University; Nursing Campus and Paramedical Institutes of Public Hospitals and Institute of Health Sciences	SLC pass	3 years	Examination Controller, Tribhuvan University	Diploma and/or Certificate
B. Nonformal				
- CTEVT technical schools - CTEVT rural training centers - Private vocational training - CTEVT-affiliated centers - DCSI training centers - CSIDB training centers - LDT training centers - VSDTD skill training centers - Regional training centers of the Agriculture and Livestock Department - NATHAM - Mobile and outreach training Centers of various organizations - Community-based organizations - DCSI-registered training centers, and local authority and privately operated centers - NGOs (e.g., Skill Nepal, F-Skill etc.) supported by donors and INGOs (e.g., SDC, GTZ, United Nations Development Programme, United States Agency for International Development, Helvetas, Plan International, ILO, Winrock International, etc.) - FNCCI trade schools - Industry-owned private training wings, staff centers	Literate to specific skills, depending upon the training. In some specific skills areas, people with any qualification can take the training.	1 week–10 months	No formal examination in most cases	Training completion certificate. One can opt for National Skill Test Certificate (a national occupational qualification for skill performance).
C. Informal				
Anytime, anywhere (construction work, farms, manufacturing and service industries, handicrafts, hotels, restaurants, household occupations, workshops, garages, etc.)	No specific entry qualification	Not specific; no barrier	Nepali citizens can take the test and get themselves certified for skill qualification also from “informally learned skill.”	

CSIDB = Cottage and Small Industry Development Board, CTEVT = Council for Technical Education and Vocational Training, DCSI = Department of Cottage and Small Industry, FNCCI = Federation of Nepalese Chambers of Commerce and Industry, GTZ = German Technical Cooperation, ILO = International Labour Organization, INGO = international nongovernment organization, LDTA = Local Development Training Academy, NATHAM = Nepal Academy of Tourism and Hotel Management, NGO = nongovernment organization, SDC = Swiss Agency for Development Corporation, SLC = school leaving certificate, TSLC = technical school leaving certificate, VSDTD = Vocational Skill Development and Training Directorate.

^a Department of Cottage and Small Industry.

^b Cottage and Small Industry Development Board.

^c Local Development Training Academy.

^d Vocational Skill Development and Training Directorate.

^e Nepal Academy of Tourism and Hotel Management.

^f Federation of Nepalese Chambers of Commerce and Industry.

Sources: Compiled by the author from various sources (CTEVT, DCSI, CSIDB, and Department of Labour).

1. Formal

The formal TVET system, which extends all the way to the polytechnic program level, evolved after 1980, when the Karnali Technical School was established as the first technical school in Nepal. After the withdrawal of the New Education System Plan (NESP),²⁰ a Technical and Vocational Education Committee was formed, with the responsibility for managing technical schools. This was followed by the establishment of the Directorate of Technical and Vocational Education (DTVE) as a division of the Ministry of Education (MOE). DTVE's functions were to coordinate the training activities of technical schools, design curricula, conduct final examinations, certify successful candidates, approve the programs of each technical school, and allocate necessary resources.

When the need for a coordinating and facilitating body for the overall development of the national TVET system was realized, the Council for Technical Education and Vocational Training (CTEVT) was created through the Technical and Vocational Training Act of 1989. Before its establishment, some technical schools were under DTVE and some were under Tribhuvan University. The CTEVT Act of 1989 was the first legal provision at the national level to initiate formal TVET in Nepal. While developments in TVET happened more recently, Tribhuvan University had provided formal technical education, albeit on a smaller scale, since 1968. Tribhuvan University's faculties of engineering, agriculture and livestock, medicine, and forestry offered several technical education programs at the certificate and diploma levels. Those institutions continued offering programs in all four areas until 2010.

With the new changes in TVET policy,²¹ and with CTEVT as the ultimate authority for TVET, most technical education programs (except engineering and medicine) have since been handled by CTEVT through its own institutes and polytechnics, and also through CTEVT-affiliated institutes. CTEVT operates about 24 technical schools and polytechnics, and has accredited more than 450 private technical schools and polytechnics to run their own programs with their own governing mechanisms.

2. Nonformal

Although CTEVT is the ultimate authority regarding policy and regulation, it is difficult to find a separate regulating mechanism for nonformal TVET. The fundamental differences between formal and nonformal TVET include (i) length of the program; nonformal is less than 1 year; (ii) entry qualification (literate at any level); (iii) examinations and qualifications; no formal system of examinations and certificates are awarded by the training centers; and (iv) career path; skills level can be upgraded, but it is not possible to enter into formal TVET or further and higher education.

By nature, nonformal TVET enhances performance in specific skill gaps, and allows students to acquire new skills for new occupations that can enable better employment. Several training providers/institutions implement nonformal vocational training. In some

²⁰ NESP 1972 was launched with a purpose of reforming the past school education system toward vocationalizing and making education as productive as possible.

²¹ See Chapter 3.

trades, even polytechnics provide nonformal TVET programs. Technical schools owned and affiliated with CTEVT also provide nonformal vocational training.

3. Informal

Informal TVET is unorganized and unstructured; it takes place anywhere, anytime. Mostly undertaken through informal skill training and skill transfer, it happens through on-the-job training, learning by doing, learning by observation, learning by compulsion or informal learning, and learning by copying.

In large numbers, Nepalese are transferring skills from one person to another taking place at home like in the case of family enterprises,²² on-the-job learning, and self-practice. Skills in construction work, farming, manufacturing and service industries, handicrafts, and household occupations (e.g., sons or daughters learning craftsmanship from their parents) are learned by observation and doing the actual work as instructed by their seniors (the experts). Such skill training occurs without the benefit of any curriculum or structure, but nonetheless contributes a great deal toward generating employment. Almost 90% of skilled workers learned their skills through informal TVET.²³

D. Organization and Management

1. Council for Technical Education and Vocational Training: Apex Body for TVET

CTEVT was established to manage and coordinate the provision of TVET services in Nepal up to the level of polytechnic diploma programs. The CTEVT Act of 1989 (amended in 1993) established the Council as an apex body for TVET policy formulation, program coordination, development and expansion, and quality assurance. Specifically, CTEVT is responsible for

- regulating and upgrading TVET standards;
- maintaining coordination among different agencies involved in TVET;
- assuring quality of TVET by producing qualified instructors, curriculum developers, institution managers, and professionals; and
- determining and certifying skills standards.

In managing and organizing TVET activities and programs, CTEVT is guided by regulations approved by the Cabinet; implementation policies, programs, and the budget approved by the Assembly; CTEVT bylaws approved by the Council; and directives to operate, regulate, supervise, monitor, and evaluate its own TVET institutions, as well as CTEVT-approved private institutions. Thus, CTEVT is a major TVET provider in Nepal.

²² Skills such as goldsmithing, tailoring, blacksmithing, wood or stone carving, pottery, embroidery, painting, etc.

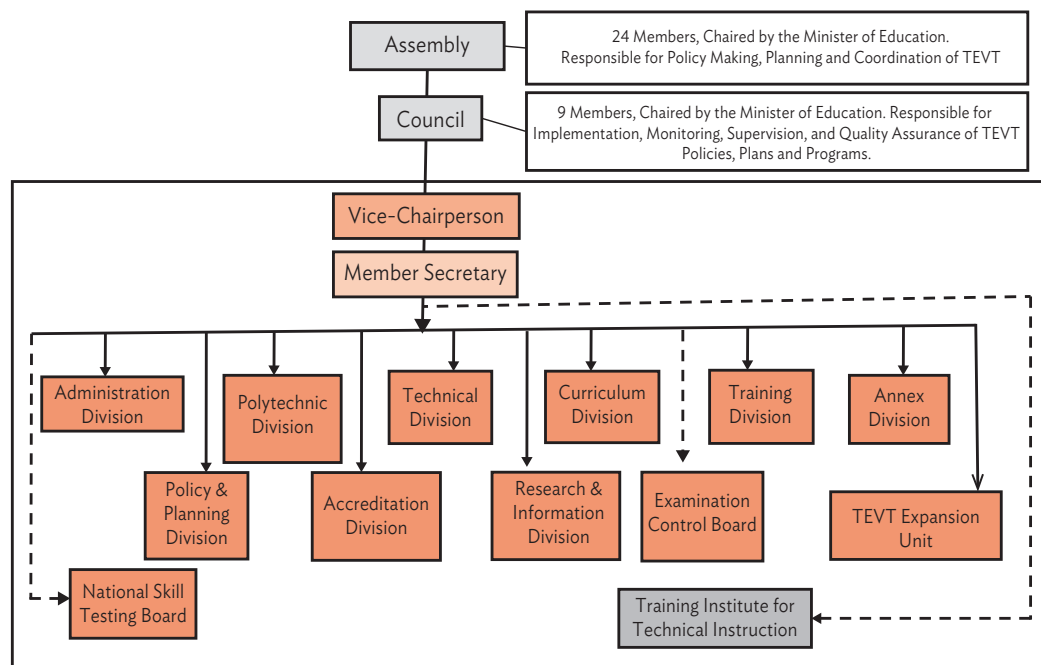
²³ Government of Nepal, National Planning Commission, Central Bureau of Statistics. 2008. *Nepal Labor Force Survey 2007-2008*.

Based on its mandate, CTEVT provides services to the TVET system in Nepal, including

- curricula of TVET programs and courses;
- examination and certification of TVET programs and graduates;
- accreditation and approval of institutions and programs;
- recognition and equivalency of the qualifications acquired from other countries
- training of instructors, curriculum developers, institution managers, and leaders;
- TVET research and information;
- skills testing and certification of youths, to recognize informally acquired skills; and
- quality assurance in TVET by coordinating and monitoring the roles of the system.

CTEVT assumes its major roles and responsibilities through the “Assembly” (i.e., the policy-making authority) and the “Council” (i.e., the executing authority of TVET policies and programs) (Figure 2). The CTEVT Assembly is the highest policy-making body for TVET. It is responsible for carrying out long-term plans and determining the general guidelines and policies for the implementation of TVET programs. The CTEVT Assembly is comprised of 24 members. The minister of education serves as chair, and the members are representatives from various ministries, the National Planning Commission (NPC), business/trade and industrial organizations, and institutions concerned with TVET. The

Figure 2: Organizational Structure of the Council for Technical Education and Vocational Training



TEVT = technical education and vocational training.

Source: Government of Nepal, Ministry of Education, CTEVT. 2009a. *CTEVT Profile*.

government nominates the member secretary, or chief executive officer, from among CTEVT employees, and the Council nominates the meeting secretary for the Assembly. Appendix 4 contains a list of CTEVT Assembly members. On the other hand, the Council is CTEVT's governing board within the CTEVT Assembly. The Council has executive power to run TVET programs and activities in Nepal. It has nine members, with the minister of education as chair. The government nominates the vice-chair and the member secretary from CTEVT staff. Appendix 4 shows the membership of the CTEVT Assembly and Council.

The plans and programs of the Council are executed by CTEVT through 10 divisions headed by divisional directors. The divisions implement the programs and offer direct services under the member secretary. However, two divisions function more independently. The Examination Division functions as the Examination Control Board and is completely responsible for the CTEVT examination system. The Skills Testing Division of the National Skill Testing Board (NSTB) is directly responsible for national skills testing and certification.

In addition, CTEVT includes the Training Institute for Technical Instruction (TITI), which operates separately as a semiautonomous institution under a managing board.²⁴ Through separate bylaws, TITI is entrusted with improving TVET quality by producing and training TVET instructors, curriculum developers, training institution managers, and trainers.

2. Other Actors

Department of Cottage and Small Industries and the Cottage and Small Industry Development Board. Major activities of the Department of Cottage and Small Industries (DCSI) and Cottage and Small Industry Development Board (CSIDB) include implementation of skills-oriented training programs, provision of post-training support to trained individuals (e.g., finding jobs in related occupations), and provision of assistance in operating small enterprises and income-generating activities.

DCSI conducts short-term skills training in more than 70 skills areas in 27 districts, covering more than 12,000 persons each year. CSIDB provides skills and entrepreneurship development training in 75 areas for the promotion, expansion, and strengthening of micro, cottage, and small industries in 48 districts, covering 7,500 persons each year.

Vocational Skills Development Training Directorate. Situated in the Ministry of Labour and Transport Management, the Vocational Skills Development Training Directorate (VSDTD) maintains its own training centers system involving 14 skills development training centers (SDTCs). These SDTCs provide skills training courses in more than 26 occupational areas, covering 7,000 people each year in 26 trades identified through labor market information and training needs assessment.

Mechanical Training Centre. The Department of Roads' Mechanical Training Centre regularly provides vocational training related to the construction industry for its in-service

²⁴ TITI is under the umbrella of CTEVT where it gets its budget. CTEVT approves TITI's annual financial report and the staff positions. CTEVT is represented in the TITI Managing Board.

staff. Training courses include the operation of bulldozers, hydraulic excavators, graders, backhoe loaders, wheel loaders, and mobile cranes. The Mechanical Training Centre conducts regular training on the repair and maintenance of heavy equipment, and provides customized courses on the operation and maintenance of heavy construction equipment and vehicles on as-needed basis.²⁵

Illamprashikhankendras (trade schools) under Federation of Nepalese Chambers of Commerce and Industry. Under the public–private partnership scheme, CTEVT and the Federation of Nepalese Chambers of Commerce and Industry (FNCCI) have jointly developed nine *illamprashikhankendras* throughout Nepal, to provide training in developing employment-oriented marketable skills. FNCCI takes the lead role in developing the *kendras*.²⁶ Currently, these trade schools train about 600 youths until 2010 and prepared them for employment.²⁷

Nepal Academy for Tourism and Hotel Management. The Nepal Academy for Tourism and Hotel Management (NATHM) is the training center for the Ministry of Tourism. NATHM provides bachelor’s and basic vocational level training related to hotel management and tourism for supervisors in tourism-related occupations. It operates on 60% funding from the Government of Nepal and 40% from internal sources (e.g., fees). Annually, NATHM graduates about 800 students in food and beverage, hotel management, tourism, and trekking, among others.

Vocational training provisions under other ministries. Other ministries, including Agriculture, Science and Technology, Land Reform and Management, and Local Development, also provide or arrange vocational skills training.

In 2002, about 47,596 people received some kind of vocational training from public providers utilizing government funds.²⁸ However, the volume and size of overall TVET products and coverage are not sufficient compared with the needs of the country.²⁹ Numerous organizations and institutions are involved in TVET services, but they are concentrated mainly in urban areas.

Nepali TVET is virtually uncoordinated and mostly scattered. Appendix 5 describes the agencies involved in TVET as well as their interconnections. Although CTEVT has a mandate, there is no central body that actually coordinates and steers the entire TVET system.

²⁵ As the training offered is not publicly announced, data on enrollments are not available.

²⁶ Centers.

²⁷ P.B. Amatya and I.K. Shrestha. 2010. *Study Report on Industrial Relations and Enterprise Economic Survey Nepal*, Federation of Nepalese Chambers of Commerce and Industry (FNCCI).

²⁸ Government of Nepal. National Planning Commission, Central Bureau of Statistics. 2007. *National Accounts of Nepal 2000–2007*.

²⁹ There is a need to provide vocational training to more than 150,000 people in the country to match with the demand (Technical Education and Vocational Training and Skills Development Policy 2007, Ministry of Education, Government of Nepal).

E. The Provision of Technical and Vocational Education and Training

1. Public Technical and Vocational Education and Training

Aiming to provide certain professional and vocational skills to people who are either unable to pursue higher education or interested in gaining certain vocational/professional skills to better their careers, CTEVT offers various short-term vocational training programs lasting 390–1,500 hours in its own and affiliated technical schools and training centers. In Nepal, anyone can access short-term vocational training and other skill training programs. Courses are offered based on demand and need, especially in agriculture, engineering, health, tourism, management, and computers. Most institutes offer training for mushroom production, vegetable production, gardening, cooking and baking, and housekeeping, among others.

2. Private Training Providers

CTEVT is also the regulating body that evaluates, approves, and accredits private TVET training providers in Nepal. In fulfilling its responsibilities, CTEVT is guided by a set of directives contained in “Management and Operation of Private Technical Schools.”³⁰ CTEVT provides accreditation and approval to its affiliated institutions through seven key steps: (i) preparation of standards (documents, papers), (ii) advertising and calls for applications, (iii) self-assessment, (iv) on-site visits, (v) reporting, (vi) infrastructure preparation/observation, and (vii) affiliation/approval (Appendix 6).

F. Performance Assessment

CTEVT implements and supervises TVET programs up to the polytechnic diploma level through 24 CTEVT-owned institutions: 4 polytechnics, 18 technical schools, and 2 vocational training centers for community development. In addition, 30 annex schools offering TVET programs also operate under CTEVT supervision,³¹ and 329 CTEVT-affiliated private institutions (i.e., technical schools, technical colleges, and polytechnics) implement TSLC and diploma programs. Moreover, 53 training providers licensed by CTEVT offer vocational training courses (i.e., short-term skill development programs in numerous trades and occupations). Similarly, 15 organizations offer short-term skills development courses sponsored by the Skills for Employment Project. Finally, about 175 unregulated vocational skills training centers, located in different areas of Nepal, offer skills

³⁰ Adopted by the Council pursuant to Subclause 17-23, Article 5 of CTEVT Regulations 1994 based on CTEVT Act 1989 (including amendment).

³¹ Annex schools are public (government) schools equipped with certain additional physical facilities (equipment, machines, and tools) but not buildings and land to offer TVET programs during off-school hours (morning, evening) by utilizing the same administration, accounting, and support services. Only technical instructors are hired or deputed to annex schools to implement the courses and programs.

training ranging in duration from 1 week to a maximum of 3 months. Data on such training centers are difficult to find because most do not report to any official body.

Table 7 summarizes TVET programs developed, organized, and implemented by various institutions and training providers. TVET's annual enrollments (85,500) and annual outputs

Table 7: Enrollment and Output by Type, Number, and Duration

Training Institutions*	Number	Type	Annual Enrollment (no.)	Annual Output (no.)	Ownership
Technical School Leaving Certificate qualification (program duration 15–29 months)					
Technical schools	245	Public/Private	9,707	7,766	CTEVT + private
Polytechnics ^a	3	Public	258	206	CTEVT
Annex schools ^b	30	Public	1,168	934	CTEVT + MOE
Total	278		11,130	8,906	
Diploma and Proficiency Certificate qualification (program duration 3 years)					
Institute of Engineering	3	Public	850	590	TU
Institute of Forestry	2	Public	350	280	TU
Institute of Medicine	5	Public	1,200	1,020	TU
Health science institutes	222	Private/Public	8,377	6,702	CTEVT + affiliated
Technical colleges and institutes	73	Private	3,434	2,747	CTEVT-affiliated
Total	305		14,211	11,339	
Skill Training Certificates—nonformal TVET (training duration 2–30 weeks)					
	387				
• Vocational skill training centers	228	Public/Private	47,000 ^c	37,600	CTEVT + affiliated + various ministries and Departments
• Trade schools	9	PPP ^d	600	510	FNCCI
• Skill development training centers	150 ^c	Private/Community-based	12,500 ^c	10,625	CBOs + NGOs + different agencies
Total	387		60,100	48,735	
Grand Total	972		85,411	68,980	
Skill Certificates (informal)					
In addition to the above, people acquiring skills informally and also trained by vocational training centers who are eligible for skill test certificates from NSTB ^e				30,000	

CBO = Community-based organization, CTEVT = Council for Technical Education and Vocational Training, FNCCI = Federation of Nepalese Chambers of Commerce and Industry, MOE = Ministry of Education, NGO = nongovernment organization, NSTB = National Skills Testing Board, PPP = public–private partnership, TU = Tribhuvan University, TVET = technical and vocational education and training.

* Long- term programs and short-term courses.

^a Three polytechnics are still under construction and have not offered training programs.

^b This figure is for 16 annex schools only. Others have yet to enroll trainees.

^c An educated guess for these centers, as no concrete data are available.

^d Public–private partnership.

^e The NSTB tests and certifies its successful candidates with nationally recognized skill test certificates. Skill level could range from elementary to level 2 for basic competencies, and to levels 3– 4 for higher medium and higher-level competencies.

Source: Government of Nepal, Ministry of Education, CTEVT. 2010a. *A Profile of Technical and Vocational Education and Training Providers*; Government of Nepal, Ministry of Education. 2009b. *Nepal Education in Figures – At a Glance*.

(68,980)³² are recorded in different reports, articles, and literature.³³ Enrollment figures are small compared with the size of Nepal's population.

Through its constituted and other affiliated schools, CTEVT has offered various diploma- or proficiency-level courses on health, engineering, and agriculture (Table 8). It also offers TSLC-level programs in health, agriculture, engineering, social mobilization, and office management, etc. On the other hand, the entry requirement for a 15- and 29-month TSLC-level course is SLC passed and grade 10 passed, respectively. At the end of December 2010, the total enrollment capacity of CTEVT-managed and -affiliated schools was 8,403 for the diploma level and 10,332 for the TSLC level.

Table 8: Technical Colleges/Centers Approved by the Council for Technical Education and Vocational Training

Programs	Institutions Offering Diploma (no.)		Programs	Technical School Leaving Certificate (no.)	
	Until 2008	2009–2010		Until 2008	2009–2010
Health:			Health:		
Nursing	43	88	Auxiliary health worker	4	6
Health assistant	35	47			
Lab assistant	38	44			
Agriculture	20	27	Agriculture		2
Forestry		0	Forestry		1
Food Technology		0	Food Technology		2
Engineering:			Engineering:		
Civil	17	23	Civil	17	19
Electronics	8	11	Electronics	1	2
Mechanical	1	3	Computer	10	12
Computer	15	17	Automobile	2	3
Electrical	7	10	Survey	7	8
Survey	1	2			
Architecture	1	2			
Total	186	274	Total	41	55

Source: Government of Nepal, Ministry of Education, CTEVT. 2010a. *A Profile of Technical and Vocational Education and Training Providers*.

³² An average of 80% of success rate is taken for output calculation.

³³ Government of Nepal, Ministry of Education, CTEVT. 2010d. *Technical Education and Vocational Training, A Glimpse*; Ministry of Education, CTEVT. 2010a. *A Profile of Technical and Vocational Education and Training Providers*; Ministry of Education. 2009b. *Nepal Education in Figures – At a Glance*.

G. Program Financing

The government finances most of the program costs in public schools while students and their parents finance all private schools for technical education. About 90% of vocational skills training programs are financed by public sources from government or external agencies. CTEVT financing of TVET activities comes mainly from government grants, with smaller portions from internal sources and foreign grants. On the other hand, CTEVT is doing well with its internal sources, which increase 15%–36% annually. This reduces dependence on government funding. CTEVT has performed very well regarding expenditures, averaging 98.2% achievement in budget execution (Table 9). However, this has to yield result in terms of quality of programs.

Table 9: Budget and Expenditures in Council for Technical Education and Vocational Training (NRs '000)

	2006–2007	2007–2008	2008–2009	Total in 3 Years	Total Budget in 3 Years (%)
Budget					
Government	161,212	196,527	230,457	588,196	77.00
Foreign grants	2,600	8,525	9,100	20,225	3.00
Internal sources ^a	38,592	45,098	71,181	154,871	20.00
Total	202,404	250,150	310,738	763,292	100.00
Expenditures					
Government	159,673	195,352	229,445	584,470	99.37
Foreign grants	2,600	8,525	9,020	20,145	99.60
Internal sources	37,993	35,882	71,074	144,949	93.59
Total	200,266	239,759	309,539	749,564	98.20

Note: These figures only reflect CTEVT financing.

^a Includes the income generated through institution and program affiliation fees, examination fees, skills testing fees, fees collected from sponsored candidates in technical schools and polytechnics, and income generated in technical schools from customized programs and consulting work.

Source: CTEVT Planning Division. Budget and expenditure of CTEVT FY2007–FY2009.

CHAPTER 3

Policies, Plans, and Programs for Reforming Technical and Vocational Education and Training

Since 2008, there have been important changes in Nepal's education system, including technical and vocational education and training (TVET). The government has prioritized developing the education system as a crucial vehicle for the overall development of the nation. This is reflected in various major policies and plans formulated and programs and projects implemented related to education.

A. Education Policies and Plans

Three-Year Interim Education Plan (2006). This plan reiterates the crucial role of education in national development and poverty reduction by equipping Nepal's citizens with knowledge and skills compatible with the needs of the national and international economy, enhancing their employability and personal development and nurturing in them values to promote social harmony and equity. By developing knowledge and technological skills amongst its human resources, Nepal will be able to compete in the global economy.

School Sector Reform Plan 2009–2015. The School Sector Reform Plan (SSRP) is a medium-term development plan for basic and secondary education to be implemented through the Ministry of Education (MOE). It contains key strategic interventions as well as estimations of the financial resources required to implement these strategies.³⁴

The SSRP supports ongoing programs such as Education for All, the Secondary Education Support Program, the Community School Support Program, and the Teacher Education Project. Building upon the gains and lessons learned from the sector, the SSRP introduces new reforms (e.g., restructuring school education, improving the quality of education, and institutionalizing performance accountability). The plan guarantees learning for all children by raising efficiency and enhancing effectiveness in the delivery of education services. It emphasizes access for out-of-school population and inclusion of previously marginalized communities in education participation through strategies that take into account sociocultural diversity, local knowledge, and value system into pedagogical approaches.

The SSRP points out that the Education for All National Plan of Action (2001–2015) emphasized the need for an integrated school system from grades 1 to 12. The Three-Year Interim Plan (2007–2010), building on the Poverty Reduction Strategy Paper (PRSP) as

³⁴ In 2007–2008, the school system had a total of 7.450 million students with 1.842 million in upper primary (grades 7 and 8), 1.201 million in secondary school, and 1.182 million in higher secondary school.

reflected in the Tenth Plan (2002–2007), also underscored the need for an integrated approach to school education. The Interim Constitution (2007) has recognized basic education as a fundamental right and made provisions for free education up to the secondary level. This provided the basis for implementing the school sector reform.³⁵

New Education Act of 2009 (amended Education Act of 1972). The New Education Act is essentially a directive to legalize the implementation of the SSRP and other government initiatives to improve education and training. It has been tabled in Parliament since 2009. The proposed amendments will be instrumental in bringing major reforms in school education, including a new structure in which grades 1–8 will comprise basic education and grades 9–12, secondary education. Although the government started to restructure basic education in 2009, approval by the Parliament is necessary to make it legal.

The proposed amendments also require the establishment of a national examination board to replace the existing School Leaving Certificate (SLC) Board and the Higher Secondary Education Board (HSEB). This also affects the Examination Board of the Council for Technical Education and Vocation Training (CTEVT). According to the Three-Year Interim Plan, existing school education (grades 1–10) and higher secondary education (grades 11–12) will be merged to take care of the whole school education system with a continuous stretch of grades 1–12. With this new arrangement, CTEVT's existing training and education structure will require adjustment. Because the exit point from basic education is the completion of grade 8, the entry point for TVET programs will be grade 9. Thus, CTEVT will need to restructure the entry qualification, revise the curricula, revise the TVET program structure giving pathways to the polytechnic diploma level, and revise the examination and certification system.³⁶

B. Government Policies and Plans on TVET

A national TVET policy is intended to support a comprehensive skills development and recognition system that supports lifelong learning for all. It must be demand driven (i.e., the standards that students must attain are set by enterprises and the market for skilled workers). A TVET system can include a vocational development stream in secondary and higher secondary schools, although developing countries more often concentrate TVET's hard hands-on trade skills in specialized skills development centers. To directly reduce poverty, TVET also includes village-based family income skills.

TVET policy in Nepal may include

- a formal and informal apprenticeship system,
- dedicated skills development institutions running programs in generic vocational areas parallel to grades 10–12,
- provision for post grade 12 diploma and degree studies,

³⁵ Government of Nepal, Ministry of Education. 2009d. *School Sector Reform Plan 2009–2015*.

³⁶ *The Kantipur National Daily* (25 August 2010).

- mechanisms for worker reentry for theory and academic upgrading,
- recognition for skills mastery regardless of mode of skill acquisition,
- a national vocational qualifications framework (NVQF),
- enterprise-set skills standards
- demand requirements for different technologies,
- quality assurance through a transparent and enterprise-supported skills assessment process, and
- community-based livelihood skills.

TVET includes both hard and soft skills. Hard skills include using machines, instruments, and equipment; operation and maintenance; and the range of computer-related design and planning skills associated with technology applications in health, manufacturing, construction, and other industries. Soft skills include on-the-job attitudes and behaviors that support workplace effectiveness such as teamwork, communications, respect, and interpersonal relations. Employers assert that both types of skills are equally important.

A major focus of TVET is to upgrade and update the skills and knowledge of the existing workforce to improve productivity and enhance employment and promotion prospects and labor mobility.

When TVET activities are integrated into the school system, the schools must be part of and contribute to the overall TVET policy framework. Parallel systems of skills development are usually very expensive, confusing to stakeholders, and ineffective in supporting employment.

National TVET Sectoral Policy of 1999. The CTEVT Assembly passed this policy on 4 October 1999. In 24 general policy statements, it highlighted the following objectives as directives:

- to develop and expand TVET services throughout the country through cost-effective and efficient investments, ensuring that these are sustainable from the technical, financial, institutional, and environmental perspectives;
- to ensure justifiable returns from these investments in both short- and long-term programs by meeting the human resource needs of the country and in parallel making efforts to supply the workforce in the international market;
- to the degree possible, to reduce government involvement in the operation of TVET institutions and to increase the involvement of business and industry, local governing agencies, and the private sector;
- to encourage the continuation of Nepalese arts and crafts through traditional skills; and
- to ensure TVET services to poor and underprivileged sectors in the country.

The same document defined CTEVT's four major roles and responsibilities: (i) encourage coordination, (ii) formulate policies and plans, (iii) assure quality, and (iv) provide services, as provided in the CTEVT Act 1989. This policy document also defined the scope of TVET and defined technical education, vocational training, levels of training, types of training, and types of institutions that are to be used when explaining TVET.

Technical Education and Vocational Training Policy Framework (March 2007): This policy framework addresses and supports the needs and demand of Nepali people to develop their productive talents, as well as of training providers who seek to engage in the development of human resources, and of employers who are eager to provide work and income for their fellow citizens. There are five key elements in this policy framework: (i) expansion of training services and opportunities, (ii) inclusion and access for all citizens who need training, (iii) integration of various training modes and providers into one system, (iv) relevance to link training content and outcome with economic demand, and (v) sustained funding to ensure that the TVET market can take off.

Technical Education and Vocational Training and Skills Development Policy (2007).³⁷ This policy is based on the Technical Education and Vocational Training Policy Framework (March 2007). Its preamble summarizes the situation that warrants a sound TVET policy:

“The majorities of Nepal’s citizens leave school early and are not properly prepared for gainful economic activity. There is a tremendous lack of short and relevant training courses which would equip the next generation of our workforce with required and rewarding occupational competencies. Apart from the large stream of annual school leavers, a vast number of adults have either not been to school or not received any technical education or vocational training. The situation is aggravated by those who have suffered from the conflict and were never given a chance to enter into a normal productive work life. As a result Nepal’s workforce lacks productivity in domestic as well as in overseas labor markets. Employment chances and income opportunities are foregone and poverty prevails.”³⁸

TVET in Nepal needs massive expansion. While training efforts are required in all relevant occupations and on all levels of competence, there is a strong need to remove existing inequalities and include all those who were and still are denied smooth pathways into productive employment, self-employment, and the subsistence economy.

Therefore, the focus of Technical Education and Vocational Training and the Skills Development Policy lies on both expansion and inclusion, so that chances for decent work are increased and equally provided throughout society.

Taking the TVET system to scale requires strong efforts on both sides of the training market, including:

- engagement and commitment by all segments of the economy and society so as to offer much more and much better training to all Nepalese citizens. The state will encourage and support all emerging training providers’ efforts through a liberalized system that focuses on training outcomes and facilitates an easy transition into the economy; and
- encouragement and financial support to all citizens who need training but cannot pay for or reach it. Stipends will be made available for them, so that at least “entry” training toward productive employment becomes affordable and accessible.

³⁷ T.N. Sharma and G. Kohlheyer. 2007. *Technical Education and Vocational Training and Skills Development Policy Nepal (Draft) - Policy Design, Policy Formulation and Implementation Strategies*.

³⁸ Government of Nepal, Ministry of Education, CTEVT. 2007. *Nepal Technical Education and Vocational Training and Skills Development Policy 2007..*

This training policy was designed to allow market forces to put the TVET system on a steep growth path, wherein the number of training opportunities is expected to increase fourfold over the next 10 years.

The emergence of new training courses will be organized in a revamped system of Nepal Vocational Qualifications—a further development of the activities of the National Skill Testing Board (NTSB). In this new system, most—if not all—occupational training courses will conclude with an official assessment and a certificate. Workers will be able to realize occupational careers through a combination of initial training, subsequent occupational experience, and further training of various kinds. All modes and places of learning, formal or informal, in-school or on-the-job, can and will be recognized in such a system and can be used for progression and transition.

A summary of key messages, key policy areas, and the favored measures proposed for putting policy into action, with detailed descriptions, is provided in matrix form in Appendix 7.

Although the Cabinet approved the Skills Development Policy in 2007, it was expected that a detailed action plan would be formulated to make all the objectives of the policy effective. In light of this, different task groups submitted drafts of an action plan for approval by the government. MOE and CTEVT were responsible for finalizing and obtaining approval of the action plan, but it did not happen due to various reasons, including frequent changes of the government and ministerial leadership, as well as weak political will.

Interim Three-Year Plan (2010–2013). In terms of its poverty reduction strategy, the policies and strategies on TVET and skills training are among the government's priority areas. Formulated by the National Planning Commission (NPC), the following main strategies on TVET and skills training are contained in the interim plan:

- expansion of TVET programs;
- inclusion and access to TVET of people from disadvantaged groups and remote areas;
- strengthening CTEVT capacity through its restructuring;
- increasing investment in TVET through public–private partnerships;
- developing a National Vocational Fund, and integrating and regularizing its funding mechanisms;
- mandating provision of the National Skill Testing Certificate to semiskilled workers for foreign employment purposes;
- providing soft loans to training providers for skills development;
- promoting income generation and entrepreneurship development activities; and
- integrating the national literacy program together with skill training and income-generation activities.

Nepal Technical and Vocational Education and Training (TVET) Policy (2012). Realizing the importance of skills development policy, and considering the SSRP's intention of making an integrated general and vocational education a major development strategy, a high-level committee including members of NPC has formulated the action plan, which explains the

TVET policies and includes implementation strategies. In June 2012, the cabinet (Council of Ministers) approved the Nepal National TVET Policy.

The TVET Policy of 2012 focuses on youth and adult workforce who were taken out or not admitted to school, are illiterate, or have not obtained any kind of skills. The policy seeks to expand opportunities of TVET on a national scale. It aims to provide skill-oriented and labor market-oriented education and training, expand training opportunities (fourfold increase over 10 years), and ensure access and inclusion of women, Dalits, ethnic groups, Madhesi, and deprived communities from across the country. Groups unable to afford training fees may participate in entry training and a policy providing financial assistance will be put in place.

The Policy foresees the development of a revamped Nepal Vocational Qualifications system managed by the National Skills Testing Board. Similar with one of the objectives of Technical Education and Vocational Training and Skills Development Policy (2007), occupational careers can be realized by a worker with a combination of initial training, subsequent occupational experience and further training; and all modes and places of learning, formal or informal, in-school or on-the-job can be recognized and used for progression and transition.

As Nepal's lead agency for skills development, CTEVT has strived to implement the policy directives for TVET, focusing on expanding services throughout Nepal. Coverage of TVET services increased from about 50 organized training providers in 2000 to more than 390 in 2010. The number of training participants also increased substantially, from about 15,000 to more than 45,000 during the same period. However, the question of the quality of the graduates remains.

C. Projects

Nepal has implemented the following projects during the past 10 years (1999–2009).

Training Institute for Technical Instruction—Swisscontact Project. This project, funded by the Swiss Agency for Development and Cooperation (SDC), was initiated in 1991 to develop infrastructure for TVET instructor training. In different phases, the total duration of the project was about 17 years, and estimates suggest that the total project cost was \$7.5 million. Phase II (1995–1998) focused on developing the capacity of the Training Institute for Technical Instruction's (TITI) training programs and courses, instructional materials, and strategic plan, and developing TITI as the leading national institute for training TVET professionals (i.e., instructors, managers, curriculum developers, and trainers). From 1999 onward, TITI and the project worked jointly to expand TITI services in the international market, intensively develop instructional materials (e.g., skill and concept cards³⁹), develop further long-term programs (e.g., leadership and management, bachelor of

³⁹ Skill and concept cards are instructional materials written, on the basis of research and with due process of development as a comprehensive and quality instructional content, on A4 paper as regards to knowledge and skill. These are a new development of TITI, and are used extensively in training trainers, instructors, curriculum developers, and managers. These cards are produced in different languages and used in more than 10 countries.

technical education, diploma and certificate in technical instruction), and further enhance TITI's institutional and human resource capacities so that TITI would be sustainable. Guided by its Strategic Plan, TITI implemented its activities in a well-planned and systemic manner. TITI's mission is to improve the quality of TVET in Nepal. Table 10 shows the number of trainees TITI produced until 2009.

Table 10: Training Institute for Technical Instruction Trainees, 2009

Training Program	Male (no.)	Female (no.)	Total (no.)
Curriculum Development	1,094	244	1,338
Instruction	4,281	1,338	5,619
Management	1,425	274	1,699
Total	6,800	1,856	8,656^a

^a Excludes trainees from other countries.

Source: Training Institute for Technical Instruction. 2009. *Evaluation of Effectiveness of Training Programmes in Nepal*. Journal of Training and Development. Vol 1, No.1.

In addition, TITI's contributions resulted in major achievements:

- TITI is the first public institute in Nepal to operate internationally in TVET quality development activities.
- TITI has provided services to more than 10 countries.
- More than 15 countries use TITI's skill and concept cards to train professionals.
- TITI developed more than 450 skill and concept cards that are available for use.
- TITI is the first institute in Nepal to develop and implement bachelor's degree programs for technical and vocational education in affiliation with Kathmandu University.
- TITI is the only institute offering certified instructor, manager, and curriculum developer training and programs.
- TITI has developed professional training systems in and outside Nepal for several organizations.

Training for Employment Project. The Training for Employment (TfE) Project was initiated in 2000 to reduce the widening gap between training programs and employment opportunities. The project (total budget about \$4.0 million) was also funded by SDC. In the initial (orientation) phase, TfE trained 2,600 youths in employable skills. Vocational training ranged from 2 to 6 months. In Phase II (2003–2007, extended until 2008), TfE focused on developing, implementing, and monitoring training packages that would enable youth to develop skills for meaningful employment. It also supported organizational and institutional strengthening of training providers. TfE was the first project in Nepal to open TVET to out-of-school persons and initiate vocational pathways in the development of TVET.⁴⁰ The overall focus of the project was the inclusion of and access to poor and disadvantaged people.

⁴⁰ Training for Employment (TfE) Project. 2008. *Project Completion Report (2000–2008)*.

By the end of the project, TFE had trained 852 out-of-school youths for employment, developed and piloted 16 quality training packages, networked with more than 14 aid agencies and international nongovernment organizations (INGOs) for TVET, initiated a TVET financing scheme (the Local TVET Fund) through local authority participation in seven districts, and promulgated vocational pathways toward integrated and concise development and implementation of TVET programs. TFE recorded an average of 76% employment of trained graduates. It is the first project to establish peer exchange groups—an informal network among managers and supervisors from training providers for sharing information, generation of new ideas in TVET, and coordination. TFE also established training placement and counseling services in training providers and developed a training manual.

Skill for Employment Project (2005–2011). Using a \$20.0 million loan from ADB, the Skill for Employment Project (SEP) aimed to provide employable skills training to the poor and disadvantaged in target districts. It also aimed to promote poverty reduction by increasing engagement in wage and self-employment and international employment. The Government of Nepal implemented the SEP under MOE, and with CTEVT as the implementing agency. The project was carried out in cooperation with the Department of Cottage and Small Industries (DCSI), the Cottage and Small Industry Development Board (CSIDB), and the Vocational Skills Development and Training Department (VSDTD).

The SEP contributed to the development of vocational skills curricula for employable skills, supported the development and implementation of the Technical Education and Vocational Training and Skills Development Policy (2007). It specifically aimed to

- increase access to market-oriented skills training (MOST), particularly by women, Dalits, and disadvantaged groups; targeting 80,000 youths during the project period;
- strengthen the capacity of key agencies to enhance their relevance and short-term training quality, providing capacity enhancement training to 1,000 instructors, 200 training supervisors, and 200 training managers in the areas of institutional management and training needs identification for improving quality of instruction;
- enhance access of disadvantaged groups, particularly disadvantaged youths, to the TVET system covering 56 districts in different locations suitable to rural people, providing free training to all including at least 60% of the total youths trained, women (50%), Dalits (25%), and people from underprivileged groups; and
- develop and articulate new TVET policy, providing full technical and financial support.

As of 2010, SEP has already trained 12,000 persons (women = 40%, disadvantaged groups = 20%) and developed 20 market-oriented short-term training packages. About 7,020 of its trained youths participated in skills testing, and 76% of the total youths trained are employed.⁴¹

National Skill Testing Board (NSTB) Project (2007–2010). The NSTB Project aimed to strengthen the capacity of the skills testing and certification system, and

⁴¹ Government of Nepal, Ministry of Education, CTEVT. 2010b. *Skill for Employment Project Information and Bulletin*.

initiate development and implementation of the National Vocational Qualifications Framework (NVQF). The project was supported by the Swiss Agency for Development Cooperation (SDC).

Considering that skills testing is not only gaining greater importance in the job market, but also has become a tool for upgrading one's level of skills and competencies, the project intended to develop the capacity of NSTB. It will make skills testing more relevant and accessible to the majority of potential applicants who lacked admission to formal TVET, have prematurely left formal TVET, or have acquired their competencies from nonformal training or experience-based (on-the-job) learning, or through a combination of both. Skills testing also gives job seekers and employed workers the awareness necessary to raise their proficiency level and increase their income.

By July 2010, NSTB had developed occupational skill standards in 206 occupations and tested and certified 36,556 persons at different skill levels (elementary and levels 1–4). Most persons are certified at skill levels 1 and 2. Appendix 8 lists the NSTB-developed Occupational Skill Standards/Occupational Profiles.

A conceptual framework has been developed for NVQF and consultations among stakeholders are ongoing. Further development work on the NVQF will also be guided by the new Nepal Technical and Vocational Education and Training Policy (2012) approved by the cabinet in June 2012 and other pertinent directives.

D. Innovations and Accomplishments

From 2000 to 2010, Nepal achieved noteworthy accomplishments in TVET:

- Skill training graduates increased from 15,000 to more than 80,000.
- TVET institutions expanded from about 150 to more than 400.
- TVET programs and courses increased from about 45 to more than 225.
- Trained instructors increased from hundreds to thousands.
- Skills testing and certification improved from a few hundred per year to more than 25,000 per year.⁴²

Nepalese TVET is relatively young as a system integrated in education and as a government priority. It started in early 1980s through the Technical School System Plan by replacing the vocational education system in general schools. After the restoration of democracy (early 1950s), the Nepalese system has witnessed some innovations that contribute to its development and expansion:

- Passed in 1989, the TVET Act served as the first breakthrough in TVET, providing an alternative system for career development in education and training.

⁴² The data are generated from various documents, reports, and information from CTEVT.

- The TSLC curriculum changed from 7 + 3 + 1⁴³ years to (i) 10 + 2⁴⁴ years + 3–6 months on-the-job training for students with grade 10 pass, and (ii) 15 months + 3–6 months OJT for students with a SLC pass. Most public institutions adopt the first curriculum, and most private schools adopt the second.
- Tribhuvan University (TU) transferred basic- and technician-level programs to CTEVT, and CTEVT took over many programs (e.g., Community Medicine Assistant [CMA], Auxiliary Nurse Midwife [ANM], Health Assistant [HA], Junior Technical Assistant [JTA], Junior Technician [JT]);
- Liberal promotion of private sector participation in TVET resulted in a significant increase in private TVET institutions, from 3 prior to 1991 to 110 in 2000 and more than 400 in 2010.
- Development of polytechnic institutions, expansion of technical diploma programs, initiation of annex programs (annexing technical education in general schools), exemplary vocational training and community development (VTCD) programs for the barely literate rural population, development of trade schools in public–private partnership (PPP) model programs in partnership with FNCCI, significant increase in sponsored vocational skill training programs (almost 95% vocational skill training programs are sponsored⁴⁵).
- Nepal adopted a uniform and coordinated system of TVET curriculum development, applying the Development of a Curriculum (DACUM)⁴⁶ process to the competency-based training (CBT) model.
- NSTB developed a trusted and recognized skills testing and certification program.
- TITI developed a trusted and recognized system of training instructors, curriculum development specialists, training institution managers, and trainers.
- The skill and concept cards system was applied to the quality of delivering instruction and training in many countries outside Nepal (TITI experience).
- All projects and donors/financiers accept graduate employment rate as an indicator of the success of TVET programs. This was a big turning point for Nepal and an important element for the development of TVET (e.g., SEP and Employment Fund experiences).
- Nepal accepted the vocational pathways concept for overall integration of the education and training system, career development, a systematic approach in TVET, accommodating all forms of school education exits and out-of-school youths toward TVET, and striving for the NVQF (TfE Project experience).
- Local financing of TVET is an innovation in TVET sustainability (TfE Project experience).
- To cope with budgetary constraints, public technical schools were encouraged to generate funds, reduce stipends by 50% and even less in some schools, and introduce fees in public institutions (CTEVT and MOE experience).

⁴³ 7 + 3 + 1 = 7th grade of school education as entry qualification to technical school + 3 years of training + 1 year of work experience for TSLC qualification.

⁴⁴ 10 + 2 + (3–6) = 10th grade of school education as entry qualification to technical school + 2 years of training + 3–6 months of OJT in a real work situation for TSLC.

⁴⁵ Sponsored = full cost of the training to suit the needs paid by the donor.

⁴⁶ Based on Ohio State University methodology.

E. Lessons Learned

TVET in Nepal has faced many challenges in the areas of national policy, coordination, financing, affordability of programs for the general public, monitoring and evaluation, employment of graduates, and NVQF. In the past 10 years, TVET has undergone several experiments that aimed to develop and expand TVET with the assistance of various support agencies. Lessons learned from such initiatives were a mix of success and new challenges. The following were the major lessons learned from various TVET development efforts in Nepal.⁴⁷

For overall structure and implementation:

- There is an immediate need for all stakeholders to work together toward a more holistic system of education and training in Nepal.
- The government's role in TVET must change from implementation to facilitation, from traditional to modern, and from rigid to flexible.
- Better outcomes from TVET programs and projects may be achieved through strong focus on outcome monitoring.
- Given the difficulty of retaining competent instructors and managers in remote parts of Nepal, establishing a rotation system based on recognizing individual work performance is very important. The rotation system can also work on a fixed-term basis anchored on specific performance indicators.

On institutional sustainability and quality maintenance:

- Long-term assistance and cooperation from government, community, and funding agencies, as applicable, is important for capacity development and sustained contribution by institutions to the sector toward quality improvement.
- Introducing the real world of work experience to training is critical in motivating trainees and enhancing the quality of the programs. Hence, engaging experienced business and industry professionals as instructors (to teach new technology and to share experience of the world of work in training, among others) will be better than retaining many permanent instructors with inflexible training approaches.

On the importance of project design phase:

- During the design process for a TVET (or any subsector) project, three integral aspects must be very clear:
 - (i) What outcomes are expected, and how will these be assessed?
 - (ii) What concrete plan is assured, and how much is allocated for institutionalizing the project results at the end of the project life?
 - (iii) If Nepal does not achieve the previous aspects, are the funding agencies and the government ready to reinvest in the same project to achieve the outcomes?

⁴⁷ Project completion reports of Training for Employment, TITI, project proposal of Skills for Employment Project, different reports and TVET journal articles published by CTEVT in different years.

- Involvement of the major stakeholders is extremely important in coming up with a sound project design.

On training relevance and employment:

- Establishing linkages with employment opportunities contributes to increased demand for training and enhances trainees' interest.
- For training programs to be relevant and successful, they must focus on employment and employability.

On policy and programs:

- In the development of national policy and programs, the involvement of major government, semigovernment, and a wide range of stakeholders contributes to better information, greater understanding of issues, and improved coordination, thereby ensuring wider acceptance and smooth implementation.
- All political parties must accept national policies and programs, and the government must focus on implementing such policies and programs with adequate funding, human resources, and monitoring.

On standards and qualifications:

- There is a strong and immediate need for Nepal's standards of education and training to conform to global demand (e.g., World Trade Organization requirement, since Nepal is already a member); it is hard-pressed to make its TVET and entire education system compatible with international standards.
- To be competitive in the global market, Nepal must set clear national goals and develop a vision for TVET encompassing at least 15 years.
- A national vocational qualifications framework will be instrumental in maintaining uniformity, reliability, effectiveness, system-based instruction, responsiveness to the job market, and quality standards of training and assessment, and, above all, allowing all citizens to select appropriate paths and programs for their careers, without any confusion.

F. Good Practices

Despite the issues and the many challenges it faces, Nepal's TVET system offers some good examples of success in trying to improve its quality and accessibility. Some of these noteworthy interventions are:

Technical school system. The Nepali technical school system works in far remote locations to open access to affordable training for out-of-school youths. The main benefit of this system is that youth who cannot continue general education due to various constraints are offered an alternative path. They gain access to skills training that can lead to productive employment. Although this system works to produce more productive citizens for the nation, it can be more effective if school management is transferred to local communities, with a block grant or fixed funding from the government, a reasonable degree of autonomy

and a set of norms and guidelines linked to key outcomes (e.g., training completers' employment and remuneration). It can even be implemented more efficiently in a public-private partnership (PPP) model.

Skills testing and certification system. The skills testing and certification system is evolving as a reliable pathway for acquiring skills and competencies through informal means. Because such skills can be recognized, assessed, and certified, affordable and credible certification leads to better employment (wage employment or self-employment) in and out of the country, with higher remuneration. This is an excellent pathway for those who cannot obtain recognition and certification of informally acquired skills and competencies.

Local-level financing. Local TVET funds were established and managed to develop a skilled workforce at the district level, reducing the burden on the national treasury. A government grant for human resources development was the initial major source of funding in each participating district and village development committee (VDC), and a fixed percentage of collected local taxes was allocated for this purpose. The system operated through a set of bylaws and implementing guidelines developed under the Training for Employment Project and approved by the Ministry of Local Development.

Vocational pathway concept. This initiative aims to accommodate and harmonize all parties involved in TVET: funding agencies, users, policy makers, and the job market's needs and interest in TVET. This concept respects all forms and pathways of education and training, and provides for horizontal and vertical movements. Incorporated in the National TVET Policy 2009, this approach is expected to contribute significantly to the formulation of a qualifications framework.

Annex school concept. This concept introduces a cost-effective model to expand skills training because it utilizes school facilities and management to offer skills training in the morning (before school) or evening (after school) by providing competent instructors for the identified trades/occupations. CTEVT publications indicate that this model helped increase access to vocational and technical skills for many aspiring youth because of the convenient location in local schools. With careful planning and monitoring, the annex school concept can be expanded for mass vocational training in Nepal.

CHAPTER 4

Issues and Constraints in Nepal's System for Technical and Vocational Education and Training

In most South Asian countries, the systems for technical and vocational education and training (TVET) have been lagging behind in developing market-driven skilled workforce needed to cope with changing regional and international labor markets. There has been little attention given to continuous research and development and new technology in developing TVET policies, plans and programs. Compared with East Asian countries, only about 1.6% of youths receive TVET services in Nepal⁴⁸ (versus 43% in the Republic of Korea and 26% in Japan). The number of South Asian schoolchildren who receive vocational education is extremely low at 1.2%. Training systems in South Asian economies suffer limited flexibility, poor curricula, and weak or no links with industries and job markets. Moreover, training focuses mostly on the organized sector,⁴⁹ which has limited capacity to provide employment. Most of the labor force works in agriculture and the informal sector (about 60% and 80%, respectively).

Approximately 450,000 youths, most with limited education and technical skills, enter the labor market each year, and the demand by Nepali businesses, industries, corporations, projects, farms, and communities for various types, categories, and levels of skilled workers increases every year. The Research Study Report on Industrial Relations and Enterprise Economic Survey Nepal 2010 of the Federation of Nepalese Chambers of Commerce and Industry (FNCCI) reveals that more than half (55%) of workers employed in the surveyed industries have the required skills, and less than half (45%) do not. These may be attributed in part to the current practice of hiring workers through personal contact, instead of based on skills qualifications, and the lack of in-house training programs and facilities to up-skill the workers in these industries. Currently, most industries and large businesses import skilled technical workers from India and other countries.

Analyzing the regional and global need for workers is very important. The demographics, migration trends, technological changes, job market demand, and overall development in other countries (e.g., members of the Organization for Economic Cooperation and Development and European Union) and the huge surplus of working-age populations in countries belonging to the South Asian Association for Regional Cooperation can provide the information to make detailed assessment and careful planning for matching demand and supply of skilled workers. Rigorous consultations and realization of the urgency to align TVET with local needs and demands, as well as with global competitiveness, are necessary to arrive at appropriate and specific recommendations.

⁴⁸ Nepal's total youth population is estimated to be 5.6 million (20% of total population in 2010). Of the total youth population, only about 90,000 get TVET opportunities.

⁴⁹ Government of Nepal, Ministry of Education. 2010b. *Nepal Education in Figures – At a Glance*.

The FNCCI study also revealed that TVET programs are not based on industry and job market needs (72%), training providers do not implement job-oriented training (54%), training providers lack industry-experienced instructors (50%), and training curricula do not specify and demand on-the-job training (35%), largely due to a mismatch between need and supply. In other words, programs are developed and offered without assessing the actual needs of the job market.

For the numerous unemployed Nepalese who left school without passing the school leaving certificate (SLC) examination and lack marketable skills,⁵⁰ TVET provides the opportunity to move out of poverty by acquiring skills to qualify for available jobs in the country and abroad, and to use in other income generating activities. People in Nepal, therefore, need greater access to relevant and effective skills training programs. In order to achieve wider access to quality TVET services, several issues must be addressed first.

A. Three Categories of Issues: Macro, Meso, and Micro

In the last 30 years (1980–2010) of organized TVET in Nepal, issues in the development and growth of TVET fall into three categories: macro, meso, and micro.

Macro level

- **National policy and directions** remain unclear. Nepal has not projected workforce requirements for at least 10 years and lacks a system of occupational classifications.
- **National goals and framework.** Nepal lacks commonly accepted national goals or education framework document developed through intensive discussions and dialogues among stakeholders (including professionals, politicians, educationists, planners, bureaucrats, employers, federations, associations, communities, government stakeholders, and funders). Nepal also lacks a government-approved and integrated national qualifications framework for both general education and TVET.
- **Political commitment.** All political parties preach the need for TVET, but none have committed to action. Nepal needs a formal joint declaration regarding TVET.
- **Financing.** TVET does not get sufficient funds. Treated as a subcomponent of school education, it is provided with only nominal support (i.e., 1.2% of the education budget and about 0.34% of the total budget).
- **Equity.** Skills development and career development programs are uneven, and only about 3% of citizens get opportunities.
- **Coordination.** Many concerned departments and ministries do not follow established norms and practices. The Council for Technical Education and Vocational Training (CTEVT) is unable to coordinate and harmonize national TVET activities, resulting in a fragmented and scattered system that produces a less competent and low-quality technical workforce.

⁵⁰ Government of Nepal, Ministry of Education. 2010b. *Nepal Education in Figures – At a Glance*. (Out of 100 enrolled in grade 1, only 6%–8% pass the SLC.)

- **Ownership.** Because TVET in Nepal operates without a commonly accepted system or standards, there is lack of ownership among stakeholders resulting in lack of accountability. Although the main responsibility lies with CTEVT, other ministries (e.g., the Ministry of Industry [MOI] and the Ministry of Labour and Transport) also claim partial responsibility for TVET implementation.

Meso level

- **Projects and interventions.** Donors and international nongovernment organizations (INGOs) implement TVET projects, but there are no appropriate directives, national framework or mechanisms to monitor and/or guide the projects.
- **Program development.** TVET programs developed in Nepal do not match the actual demand and needs of the job market; program and project development does not mandate employer participation.
- **Research and development.** Nepali TVET provision is hardly research-based. Because financing agencies do not prioritize research and development, such activities lack funding.
- **Accessibility.** Most youths with potential for TVET have difficulty accessing programs because TVET heavily concentrates its services in urban and semiurban areas. The development initiatives by the government are distributed inequitably across the country.
- **Database and documentation.** Nepal lacks a system for labor market information. TVET organizations have no reliable data because the documentation system is poorly managed and mostly unavailable.

Micro level

- **Communication and information dissemination.** People do not receive timely information about TVET services, and too often, information is sparsely available (e.g., advertisements in only one national newspaper or on the notice boards of one or two large organizations).
- **Advocacy.** TVET lacks advocacy at the local and grassroots level.
- **Training courses.** Developed mostly in urban centers with inputs from experts and professionals who often have limited work experience, training courses do not consider local needs and demand.
- **Pre- and post-training support.** Because the success of TVET depends on pertinent quality inputs and higher employability of its graduates, pre- and post-training support is crucial. TVET providers lack an established integral support system for offering services that link graduates with top potential employers.
- **Implementation.** TVET providers often lack adequate infrastructure, professional staff, logistics, materials, norms and standards, etc. Consequently, trainees frequently lack quality monitoring, supervision, and guidance.

B. Supply-Side Issues

Several interrelated broad issues are identified with the supply-side of TVET in Nepal.⁵¹ These include:

- relevance in promoting effective linkages between education/training and the world of work;
- quality and effectiveness;
- efficiency in promoting partnerships and utilization of available resources;
- access, equity, affordability, and inclusion;
- financing mechanisms and sustainability of operations; and
- management for better coordination, communication, and networking regarding TVET development.

1. Relevance

Nepal initiates TVET programs under the premise that the growing problem of unemployment and underemployment can be reduced through appropriate skill development (i.e., skill training programs can promote employment and augment the earning potential of trained graduates). However, TVET programs are poorly linked with labor market demands and do not satisfactorily fulfill the employment and earning needs of individuals or the economic development needs of the country. Available data from various sources in MOE, CTEVT, and government literature reveal low employment of skills training graduates (30%–50%).

On the other hand, slow economic growth restrains employment opportunities and job creation for TVET graduates in Nepalese businesses and industries. Neither the public nor the private sector creates new jobs. The government has been unable to create jobs and prioritize new projects and programs in sectors (e.g., tourism and energy, especially hydropower) that can generate huge employment opportunities.

Although the government has tried to make TVET need-based, it is not relevant enough to respond to the needs of the labor market. Most TVET programs are driven by supply resulting in a situation where there is shortage of skills in certain occupations and surplus in others. Some TVET graduates cannot find employment, but industries and the informal sector hire skilled workers from neighboring countries.

Most TVET programs, especially in the public sector, are supply oriented, with a typical bureaucratic and top-down approach to training. Centralized decision making impedes an immediate response to emerging local needs for human resources. Training programs are often based on budget allocations as well as available trainers/staff, equipment and facilities. TVET currently lacks proper monitoring and follow-up systems, and the feedback system for program improvement is weak. Similarly, the assessment of training needs is often absent, and the labor market information system is unable to provide updated

⁵¹ Based mostly on review of TVET-related literature in Nepal, interviews and discussions with stakeholders, consultative meetings with government officials, experience with and knowledge of existing conditions, and reflections on several government initiatives on the policy and program aspects of TVET.

information to assist training program selection. Because information from both do not guide the selection of skills and content, offered courses and their content are regularly irrelevant to needs and demands.

Inadequate linkage between educational institutions and industry is not fostering mutual cooperation. The absence of collaboration and partnership between training providers and employers (businesses and industries) hinders their ability to initiate work-based learning opportunities for trainees. The only significant linkage was initiated by FNCCI, which introduced the concept of trade schools that offer vocational training in close tandem with industry. Educational institutions are not always fully aware of the needs of industry, nor are they able to fully explore the ways in which industry can help (e.g., on-the-job training). Except for the development of curricula by CTEVT, industry participation in the design and implementation of TVET is rare. The involvement of industry and the world of work in TVET system development—establishing TVET standards, developing need-based curricula, demanding exact skill and competency requirements of graduates, providing and encouraging on-the-job training, and orienting training institutions toward necessary technological and behavioral changes—is crucial for the growth and development of TVET.

While the current general performance of the TVET system is not encouraging, especially in terms of efficiency and relevance, some TVET programs are doing well. For example, people who have earned a certificate in nursing enjoy almost 100% employment, within Nepal and abroad, (CTEVT Reports, and Profile TVET Providers 2010). Similarly, more than 70% of civil engineering graduates are currently employed (Profile TVET Providers, 2010).

Another relevance-related issue in TVET is that training curricula are rigid and outdated and cannot respond to the changing needs of the labor market. Instructors and trainers engaged in partner technical training providers (TTPs) have little industry/enterprise work experience. These TTPs have limited ability to provide post-training support and linkages to trainees because of absence of rules and guidelines and poor financial condition. This could have helped address poor work ethics, attitude, and work culture that are prevalent among Nepali workers/trainees. Moreover, established and functional career guidance and counseling services are not available to trainees and potential trainees.

2. Quality and Effectiveness

The quality and effectiveness of education and training remain to be major challenges in the national TVET system. Employers complain that graduates' knowledge, competencies, and work ethics are much lower than expected, largely due to the poor quality of training in most institutions. This situation is less in the public sector due to better infrastructure and resources, and more in the private sector due to constraints in investment.

Alongside efforts to address the skills training needs of the massive number of new entrants to the labor market, TVET needs to improve the quality of its system. The quality of its graduates falls short of the requirements of the industry. National standards to measure skills levels are largely absent. Qualified and trained instructors comprise only about 30%

of the total 30,000 instructors.⁵² On-the-job training slots are inadequate, and support systems for TVET trainees and graduates are insufficient.

Competency requirements and curricula standards vary among providers, and, often, institutions are unable to educate or train students/trainees according to the requirements of their curricula. Without nationally accepted qualifications and vocational qualifications frameworks, TVET programs lag in terms of quality and effectiveness. Moreover, an ineffective monitoring system and the absence of a proper accreditation system contribute to the poor quality of technical education.

Most training institutions, especially in the private sector, have inadequate equipment and facilities, training materials, and practical work-study opportunities for students. The growing number of private training providers, a proportion of which are in the training business solely for financial benefit, further threatens training quality across the country. On the other hand, public providers of vocational training place too much emphasis on quantitative goals and ignore qualitative outcomes. Most trainers/instructors are unqualified and untrained, and lack prior work/industrial experience. The program for technical teacher training for trainers' occupational skill upgrading through hands-on industrial experience is weak and instructional supervision and professional support for trainers and training providers are inadequate. Overall, training providers are not held accountable for ineffective training programs and poor outcomes. Measurement and monitoring of training providers' performance, accountability, and transparency in budget management is also insufficient. Monitoring of training programs also needs improvement.

Overlap and confusion in the roles and responsibilities of various government training agencies also affect the efficiency and quality of the vocational training system. Lack of coordination and monitoring mechanism is a major reason for the prevailing ineffectiveness of the national training system. Although CTEVT has a legal mandate for quality assurance at the national level, its performance has been limited to its own institutions.

On top of this all, Nepali society insufficiently perceives the value of skill training resulting in low-quality students entering into TVET programs. In some cases, trainees seek stipends or certificates but do not work to acquire knowledge and skills. In the public vocational training programs, the trainee selection practices are lax and ineffective.

3. Internal Efficiency

TVET institutions produce very few graduates, but each institution requires considerable resources, infrastructure, and personnel. The criteria for investing in TVET are unclear, and the wide discrepancies among different institutions and providers indicate variations not only in quality, curricula, duration, and outcomes, but also in training approaches, strategies, and delivery mechanisms. High cost per unit of training;⁵³ low pass percentages, especially

⁵² Estimated data from Training Institute for Technical Instruction Annual Report 2010.

⁵³ On average, the per unit cost of training (duration of 2–6 weeks) is NRs11,000.00, as illustrated by several reports, including Employment Promotion Commission 2000 (*Employment Promotion Commission Report 2000*); CTEVT 2010c (*A Model of TEVT Quality Framework for Nepal*, TVET Development Journal, Vol 1, No. 10); and CTEVT 2010a (*A Profile of TVET Providers*). For the average Nepali the cost is rather high in relation to the general education cost and the average per capita income of Nepali people. On the other hand, available physical facilities and human resources efficiently or fully utilized.

in private sector institutions,⁵⁴ and a high employee-trainee ratio⁵⁵ are some examples of serious inefficiencies of Nepalese TVET.

The TVET system is characterized by centralized management that put too many restrictions on introducing new programs or revising old ones and making decisions on financial and personnel matters; and interferes with local institutional management. Such restrictive financing practices restrain resource generation and utilization for program improvement at the local level. As a result, there is a tendency to shovel the responsibility upward because accountability is perceived to lie only at the central level. There is also lack of local participatory planning and monitoring practices to ensure efficient operation of TVET institutions. Public training institutions and their management committees are not keen about overall efficiency because of limited authority. Private sector's contribution to skills training is not fully explored and utilized because of TVET's too much dependency on the government subsidy channeled to public training providers.

4. Access, Equity, Affordability, and Inclusion

Most working-age youths and adults having less than grade 10 education enter the labor market without skills. This population usually consists of disadvantaged groups such as the Dalits, individuals with special needs, women, poor and marginalized, and residents of remote rural areas, who have limited or no access to skill development opportunities. Every year, about 280,000 youths cannot access TVET programs.⁵⁶

Inadequate levels of general education among the disadvantaged groups tend to deprive them of the opportunity to attend TVET programs. Potential loss of income (i.e., the opportunity cost) further discourages them from undertaking further training and education. Moreover, most TVET programs are expensive and thus unaffordable for the disadvantaged population. Fees, entry qualifications, age, delivery approach, geographical barriers, and inadequate support and encouragement limit their access to TVET. In addition, discriminatory social practices, traditional beliefs, and cultural norms restrict participation in TVET, particularly by Dalits, Kamayias, Badis, Haliyas, and, in general, females. Continuing political instability and conflict among political parties also restrain the disadvantaged from accessing available opportunities. The TVET system has failed to provide the environments, infrastructure, and special programs for people with special needs and other disadvantaged groups due to inadequate commitment and funding.

The TVET system focuses mainly on urban areas and most youths who leave school who belong to disadvantaged groups such as the Dalits and scheduled castes (Janajati) live in far-remote areas. Thus far, CTEVT and CTEVT-affiliated schools operate in only 50 of 75 districts. CTEVT programs mainly target those who have completed grade 10, providing little attention on skill development for people with basic literacy only. Consequently, most disadvantaged people have weak skills and competencies, thereby contributing to the

⁵⁴ In competency-based training, the current pass rate of trainees, excluding health trades averages 65%–75%, which is considered low compared with public technical institutes (where it is more than 85%).

⁵⁵ The employee-trainee ratios in training institutions (especially public institutes) are around 1:3, which is considered high.

⁵⁶ Based on Government of Nepal, Ministry of Education, CTEVT. 2009b. *Draft Nepal Technical and Vocational Education and Training Policy 2012*.

unemployment situation. In addition, they lack awareness and sufficient information about TVET providers, training programs and their benefits, and job opportunities.

Nepal needs a systemic plan to provide the youth with easy access to skills training, especially to address the skill and career development needs of most out-of-school youth from disadvantaged and underprivileged communities. TVET's rigid structure and delivery mechanisms have restricted access by wider segments of the population, especially by those who have not completed secondary school education. Currently, Nepal also lacks any alternative flexible education and training mechanism (i.e., absence of vocational pathways).

5. Financing Technical and Vocational Education and Training

TVET financing has been inadequate, and is characterized by uncoordinated management of available resources due to lack of prioritization of often supply-oriented training programs. Quality TVET programs is cost intensive, and the government is always concerned about providing adequate funding. However, in many institutions, there is lack of financial accountability and transparency, and regulatory mechanism for checks and balances for direct financial support from aid agencies and international nongovernment organizations (INGOs) is weak.

TVET is too dependent on government-controlled funding, which is quite limited. The private sector has had little incentive; rather, it has been penalized by taxes and restrictions. The private facilities are not at par with public facilities. Ineffective public-private partnerships (PPPs) have rendered TVET unable to take a priority position in national investment. In addition, the participation of local communities and local self-government bodies is constrained.

6. Management and Structure

The absence of an overall structure with a clear mandate, roles, and responsibilities; defined accountability; and backing from a national policy framework is one of the crucial problems in TVET in Nepal. The existing structure of managing, coordinating, facilitating, implementing, monitoring and supervising, and developing complete TVET programs and materials is not effective in bringing all stakeholders within the coordinated network and collaborative support group. The uncoordinated efforts among TVET providers operating under various ministries and government departments, and the fragmented provision of skill training result in duplication of efforts and resources. Public TVET institutions/providers operating under various ministries and skill development programs are financed independently by international agencies without coordination, because the financing of such programs is not channeled through the national coordinating agency.

As the national coordinating agency for TVET, CTEVT is entrusted with coordination, accreditation, and monitoring of TVET providers; facilitating training providers to develop curricula, training packages, and instructional materials; skills standardization; and provision for necessary funding. However, its existing structure, work system and practices, and

human resources have been unable to satisfactorily perform its functions. In practice, it has become a political and formality institution rather than an autonomous, dynamic, and leading organization in charge with effective management of TVET. Excessive political interference and influence on all the organizations involved in TVET hinder their ability to effectively carry out their activities. The frequent and abrupt changes in the government result in unpredictable transfers of responsible persons in the system.

Devolution of power, authority, and accountability to regional and institutional settings are not really practiced by the central authority for fear of losing control. For the last 3 years, CTEVT has maintained regional directorates in Itahari (in the eastern region) and Nepalgunj (in the far western region). In principle, the directorate should assume most central roles/functions and authority, thus facilitating easy access to local institutions for all sorts of services. In practice, the far western regional directorate has not been operational due to staffing and resources problems. Although operational, the eastern regional directorate is somehow still controlled by the center.

C. Summarizing the Constraints

TVET in Nepal is highly fragmented. The roles of the various stakeholders of the TVET system are not clearly defined and organized. In the public sector, institutional leadership is weak, and CTEVT is too burdened with implementation tasks. Skills development is organized by government ministries (and within ministries, by departments), nongovernment organizations (NGOs), aid projects, and to some extent by local initiatives. Coordination among these various actors and their respective activities is lacking, leading to duplication of activities (e.g., development of curricula and skills standards, and, therefore, waste of already scarce resources). Most training providers work to their own benchmarks and curricula. Because outcomes vary, agencies have no common purpose or comparable outcomes. Most TVET-related decisions are made at the central level within each respective line ministry, and include little consultation with key stakeholders (e.g., the private sector and local communities). Moreover, government funding for training to each public agency is based on the needs of the given department rather than priorities within the training market. Well-performing institutions receive no incentives or rewards, and nonperforming institutions are not sanctioned. Due to the constraints detailed here, the TVET system that should help produce skilled workforce in Nepal is becoming cumbersome and less effective.

CHAPTER 5

Priorities and Strategies for Reforms

Vocational Education and Training is one of the most undisputed investments in social, economic and ecological development worldwide. A skilled workforce is the primary asset of many countries. Also for individual, access to skills is often a necessity for survival and progress.

(VET Swisscontact literature—2006)

Two prime developments—globalization and modern technology—have increased recent demand for skilled labor.

In South Asia, a large part of the labor force remains in the informal and/or unorganized sector, which largely operates at low productivity. A key challenge for most South Asian countries involves overcoming this problem of low productivity, which is associated with a large percentage of the labor force engaged in agriculture despite its shrinking contribution to gross domestic product (GDP). Concurrently, low educational attainment and poor employable skills have forced a large percentage of the labor force into overseas employment in low-skill jobs. Therefore, Nepal requires concerted efforts to develop knowledge and demand-driven skills that complement generic skills acquired from formal schooling to provide market-responsive technical and vocational education and skills. This effort will help improve the quality of the workforce; enhance employability, productivity, and remuneration, leading to higher economic growth.

A. Priorities for Interventions

Considering the importance of skill development through a well-established, competitive technical and vocational education and training (TVET) system, and based on analyses of the issues and constraints identified in the preceding chapters, this chapter identifies three major areas to promote and enhance skills development in Nepal.

1. Restructuring and Repositioning of Authorities to Improve Ownership and Delivery

TVET authorities must be restructured and repositioned as complementary autonomous bodies with distinct and transparent roles and responsibilities that complement rather than duplicate functions and activities. Improving TVET outcomes, including higher employability, productivity, and remuneration, will require effective coordination of the TVET system. The goal is to (i) enhance coordination of the currently fragmented TVET

system; (ii) improve transparency and accountability among agencies; and (iii) improve TVET management and delivery to respond to the demands of national, regional, and international labor markets.

During the last 5–10 years, quantitative expansion of outputs⁵⁷ (i.e., trained youths) and the number of training institutions⁵⁸ has been significant. However, this expansion has not been able to cope with the growing demands for a skilled workforce in terms of quality, relevance, and level or types of skills.

The Council for Technical Education and Vocational Training (CTEVT) is currently the only authority responsible for planning, developing, coordinating, and implementing TVET programs in Nepal. MOE is the line ministry of CTEVT. However, there is duplication in TVET activities because other ministries and departments also exercise some of these functions. Although CTEVT is an autonomous body, coordination, supervision, and monitoring have become a challenge, largely because other ministries and departments do not follow CTEVT's leadership, and CTEVT has no control over financing and management of their TVET activities.

Ownership is another bottleneck for TVET in Nepal. More than five ministries are involved in skills development activities, and many departments meet their own requirements. Three ministries claim total ownership. Based on the Education Act, Ministry of Education (MOE) claims to be the responsible agency for the entire TVET system in Nepal, but Ministry of Industry (MOI) and the Ministry of Labour and Transport Management (MLTM) also claim ownership of skills development. Often, these two ministries question the role of MOE. Without clearly defined mechanisms for implementation, funding, coordination, quality assurance, and monitoring, this competition for leadership and ownership has caused delays and generated confusion regarding the overall development of TVET. The ownership issue also inhibits strategic mechanisms for coping with key issues pertaining to national and international skill competitiveness and ensuring credibility of the TVET system.

2. Implementation of Improved Policy, Framework, and Directives

All stakeholders must adhere to TVET policies that incorporate national TVET goals, priorities, qualifications framework, directives, detailed action plan, and horizontal and vertical linkages/pathways between different streams of education and training. The Nepal Technical and Vocational Education and Training Policy (2012) and MOE's School Sector Reform Plan (2009–2015) provide options to address the constrained TVET system to substantially expand access and significantly improve quality of TVET services. The real challenge lies in actual implementation.

⁵⁷ 2,000 (CTEVT) and approximately 9,500 (others) graduated in 1995 compared with more than 85,000 (CTEVT and others) in 2009—CTEVT 1994 (*Council for Technical Education and Vocational Training Profile*); CTEVT 2010d (*Technical Education and Vocational Training, A Glimpse*); and Ministry of Education 2010b (*Nepal Education in Figures – At a Glance*).

⁵⁸ Similarly, institutional growth from 10 in 1995 to more than 400 in 2010 reveals that quantitative growth has become notable.

3. Improving Financing and Sustainability

Devising and implementing improved schemes for a sustainable TVET system is another critical area for allowing systematic growth and development of TVET.

TVET programs are cost intensive, and providing an adequate budget has always been a big challenge. However, TVET is not yet regarded as a separate pathway in Nepal, like general education (school to university), and it is treated as one subcomponent of school education.

Education in Nepal received an average 16.58% of the total national budget, and TVET received an average 1.22%. Table 11 covers only those TVET expenses under MOE and CTEVT. However, TVET activities are also found in other ministries, including MOI, the Ministry of Labour and Transport Management, and the Ministry of Agriculture, which receive separate allocations for skills development. Nepal's allocation to education as a percentage of GDP averaged 4.02%.

Table 11: Total Education Budget, including Technical and Vocational Education and Training (NRs '000)

Fiscal Year	National Budget	Education Budget	Education Budget (%)	GDP (%)	AGR of Education Budget	Budget for TVET	Education Budget (%)	Total National Budget in TVET (%)
2005–2006	126,885,100	21,250,447	16.75	3.48	17.70	292,000	1.40	0.23
2006–2007	143,912,300	23,005,525	15.99	3.40	8.30	510,000	2.20	0.35
2007–2008	168,995,600	28,390,000	16.80	3.76	23.40	250,150	0.88	0.15
2008–2009	23,6015,897	39,086,407	16.56	4.29	37.70	310,738	0.80	0.13
2009–2010	285,930,000	46,616,672	16.30	4.34	19.30	434,000	0.93	0.15
2010–2011	337,900,000	57,640,000	17.10	5.18	23.65	(estimated) 650,000	1.13	0.19

AGR= annual growth rate, GDP = gross domestic product.

Source: Ministry of Finance, various years of Red Books (<http://www.mof.gov.np/en/archive-documents/budget-details--red-book-28.html>)

Given the current poor health of the economy and the huge need for school education and higher education, it may not be realistic to depend only on government resources for TVET. Other options must be explored, including (i) new levies that could draw on overseas employment, based on a premise that training will lead to higher remuneration for those seeking such employment; (ii) tax credits to those who invest in skills development, either as a separate training provider or within existing businesses (internships, apprenticeships, etc.); and (iii) external financing linked to performance-based funding to improve the outcomes of skills development and support endowment funds for skills training programs that address vulnerable groups with superior outcomes.

B. Proposed Model

The TVET model in Figure 3 proposed for Nepal tries to address all levels of issues and constraints (i.e., institutional arrangements and role clarity, governance of TVET system and coordination, quality assurance, relevance, monitoring and supervision, funding modality, performance-based funding, etc.) discussed in previous chapters. The following major aspects must be addressed:⁵⁹

1. Sustained and gainful employment by at least 80% of graduates;
2. An independent and highly respectable national steering commission (A1 in Figure 3) for overall coordination, monitoring, and quality assurance of the TVET system;
3. An operational system with distinct and clear roles, responsibilities, and authorities according to the identified and defined core functions; and
4. Integrated system of coordination through representation and participation across functions.

1. Restructured and Repositioned Organizations and Management for Improved Delivery and Ownership

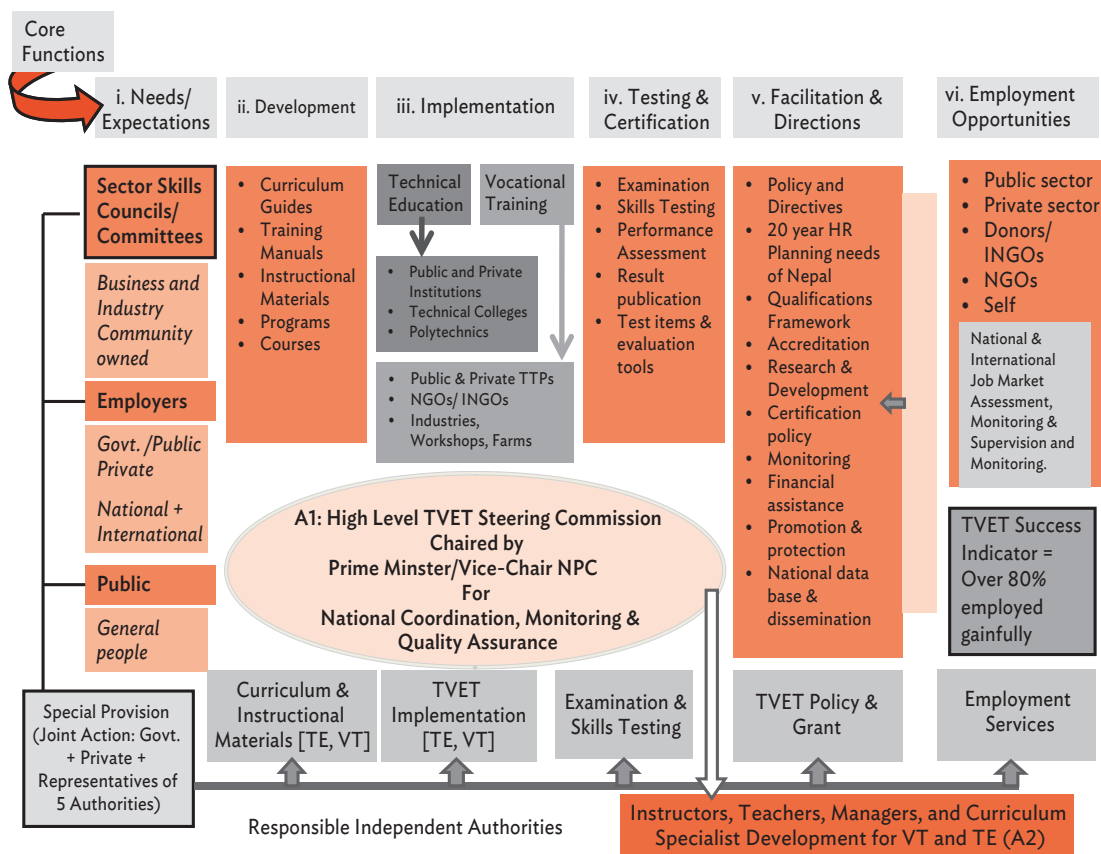
To restructure, reposition, and improve delivery and ownership in Nepal's TVET system through a new model, approval by the Cabinet and subsequent incorporation into policies and regulations as approved by Parliament are necessary.

In addition to the four principles articulated above, successful TVET has to effectively function in six core areas, which must be independent and carried out by respective governing systems including public–private partnerships (PPPs).

- (i) **Needs and expectations.** This function of TVET is most crucial for the relevance and effectiveness of the system. The needs and expectations for TVET programs and courses are determined through a joint effort of business and industry, government employers, foreign employment agencies, general public interest representatives, and the representatives of the proposed five authorities in Figure 3 (Curriculum and Instructional Materials, TVET Implementation, Examination and Skills Testing, TVET Policy and Grant, and Employment Services). This function should be owned and operated by sector skills committees/councils, as is the case in the United Kingdom and other countries. Because skill development needs and requirements differ in various sectors (e.g., construction, agriculture, business, tourism, infrastructure development, etc.), the respective skills councils are best positioned to address this occupation-wise. The major contribution of this function to overall TVET is to provide the inputs (skills and competencies demanded by the job market, community, society, government, and development projects) and the business creation ideas (i.e., which areas should be considered

⁵⁹ The model proposed here is based on the knowledge and experience of the author, inputs and suggestions collected from various professionals (in a survey conducted by the author in 2010), ideas and comments collected from TVET literature and reports on TVET, reflections from other countries' TVET systems, extracts from a number of several policy and directions papers of Nepal and other countries, and the fundamental principles of growth and development of TVET.

Figure 3: Proposed Model for Reforming the Technical and Vocational Education and Training System in Nepal



HR = human resources, INGO = international nongovernment organization, NGOs = nongovernment organizations, NPC = National Planning Commission, TE = technical education, TTP = technical training provider, TVET = technical and vocational education and training, VT = vocational training.

Created by D. P. Dahal, TVET Consultant, ADB.

for new business creation to generate further employment for TVET graduates) for the system. The next function focuses on effective development of programs, courses, and guidelines for TVET as per the requirements.

- (ii) **Development.** Based on the inputs from (i), detailed curriculum guidelines, training manuals, instructional materials (i.e., teaching and training manuals), programs, courses, and models of teaching and instruction are developed by the proposed Curriculum and Instructional Materials Authority, with close interactions and feedback from employers. Although it will be given a certain degree of independence in terms of its functions and operations, the Curriculum and Instructional Materials Authority will report to A1 (see Figure 3) for quality matters and budget. Its annual plan and budget will also be approved by A1. Detailed structure and staffing requirements of this function will require further development.

- (iii) **Implementation.** This function is divided into two parts: (a) implementation responsibility for technical education (mainly for academic and career-building programs, including full-time TSLC, diploma, and bachelor's degrees) offered by technical schools, polytechnics, and technical colleges/institutions; and (b) vocational education and training (mainly nonacademic and short-term skill training for youths). These training programs are currently offered in public and private technical training providers (TTPs), training centers supported by NGOs/INGOs, industries, workshops, farms, and community-managed centers. The authority to effectively manage TVET implementation can be called the Council for TVET (the current CTEVT can be given this role with revised mandate and full autonomy).
- (iv) **Testing and certification.** Testing and certification is among the most critical functions for overall quality assurance of the system. Responsibilities under this function include developing norms and standards of examination and certification, conducting examinations, conducting skill tests, publication of results, development of test items, maintaining a complete database of the total activities, and undertaking research and evaluation on the reliability and efficacy of testing on a regular basis. The present Examination Board and National Skill Testing Board of CTEVT may be merged into a National Testing and Certification Authority with an improved and revised mandate and full autonomy to take up the tasks.
- (v) **Facilitation and directions.** This key function has many higher-level duties, tasks, and responsibilities for a dynamic TVET system. These are mainly government roles. Core tasks include formulation of long-term policy and directives, human resource projections and development of plans for different categories and occupations, defining the qualifications framework of TVET, accreditation of programs and institutions, providing and monitoring of grants in TVET with a central TVET Fund, promotion and protection of TVET demand and requirements, and maintaining and updating the national LMIS including conducting tracer studies on a regular basis. Promoting TVET research and development activities is also important for the exploration of new ideas about the growth and development of TVET. A National TVET Policy and Grant Authority would be an appropriate body to assume these tasks and roles.
- (vi) **Employment opportunities.** Assessment of national and international job markets and provision of relevant information to the entire sector in a timely manner are very important in systematically creating avenues for TVET graduates to obtain employment both within and outside Nepal. Conduct of various studies exploring extended employment opportunities for different levels and types of TVET graduates and provision of all kinds of post-training support contributory to graduates' employability are also crucial. All these activities will be the responsibilities of an Employment Services Authority, the detailed structure and staffing of which will need to be worked out.

A high-level TVET steering commission (A1 in Figure 3) will be the ultimate authority for overall TVET coordination, monitoring, and quality assurance to govern the system in a transparent manner. Structure and staffing of the commission will abide by the legal mandate given by the government. For the commission to work effectively and efficiently, existing acts, rules, and bylaws related to TVET must undergo review by the government and Parliament. The new directives will reflect the necessary amendments/changes and will

be handed over to the commission for implementation. The commission will coordinate all the funding agencies, INGOs, ministries, and NPC for the overall plan, programs, finance, and national goals and priorities for TVET.

The commission will have a special provision for establishing a national human resources training and development authority (A2 of Figure 3) with the mandate of producing quality instructors, teachers, managers, and curriculum developers for the entire TVET system through a PPP mode.

2. Improved Policy, Framework and Directives

The concerns listed under this issue will be addressed in an integrated manner pursuant to the approval of the new TVET model as proposed, and subsequently the sustainable financing model of TVET. The expected course of progress will be the timely approval by the cabinet of the proposed national TVET policy and pertinent directives, together with the detailed action plan; implementation of the National Vocational Qualifications Framework (NVQF) as in the national TVET policy upon approval by the cabinet; and promulgation by the Parliament of a revised or new Act of Education and Training incorporating all the required changes so as to make both general education and TVET responsive to emerging national, regional and international skills needs.

3. Improved Financing and Sustainability

Being capital-intensive, technologically driven, and quality focused, TVET has an even greater need for a well-planned and structured financing system. The existing financing system in Nepal has been inadequate, as explained in the previous chapters. Due to Nepal's overall economic situation, sustainable government financing for the entire TVET system is not possible; many other priority sectors require investment. Therefore, the following funding model is recommended to improve the financing and sustainability of TVET in Nepal.

The proposed sustainable financing model for Nepal works on three features: (i) an independent and autonomous setup that can make timely decisions on the basis of carefully developed and agreed-upon guidelines that links financing to responsibility and accountability; (ii) funding can be generated from foreign funding agencies, remittances, local taxes, and government grants, but the allocation and disbursement should be performance based; and (iii) a separate TVET fund that is linked to local financing and conditions and that adopts a fair and inclusive disbursement mechanism needs to be established.

The following are presented as recommendations to effectively operationalize the proposed TVET fund, subject to consultation and discussion with key stakeholders.

- Adopt an innovative performance-based funding system to provide grants based on clearly defined criteria to private, public, and community-level training providers for priority, market-oriented skills training programs that promote relevance and equity/inclusivity.

- Promote and protect private sector investment through special incentive packages (e.g., a low-interest credit facility, tax rebates, and grants to provide services in remote and rural areas).
- Establish a training fund and manage it at the local, regional, and national levels through professional fund-management services by experimenting with a training levy system, which could be used to train workers in levy-paying enterprises.
- Issue pilot training vouchers to increase access by disadvantaged groups. This can be complemented by introducing student loans to students pursuing TVET programs.
- Increase the national budget allocation to the TVET subsector, including incentives to employers and the private sector to provide short-term modular training, OJT, and apprenticeship training. This can facilitate and encourage a shift toward competency-based lifelong training.
- Initially fund piloting of experiential training by enterprises and industries through government subsidies until the private sector can take over and take it to scale. This will also help minimize educational wastage.
- Maximize government grants to basic-level skills training programs that will benefit a large number of people most in need of training, and proportionately reduce the grant subsidy at higher and more specialized levels of training, where cost-sharing between employers and trainees is feasible due to higher returns to both parties after training.
- Promote PPPs by, for example, sharing existing government facilities with the private sector through a rental system, which can facilitate optimal utilization of available resources. Such partnerships could also lead to other synergies in sharing curricula, trainers, and practical training.
- The government can introduce a funding formula to facilitate some uniformity in unit costs and subsidies. In developing such funding formula, special attention or consideration must be given to disadvantaged groups, remote locations, and priority training programs with higher subsidies. As long as they transparently meet the government's priorities, both public and private training providers should be allowed to compete for funds. Special arrangements among the government, private sectors/ industries and financing agencies should be forged to bring key stakeholders together for a viable financing options.
- Explore ways to increase efficiency and reduce the unit costs of TVET programs, given that they have high operational costs. Possibilities include optimizing the utilization of physical facilities/resources by running in shifts and increasing the overall enrollment, joint management and administration of multiple training institutions in close proximity; and developing mechanisms and capacity of training institutes to generate at least 20% of the total operational budget.

APPENDIX 1

Nepal's Economic and Social Indicators

Indicators	2005	2008	2011
GDP (\$, millions)	9,165	13,406	1,249.11
GDP: Growth rate at constant 1990 prices (annual %)	3.7	5.6	3.884
GDP per capita (current \$, %)	338.3	465.4	622.495
GNI (current \$, %)	340.8	468.1	540
CPI (2000=100)	123	157	165.4
Agricultural production index (1999–2001=100)	115	118	117
Employment in industry sector (% of employed)	14	15	26
Employment in agriculture sector (% of employed)	67	65	65
Labor force participation, adult female pop. (%)	57.3	59.3	79.4
Labor force participation, adult male pop. (%)	76	75.7	80.9
Population growth rate (avg. annual %)	1.8	1.8	1.35
Education: Government expenditure (% of GDP)	3.8	3.8	3.8
Education: Primary: secondary gross enrollment ratio (w/m per 100)	79/80	79/81	79/81

CPI = consumer price index, GDP = gross domestic product, GNI = gross national income.

Sources: Government of Nepal, Ministry of Finance (*Nepal Economy Profile 2010 and 2012/13 and Economic Survey - Fiscal Year 2011/12*); Nepal Rastra Bank 2012 (*Macroeconomic Indicators of Nepal*).

APPENDIX 2

Breakdown of Employment, by Occupation, 2009

Occupation	Total (%)			Urban (%)			Rural (%)		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Legislators, senior officials	0.6	1.1	0.2	1.9	2.7	0.9	0.4	0.8	0.1
Professionals	1.7	2.8	0.8	5.1	6.3	3.6	1.2	2.2	0.4
Technicians, associate professors	2.0	2.7	1.3	5.6	6.7	4.3	1.4	1.9	1.0
Clerks	1.0	1.8	0.3	4.0	5.5	2.1	1.4	1.9	1.0
Service workers	7.3	9.3	5.5	22.9	24.4	21.0	5.0	6.6	3.6
Market agriculture	3.1	2.7	3.5	2.1	1.7	2.6	3.3	2.9	3.6
Subsistence agriculture	64.0	52.9	73.7	26.6	16.1	39.7	69.6	59.7	77.9
Craft and related trade workers	8.4	11.6	5.5	15.6	18.5	12.0	7.3	10.4	4.7
Plant and machine operators	1.4	2.7	0.2	3.4	5.6	0.6	1.1	2.2	0.1
Elementary occupations	10.5	12.2	9.1	12.4	11.8	13.3	10.3	12.2	8.6
Armed forces	0.1	0.1	0.0	0.4	0.6	0.0	0.0	0.1	0.0

Notes: Some of the proficiency certificate-level (PCL) programs cover 3 years; bachelor's degree programs cover up to 6 years; master's degree covers up to 4 years; M. Phil covers up to 2 years; and PhD covers up to 5 years of education. Therefore, in total the complete education program may cover up to 30 years.

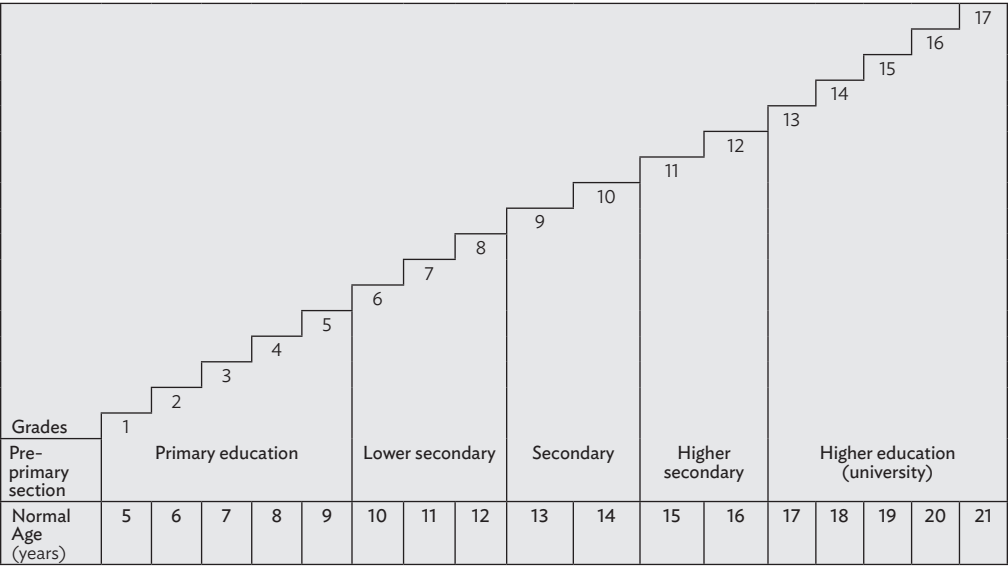
The existing school education structure consists of 2 years of Early Childhood Development/Preprimary Class 5 years of primary, 3 years of lower secondary, and 2 years of secondary and higher secondary each.

Source: Government of Nepal. Ministry of Education. 2009b. *Nepal Education in Figures – At a Glance*.

APPENDIX 3

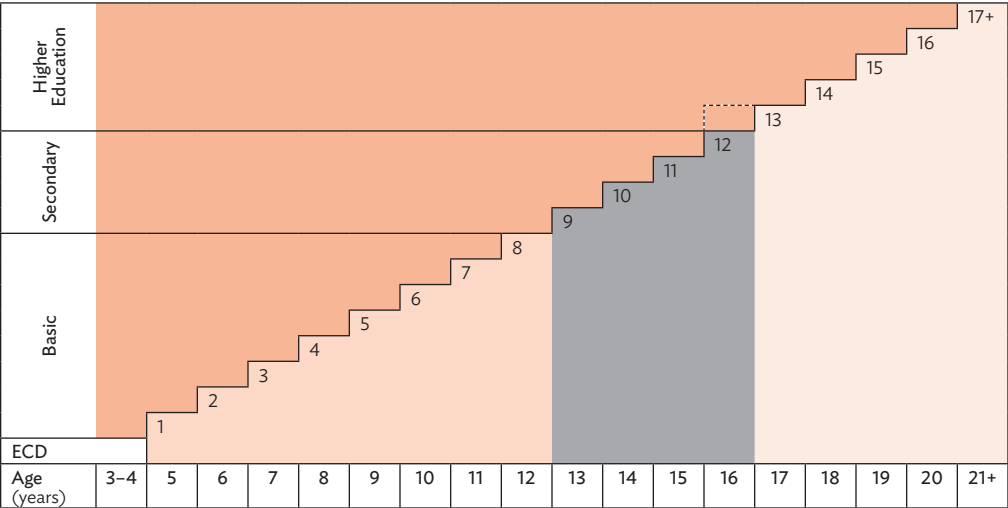
Comparative Charts of Existing and Proposed Formal Education System in Nepal

Figure A3.1: Existing Structure of Nepal’s Formal Education System



Source: Government of Nepal, Ministry of Education.

Figure A3.2: Proposed New Education Structure of Nepal



ECD = early childhood development.
Source: Government of Nepal, Ministry of Education.

APPENDIX 4

CTEVT Assembly and Council Members

Assembly Members	Position
Minister or State Minister, Ministry of Education	Chair
Chair, Population and Social Committee of Parliament	Member
Member responsible for Human Resource Development, National Planning Commission	Member
Member, Public Service Commission	Member
Secretary, Ministry of Education	Member
Secretary, Ministry of Industry	Member
Secretary, Ministry of Labour and Transport Management	Member
Secretary, Ministry of Tourism and Civil Aviation	Member
Vice-Chair, CTEVT	Member
Rector, Tribhuvan University	Member
President, Federation of Nepalese Industry and Commerce	Member
Five Deans (Technical Faculty) nominated by the Chair from various universities	Member
Three persons, who have made special contribution in TVET sector, nominated by the Chair	Member
Three persons nominated by the Chair from among industries and businesses	Member
Representative, Nepal Academy of Science and Technology	Member
Member Secretary, CTEVT	Member Secretary of the Assembly
Council Members	
Minister or State Minister, Ministry of Education	Chair
A person nominated by the Government of Nepal	Vice-Chair
Secretary, Ministry of Education	Member
Member of National Planning Commission	Member
Two persons nominated by the Chair from among those who have made special contributions to TVET	Members
Two persons nominated by the Chair from among the persons belonging to various organizations and associations connected with TVET	Members
A CTEVT employee nominated by the Government of Nepal	Member secretary

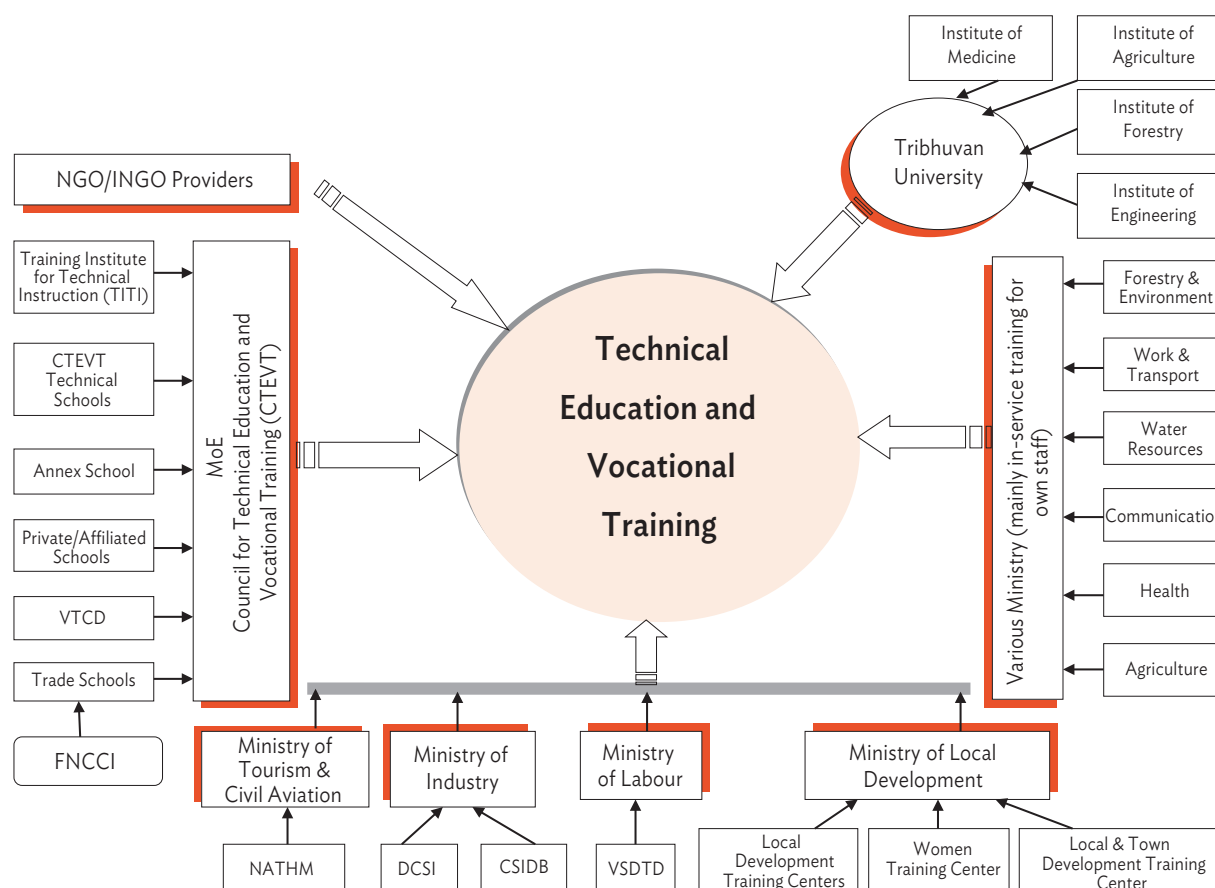
CTEVT = Council for Technical Education and Vocational Training, TVET = technical and vocational education and training.

Note: All Assembly members have a 4-year term and are eligible for renomination.

Source: Government of Nepal, Ministry of Education, CTEVT. 2011b. CTEVT at a Glance 2010-2011.

APPENDIX 5

Agencies and Institutions Involved in TVET and Their Interconnections



CSIDB = Cottage and Small Industry Development Board, CTEVT = Council for Technical Education and Vocational Training, DCSI = Department of Cottage and Small Industries, FNCCI = Federation of Nepalese Chambers of Commerce and Industry, INGO = international nongovernment organization, NATHM = Nepal Academy for Tourism and Hotel Management, NGO = nongovernment organization, VSDTD = Vocational Skills Development and Training Department, VTCD = Vocational Training and Community Development.

Source: Adapted by the author from Gunter Kohlheir's Technical Education and Vocational Training System in Nepal 1999, modified by CTEVT in 2006."

APPENDIX 6

Steps in Approving New Institutions and Programs

Steps	Details
A. Application process	1. Notice publication in national daily for application submission. 2. Submission of completed application in accordance with the criteria given by CTEVT. 3. Submission of detailed proposal together with the application.
B. Application selection process	1. Accreditation Division of CTEVT studies the details of the applications and notifies the concerned applicants, either recommended or rejected, in writing. 2. Feasibility study and inspection of the recommended applicants begins.
C. Feasibility study and inspection	1. Feasibility study and inspection of the recommended applicants conducted by the team assigned by Accreditation Division of CTEVT. 2. Applicants submit required charges for feasibility study and basic infrastructure inspection before the team leaves for the site. 3. Team submits the feasibility study report to CTEVT. 4. Qualified applicants will be asked in writing to prepare for all the facilities in compliance with directives for the required physical facilities for a new program and new institution. 5. Concerned applicants must inform CTEVT when they are ready for final inspection of physical facilities. Prior to inspection, applicants must deposit inspection fees with CTEVT. 6. Inspection team submits its report to CTEVT, with recommendations. 7. CTEVT decides to approve or not approve the institution or program affiliation after careful study of the report findings. Prior to providing written notice to approved applicants, applicants must deposit all fees and charges with CTEVT, as per the norms.
D. Final approval	After final verification of applicant's details, study reports, and inspection reports, CTEVT issues a letter of approval to run the institution or program for a maximum of 2 years.
E. Renewal	CTEVT will renew the program or institution approval every 2 years on the basis of follow up, inspection and supervision, and evaluation conducted by CTEVT. The institution must deposit the renewal fee before obtaining renewal approval.

CTEVT = Council for Technical Education and Vocational Training.

Notes:

For private training institutions to obtain approval of the institution or program from CTEVT, each applicant must submit the proposal details in accordance with the guidelines and directives given by CTEVT.

Institution and program approval fee and charges:

Long-term program (diploma level): NRs650,000 for one program at the start. NRs325,000 for each additional program, and NRs20,000 for renewal of one program.

Long-term program (junior technician level): NRs270,000 for one program at the start. NRs105,000 for each additional program, and NRs5,000 for renewal of one program.

Short-term program (skill level): NRs140,000 for one course at the start. NRs2,000 for each renewal.

Source: Government of Nepal, Ministry of Education, Council for Technical Education and Vocational Training. Website, <http://ctevt.org.np/>.

APPENDIX 7

Nepal TVET and Skills Development Policy

Outcomes	Key Policy Areas	Strategies
For citizens: Every Nepalese will be entitled to at least 3 months of training for employment free of charge; beyond that an increasing array of lifelong learning opportunities will be available on a fee-paying basis For training providers: All businesses and institutions, small or large, private or public, commercial or charitable, will be encouraged and supported to offer skills development for school leavers and the national workforce For the business community: The supply of workers, competent and confident in their occupations, will be massively increased, thus enhancing national productivity In summary: Development of a strong and functioning market for TVET and skills development	Massive EXPANSION of training opportunities	Deregulation, autonomy, decentralization, free startup support to emerging providers, outcome quality assurance (in line with national vocational qualifications), performance comparison, transparency, and quality marks as elements of customer protection
	INCLUSION of and ACCESS for all citizens who need training	Stipends (for tuition fees and subsistence allowance) especially for disadvantaged groups of people, recognition of prior learning /open assessment, entry level occupational standards, preparatory and support courses to promote mainstreaming
	Firm INTEGRATION of various training modes and pathways	Vocational Qualifications Framework as a bracket for formal, nonformal, and informal training and learning, bridging courses into general education, promotion of typical occupational career ladders, and career guidance for the workforce as elements of lifelong learning
	Enhanced RELEVANCE of courses and competencies	Licensed trainers with industrial exposure, needs-identified, curricula based upon occupational standards, hands-on training (on-the-job and projects), independent assessment and certification
	Sustained FUNDING sources and mechanisms	Massive increase in public funds, fees for all training measures beyond 3 months, concerted external assistance, TVET development funds on district level, explore contributions from former stipend recipients

TVET = technical and vocational education and training.

Source: Government of Nepal, Ministry of Education, CTEVT. *Technical Education and Vocational Training and Skills Development Policy 2007 and Nepal Technical and Vocational Education and Training Policy 2012.*

APPENDIX 8

NSTB-developed Occupational Skill Standards/Occupational Profiles

SECTOR: ELECTRICAL

1	Armature Rewinding	L-2
2	Building Electrician	L-1/2/3/4
3	Cable Joiner	L-1
4	Electrical Appliances Repairer	L-1/2
5	Electrical Lineman	L-1
6	Electrical Lineman, El. Distribution & 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 B/W Television Receiver

1	Repair Technician	L-1/2
2	Color Television Receiver Technician	L-1/2
3	Mobile Phone Repair Technician	L-1
4	Radio Receiver Repair Technician	L-1
5	Radio Technician	L-2
6	Radio Repair Technician	L-1/3
7	Tape Recorder Repair Technician	L-2
8	Telecom Technician	L-1

SECTOR: FORESTRY

1	Community Forestry Facilitator	L-1/2
2	Khoto Collector	L-EI

SECTOR: HANDICRAFT

1	Bamboo Stick Maker	L-EI
2	Can and Bamboo Product Producer	L-1
3	Metal Sculpture	L-3
4	Paubha Artist	L-3
5	Reposse (Metal Sheet Embosser)	L-3
6	Stick Incense Roller	L-EI
7	Thangka Artist	L-1
8	Tharu Handicraft Maker	L-1
9	Woodcarver	L-1

SECTOR: HEALTH

1	Assistant Beautician	L-1
2	Barber	L-1
3	Beautician	L-2
4	Community Health Worker	L-1
5	Complementary Health Assistant	L-3
6	Eye Health worker	L-2
7	Lab Assistant	L-2
8	Model Health Worker	L-1/2/3
9	Naturopathic Physician	L-4
10	Ophthalmic Assistant	L-3
11	Orthoptist	L-4
12	Physiotherapy	L-1/2/3

SECTOR: HOSPITALITY INDUSTRY

1	Assistant Waiter	L-1
2	Bellboy	L-1
3	Care Giver	L-1
4	Chinese Cook	L-1
5	Commis-II	L-2
6	Commis-III	L-1
7	Continental Cook	L-1
8	Housekeeping/Cleaner	L-1
9	Indian Cook	L-1
10	Sweets & Snacks Maker	L-1
11	Waiter	L-2
12	Baker	L-1

SECTOR: MECHANICAL

1	Arc Welder	L-1
2	Bicycle and Rickshaw Mechanic	L-1
3	Boiler Operator	L-1/2
4	Junior Welder (TIG-MIG)	L-1
4	Lathe Setter Operator	L-1/2/3
5	Forging Technical Assistant	L-1
6	Mechanical Fitter	L-1/2
7	Maintenance Fitter	L-3
8	Milling M/C Setter Operator	L-2/3
9	Production Foreman, Cement Plant	L-3
10	Refrigeration & Air-conditioning Junior Mechanic	L-1
11	Refrigeration & Air-conditioning Mechanic	L-2
12	Refrigeration & Air-conditioning Technician	L-3
13	Sheet Metal Worker	L-2
14	Structural Fabricator	L-1/2/3

continued on next page

Table continued

SECTOR: OTHERS			SECTOR: RENEWABLE ENERGY		
1	Early Childhood Development Facilitator	L-1	1	Microhydro Operator	L-2
2	Library Assistant	L-2	2	Biogas Technician	L-1/4
3	Music and Dance	L-2	3	Solar Electric Technician	L-1
4	Security Guard	L-1	4	Solar Technician	L-2
5	Senior Library Assistant	L-3			
SECTOR: PRINTING			SECTOR: TAILORING/GARMENTS		
1	Bookbinding Technician	L-3	1	Assistant Leather Goods Technician	L-2
2	Printing Technician	L-2/3	2	Dressmaker	L-1
			3	Garment Fabricator	L-1
			4	Hand Embroidery	L-1
			5	Tailoring	L-1/2
			6	Tailor (Dressmaker)	L-3

The requirements to participate in the skill test are as follows:

1. Nepalese Citizenship Card
2. Passport size photo x 4 nos., Auto size photo x 1 no.
3. Age 16 years or above
4. Other eligibility as explained hereunder:

Skill Level – Elementary: Successful completion of 140 hours of vocational training in a relevant occupation/trade.

Skill Level 1: Literate with knowledge and skill in the relevant occupation with minimum of 1 year of work experience in a related occupation/trade **OR** Successful completion of 1 month (160 hours) of vocational training in a relevant occupation/trade **OR** Vocational training with 6 months of work experience in the relevant occupation/trade.

Level 2: Literate with knowledge and skills in the relevant occupation with minimum of 3 years of work experience in a relevant occupation/trade **OR** 1 year training (minimum 600 hours of theory and 800 hours of practical) in a relevant occupation/trade **OR** 1 year of work experience after the Level 1 Skills Test certificate passed in a relevant occupation/trade.

Level 3: Literate with knowledge and skills in the relevant occupation with minimum of 5 years of work experience in a relevant occupation/trade **OR** 2 years of work experience after 1 year of training in a relevant occupation/trade **OR** 1 year of work experience after Skill Level 2 certificate passed in a relevant occupation/trade.

Level 4: Level 3 passed with 3 years of experience and 1 year of training **OR** Certificate level in Health Science equivalent passed with 3 years of experience and 1 year of training.

To date, NSTB has developed occupational skill standards for 206 occupations, and 36,556 craftspersons are certified.

Source: National Skill Testing Board and CTEVT. 2010. Skill Testing System in Nepal (Skill Testing Brochure)..

References

- P.B. Amatya and I.K. Shrestha. 2010. *Research Study Report on Industrial Relations and Enterprise Economic Survey Nepal*. Kathmandu: Federation of Nepalese Chambers of Commerce and Industry.
- D. Dahal. 2008. *Employers' Needs and Expectations from the Skilled Workers for the Employment*. Kathmandu.
- Government of Nepal. 2008. *Political, Economic and Social Development Report*. Kathmandu.
- Government of Nepal, Employment Promotion Commission. 2000. *Employment Promotion Commission Report 2000*. Kathmandu.
- Government of Nepal, Ministry of Education. <http://www.moe.gov.np/>
- . 2006. *Three-Year Interim Education Plan 2007–2009*. Kathmandu.
- . 2009a. *Department of Education Data 2005–2009*. Kathmandu.
- . 2009b. *Nepal Education in Figures—At a Glance*. Kathmandu.
- . 2009c. *New Education Act of 2009*. Kathmandu.
- . 2009d. *School Sector Reform Plan (2009–2015)*. Kathmandu.
- . 2010a. *Department of Education Report (2009–2010)*. Kathmandu.
- . 2010b. *Nepal Education in Figures—At a Glance*. Unpublished.
- Government of Nepal, Ministry of Education, Council for Technical Education and Vocational Training (CTEVT). <http://ctevt.org.np/>
- . 1994. *Council for Technical Education and Vocational Training Profile*. Kathmandu.
- . 2007. *Nepal Technical Education and Vocational Training and Skills Development Policy 2007*. Kathmandu.
- . 2009a. *CTEVT Profile*. Kathmandu.
- . 2009b. *Draft National Technical and Vocational Education and Training (TVET) Policy Document 2012*. Kathmandu.
- . 2010a. *A Profile of Technical and Vocational Education and Training Providers, Nepal*. Kathmandu.
- . 2010b. *Skill for Employment Project Information and Bulletin*. Kathmandu.
- . 2010c. *A Model of TEVT Quality Framework for Nepal*. Technical and Vocational Education and Training Development Journal, Vol 1, Number 10. Kathmandu. Page 98.

- . 2010d. *Technical Education and Vocational Training, A Glimpse*. Kathmandu.
- . 2011a. *A Profile of TVET Providers (Volume II)*. Kathmandu.
- . 2011b. *CTEVT at a Glance 2010–2011*. Kathmandu.
- . 2012. *Nepal Technical and Vocational Education and Training Policy 2012*. Kathmandu.
- Government of Nepal, Ministry of Finance. Various years. Budget Details: Red Book. <http://www.mof.gov.np/en/archive-documents/budget-details--red-book-28.html>
- . Various years. *Nepal Economy Profile 2010 and 2012/13*. Kathmandu.
- . 2008. *Economic Survey—Fiscal Year 2007/08*. http://www.mof.gov.np/uploads/document/file/Economic%20Survey%202007-08_20141224061607.pdf
- . 2009. *Economic Survey—Fiscal Year 2008/09*. http://www.mof.gov.np/uploads/document/file/Economic%20Survey%202008-09_20141224061533.pdf
- . 2010. *Economic Survey—Fiscal Year 2009/10*. http://www.mof.gov.np/uploads/document/file/Economic%20Survey%202009-10_20141224061314.pdf
- . 2012. *Economic Survey—Fiscal Year 2011/12*. http://www.mof.gov.np/uploads/document/file/Economic%20Survey%202011-12_20141224054554.pdf
- Government of Nepal, Ministry of Industry, Cottage and Small industries Development Board. <http://www.csidb.gov.np/>
- Government of Nepal, Ministry of Industry, Department of Cottage and Small Industries. http://dcsi.gov.np/dcsi_en/
- Government of Nepal, Ministry of Labour and Employment, Department of Labour. <http://dol.gov.np/>
- Government of Nepal, National Planning Commission, Central Bureau of Statistics. 2004. *Nepal Living Standards Survey (NLSS) 2003–2004*. Kathmandu.
- . 2007. *National Accounts of Nepal 2000–2007*. Kathmandu.
- . 2008. *Nepal Labor Force Survey 2007–2008*. Kathmandu.
- . 2011. *Nepal Living Standards Survey (NLSS) 2010–2011*. Kathmandu.
- . 2012. *National Population and Housing Census 2011*. Kathmandu.
- The Kantipur Daily*. 2010. 25 August.
- P.B. KC. 2007. *Current Trends in the Employment Market (A Report for Skills for Employment Project)*. Kathmandu.
- G. Kohlheir. 1999. *Technical Education and Vocational Training System in Nepal*. Kathmandu: Council for Technical Education and Vocational Training.
- National Skill Testing Board and Council for Technical Education and Vocational Training. 2010. *Skill Testing System in Nepal (Skill Testing Brochure)*. Kathmandu.
- Nepal Rastra Bank. 2012. *Macroeconomic Indicators of Nepal*. Kathmandu.
- T.N. Sharma and G. Kohlheyer. 2007. *Technical Education and Vocational Training and Skills Development Policy Nepal (Draft)—Policy Design, Policy Formulation and*

- Implementation Strategies*. Kathmandu: Council for Technical Education and Vocational Training and Swiss Agency for Development and Cooperation.
- Swiss Agency for Development and Cooperation (SDC), Alliance Nepal, and Training for Employment (TfE). 2006. *Vocational Pathways: A Concept for Nepal's TVET System Development*. Kathmandu.
- Training for Employment (TfE). 2008. Project Completion Report (2000–2008). Kathmandu: Alliance Nepal and Swiss Agency for Development and Cooperation.
- Training Institute for Technical Instruction. 2009. *Evaluation of Effectiveness of Training Programmes in Nepal*. Journal of Training and Development. Vol. 1, No. 1.
- . 2010. *Annual Report*. Kathmandu.
- United Nations Development Programme. 2009. *Nepal Human Development Report: State Transformation and Human Development*. Kathmandu.
- . 2010. *Human Development Report 2010*. New York.
- M.P. Wagley. 2010. Causes of Failed Education Policy. *The Kantipur Daily*. 1 November.
- . 2010. Sustainability of Educational Institutions: Agenda for Reform. *The Himalayan Times*. 4 November.
- World Bank. The World Bank Data. <http://data.worldbank.org/indicator/SL.TLF.TOTL.IN?display=default>
- . 2010. Enhanced Vocational Education and Training, Project Information Document— Concept Stage. *World Bank Report*. No. AB5958. Washington, DC.
- . 2011. *Migration and Remittance Fact Book*. Washington, DC.

**Innovative Strategies in Technical and Vocational Education and Training
for Accelerated Human Resource Development in South Asia**
Nepal

This publication consists of six country reports on technical and vocational education and training and higher education in Bangladesh, Nepal, and Sri Lanka. Each report presents current arrangements and initiatives in each of the three countries' skills development strategies, complemented by critical analysis to reveal key issues, challenges, and opportunities for innovative strategies toward global competitiveness, increased productivity, and inclusive growth. The emphasis is to make skills training more relevant, efficient, and responsive to emerging domestic and international labor markets. The reports were conducted under the Australian AID-supported Phase 1 of Subproject 11 (Innovative Strategies for Accelerated Human Resource Development) of RETA 6337 (Development Partnership Program for South Asia).

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