

Vocational Pathways

Conceptual Framework of Education, Vocational Training and Learning for Nepal

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1 Introduction

1.1 Background:

Today many developing and developed nations identify the type of workforce needs -such as academic, vocational and technical- for up to 15-20 years, adopt the education and training system accordingly, formulate plan and policies and implement them. Case of Nepal in light to this is by far too weak. It is due to the absence of such a system that the skilled workforce required for the country is replaced by non-Nepalese. Mostly unskilled Nepalese laborers are being supplied for foreign employment. Many of them, lacking skills, have chosen the jungle way with arms in their hands due to the lack of opportunities. Size of labour force in Nepal is 11.2 million with an annual growth of 2.3%. Creation of jobs and thereby having substantial investment in Nepal is far too low. In a country where under-employment is almost 47%; the situation of availability and opportunity of employment is very minimal. Formal sector is very weak in generating employment. About 85% of total labour force is working in informal sector.

Present unbalanced in-equitable training and education system is one of the main factors of the conflict situation. The tri-polar conflict of the Palace, the Maoists and the mainstream parliamentarian political parties representing each pole has further exacerbated the political conflict. As a result not only the government services have had difficulties to reach the mass but also added insecurity of the people in the rural areas. Consequently, migration of people especially working age population of very high magnitude has taken place from the rural to urban areas and across the international border. In addition to this, a high number of the children and youths, falling out of the educational system every year and coming to the job market, and migration of the workforce in search of new livelihood in the urban centers and their inclination to go abroad has provided a great challenge to the government in providing sustainable livelihood to its people. Recent success of second people movement has almost abolished tri-polar conflict in Nepal. The implication of this success will be on addressing the internally displaced people, migration from urban to rural and vice versa, managing ex-combatants, aspiration of different political parties and civil societies towards better access, opportunities, equity and inclusion. Looking at all these to be addressed by the government immediately and taking into consideration of huge damages of infrastructures, loss of lives, heavily sinking economic condition of Nepal and almost paralyzed system; the overall socio-economic situation of the country is not at all encouraging.

1.2 The gap:

Educational reform is a key issue in Nepal. This includes all educational layers and sub-systems, i.e. technical and vocational, primary, lower-secondary, secondary, higher secondary and higher education. The general public, parents and young people wish to see an education system which prepares young people in the best possible way for their insertion into economic life. People entering into the world of work in 21st century will have to face many new challenges. Rapid developments of information and communication technologies, the impact of globalisation, and ever-widening demand for new services are some of the dimensions to be seriously considered.

The Nepalese education system has a structured and career path oriented provision for general education. In case of Technical and Vocational Education and Training, a part of the system exists for class ten pass and above. For the majority below class ten pass, there is no provision of career path oriented technical and vocational education and training (TVET) system linking with the world of work.

1.3 Rationale:

For the development of a country, skilled workforce of various categories and levels is essential and the state should adopt a balanced education and training system to prepare all types of workforce. The present world of work is more knowledge-based and technologically driven. This will require a flexible system of acquiring knowledge and skills. From the professional point of view, education and training will be inseparable. The education chain will stretch lifelong. A single person will make many demands for education and training over a lifetime.

The world of work is becoming more international. The World Trade Organization (WTO) has made it possible for its member countries to exchange trade and business opportunities based on the quality of work force of a particular country. In this light, Nepal being the member of WTO will have to strive for a compatible (competent and qualified) work force production sooner the better. Today jobs require more and more new skills and new jobs are constantly appearing which require qualifications of an ever greater technological nature. As a result, technical and vocational education must be revamped in an order to free the large number of young people from the grip of unemployment. Keeping in the same line, public education system also must rethink their capability to adapt to emerging needs and demands of the economy. The new system will also have to be considered to allow horizontal mobility between general and technical & vocational education.

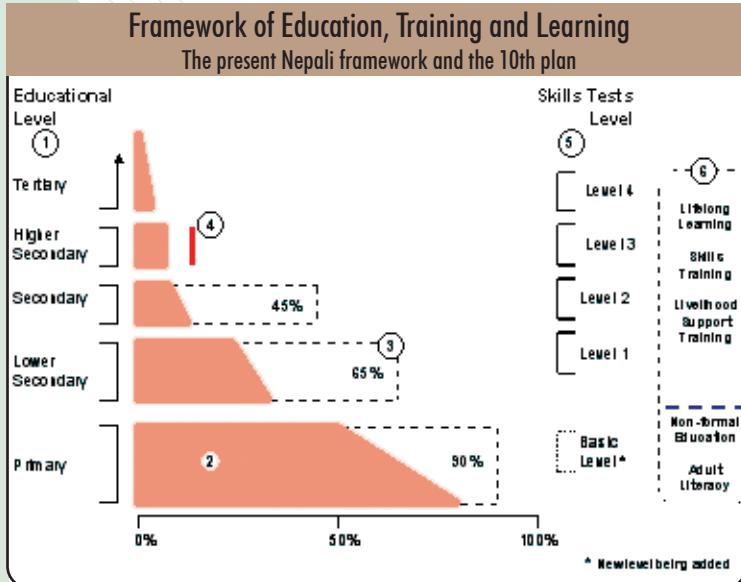
1.4 Purpose:

The purpose of this paper, thus, is to develop a comprehensive Technical and Vocational Pathways concept for Nepal covering all educational levels.

2. The educational framework in Nepal

2.1 Key features

Graph 1 depicts the present framework of education, training and learning in Nepal, including the perspective of the 10th plan. As consolidated figures on net enrolment rates and rates of successful completers of each educational level are not readily available, the figures are compiled on the basis of educational and Government statistics in the sense of best guesses.



Explanations

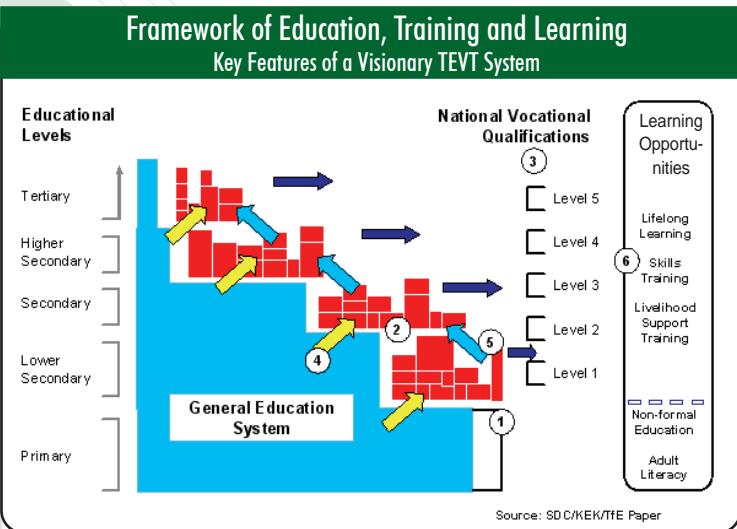
- Not considering pre-primary education and the differentiation at the tertiary level, the general Nepali education system comprises five educational levels as follows:
 - Primary Education (5 years)
 - Lower Secondary Education (3 years)
 - Secondary Education leading to the school-leaving certificate-SLC (2 years)
 - Higher Secondary Education (2 years; 10+2 system)
- The estimated enrolment rates of an age cohort and the respective percentage of completers at each educational level are displayed graphically.
- One of the key issues in general education is that out of an age cohort about 80% enter primary school, and about 50% complete it. According to the 10th plan the net enrolment rates in primary school should reach 90% of an age cohort by the year 2007.
- According to the 10th plan the net enrolment rate in lower secondary should be 65% by 2007. About 25% of age cohort completes lower secondary education.

- About 3% of an age cohort participate in formal technical education, which is exclusively accommodated at post-secondary or higher secondary level. According to the 10th plan the net enrolment rate in secondary should be 45% by 2007. Approximately 8% of an age cohort completes secondary education with the school-leaving certificate (SLC).
- The present skill testing system comprises five testing/qualification levels:
 - Elementary level is the basic skill test for any one willing to get their skill competency certified by a national system. This does not demand any entry qualification. Recognition of the test completers at this level is a skill labour.
 - Level 1 is not specific and is open to candidates with any entrance qualification below secondary education. The recognition of this level is equivalent to class eight of general education for employment.
 - In terms of employment the levels 2 and 3 are equal to the formal technical education at secondary and higher secondary levels respectively.
 - Level 4 is not yet implemented in many occupations except in Orthoptist (an eye related occupation), but theoretically it would be at the level of a Bachelor Degree for employment.

- Outside the general education and the TVET system the Government and donors offer adult literacy programmes, non-formal education programmes, livelihood support training, employment oriented skills training and lifelong learning opportunities. Apart from some skills training programmes under the Ministry of Labour and Transport Management, such programmes are mostly financed either by the Government under special arrangements, or by donors. Neither consolidated figures on such programmes nor data on their impact are available.

2.2 Conclusions and challenges

- The above key features lead to the following conclusions and challenges:
- A considerable number of an age cohort either never enters the general education system or leaves school before completion of primary education.



Explanations

- 1 The facilitation of the school-to-work transition of school leaving youth is one of the core tasks of a TVET system. Thus bottom layer of any formal TVET system, its first entry point, is accommodated at the first exit point from the general education system. In Nepal the first major exit point from the general education system is after primary education. Thus, the bottom layer of the TVET system is to be designed accordingly at the post-primary level. As a TVET system is not supposed to compete the overall national and international goal (Millennium Development Goal) of primary education for all, non-formal education can compensate for those not having completed primary as well as other levels of education. Thus, the formal TVET system should not develop any systematic programmes below post-primary level.
- (2) Delivery and learning mechanisms of a TVET system feature a jigsaw puzzle of long-term courses, modular courses, recognition of prior learning, apprenticeship practice periods, on-the-job training, classes at any time of the day and the week (morning classes, evening classes, weekend classes, block release classes, day release etc.), and any combination of classroom-based and workplace-based learning.
- (3) Approved and widely accepted National Technical and Vocational Qualifications don't exist in Nepal and a respective structure needs



to be designed. The number of desired and required qualification levels depends on a high level and national decision. However, reference to international qualification systems is recommended. Some examples are given in annex of this paper. An example of City and Guilds of U.K. for levels of qualifications has been attached for reference. Annex

- (4) Transition from general education to vocational education and training should be possible after completion of entrance test at each educational level, starting from the completion of primary education. However, the two major entry points into formal TVET will coincide with the two major exit points from the general education system, i.e. after completion of primary education and after completion of lower secondary education. For livelihood type of skills training or vocational training education below or within primary level can be possible.
- (5) Both the design of the qualification structure and the design of delivery mechanisms have to be done in such a way that it opens vocational pathways through the qualification ladder.

4.2 National vocational qualifications

A national qualification framework for Nepal may be developed as follows:

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Level	Description	Entrance requirements
Each level of qualification is equal to the *Competencies that involves the application of:		
Level 1	Knowledge and understanding in the performance of a variety of routine and predictable activities together with the qualification equal to the level of knowledge in communication, mathematics and science after completion of the primary education	<ul style="list-style-type: none"> • Any body above 14 years of age and completers of primary education or equivalent, or • Entry test
Level 2	Knowledge in a significant range of varied work activities, performed in a variety of contexts. Some of these activities are complex or non-routine and there is some individual responsibility or autonomy. Collaboration with others is often a requirement.	<ul style="list-style-type: none"> • Successful completion of level 1 qualification, or • Successful completion of lower secondary education or equivalent, or • Entry test
Level 3	Knowledge in a broad range of varied work activities performed in a wide variety of contexts, most of which are complex and non-routine. There is considerable responsibility and autonomy and control or guidance of others is often required.	<ul style="list-style-type: none"> • Successful completion of level 2 qualification, or • Successful completion of secondary education (class 10 pass) or equivalent, or • Entry test
Level 4	Knowledge in broad range of complex, technical or professional work activities performed in a variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and the allocation of resources is often present.	<ul style="list-style-type: none"> • Successful completion of level 3 qualification, or • Successful completion of secondary education with the school leaving certificate or equivalent, or • Entry test

Level	Description	Entrance requirements
Level 5	A range of fundamental principles across a wide and often unpredictable variety of contexts. Very substantial personal autonomy and often-significant responsibility for the work of others and for the allocation of resources features strongly, as do personal accountabilities for analysis, diagnosis, design, planning, execution and evaluation.	<ul style="list-style-type: none"> • Successful completion of level 4 qualification, or • Successful completion of higher secondary education or equivalent or • Entry test

*Competencies are defined as the sum of all intersecting and interrelated aspects of abilities, behaviour patterns, knowledge and skills of a trained person.

The national vocational qualifications apply both to all public and private providers of vocational education and training and to skills testing if it does not substitute the ideal national vocational qualification framework. The national vocational qualifications can be acquired either through long-term resident courses, through additive modular courses, or through skills testing on the basis of on-the-job learning, traditional apprenticeship schemes or other non-formal/informal learning.

The qualifications at each level can either be acquired through one full-fledged test or in a modular way through the accumulation of credit points earned through successful completion of individual modules or respective parts of the test.

4.3 Delivery approaches

Delivery approaches for acquiring vocational qualifications through public and private training providers may comprise the full range of possible delivery approaches, such as:

- Traditional long-term residential courses
- Modular short courses
- Flexible timing through morning classes, evening classes, weekend classes, etc.
- Any possible combination of centre-based and work-based learning through on-the-job training, internships, and apprenticeships practice periods in public and private enterprises, participation in outreach programmes, implementation of real-life projects, etc.

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- Supplementing working youth with generic skills training (or general education subjects) like communication, mathematics and science.

Participation in specific occupational skills training will be open for above 14 years of age. Working youth below 14 can participate in generic skills training in order to acquire the entry-level qualification.

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5 Systems requirements

The systems requirements feature indispensable and additional components. The **indispensable components** include:

- Qualifications framework
- Accreditation and certification processes
- Financing mechanisms

The **additional components** include other support processes like

- Human resource development
- Quality assurance
- Curriculum development

6. The TVET system and its neighbouring systems and programmes

General education system

The links to the general education system are defined through the definition of the entry requirements into TVET programmes. At a later stage bridges from the TVET system back to the general education system should be an inherent process of TVET system development.

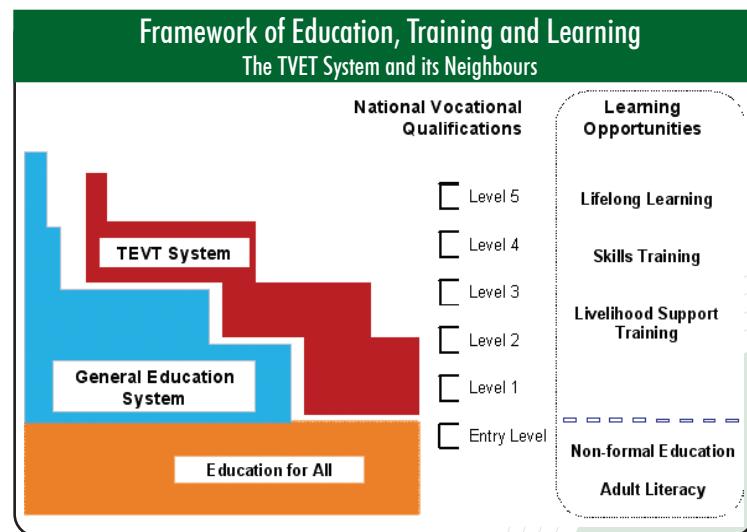
Education for all

Education for all is a high level national and international goal, under the name of primary education for all even a millennium development goal (MDG). The implementation envisages that 100% of an age cohort enter and complete primary education. At a systems level TVET should

not be in competition with primary education for all, and thus accommodate its own programmes starting from the post-primary level.

Non-formal education and adult literacy

As the implementation of primary education for all will take time, and as the existence of a large number of youth and adults not having completed primary education is a reality, non-formal education and adult literacy programmes are a must. However, such programmes have by definition not a systems perspective, but rather a temporary and social connotation, in that they should become obsolete once primary edu-



tion for all will have been implemented. However, through the entry-level qualification non-formal education and adult literacy programmes can be linked to the TVET system.

Skills training and livelihood support programmes

Skills training and livelihood support programmes are mostly financed either under special Government programmes or by the donors. Such programmes also don't have a systems perspective, but rather a deficit orientation. Among others such programmes are being offered because of the deficiencies of the TVET system. If desired, such programmes can be linked to the national vocational qualifications, but they don't necessarily have to.

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Lifelong learning opportunities

Lifelong learning opportunities can have different purposes like performance improvement, individual advancement, employability, etc. However, as opposed to general education and TVET systems with an expected long-term return on investment, such life-long learning opportunities, which are mostly privately financed, are expected to have short-term return on investment. Thus, these opportunities should be available for all irrespective of level or age.

7. Relevance, potential and opportunities

Under prevailing development policies any sectoral programmes are assessed for their relevance for key issues like equity, inclusion, accessibility and decentralisation. Before elaborating on specific issues, it is crucial to state that any direct interventions like financing or subsidising skills training, livelihood support training or non-formal education generate quick results at the micro level, whereas the impact of institu-

tional and systems development is based on a different time horizon. In that respect comparing direct interventions with institutional and systems development for the relevance in key development agendas, is fatal.

Inclusion and Equity

Inclusion of the majority of out of school youth is the core business of a TVET system. Applying impartiality, giving access to all, inclusion of the majority, providing affordable programs to people are most desired elements of a successful TVET.

Decentralisation

The decentralisation of the delivery system is a key success factor for a TVET system, as training providers must on one hand be in a position to react to the specific needs within their respective catchment areas, and on the other hand to flexibly adapt to changing needs and market saturation. Delegating full authority with responsibility to training providers is essential for the sustainability and growth of a system.



Employability

Sustainability in its true sense and continuity for a considerable long time of any system depends on the system products' ability to compete and to be proactive with the ever-changing global market needs.

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8 Annex

Annex - 1

An example of City and Guilds of U.K. for levels of qualifications:

Levels of qualification- City and Guids
The international awards of City and Guids are available at a range of levels, from entry to the highest levels of professional ability. Available levels may vary according to the occupational field.
Entry level is for those learning initial skills and aspiring to enter a training leading to a qualification at level 1.
Level 1 is introductory, for those new to the area. It covers routine tasks or basic knowledge and understanding.
Level 2 is for those with some knowledge of, or ability in, the area. These awards acknowledge individual responsibility.
Level 3 recognises the application of knowledge in a broad rang of work activities, most of which are complex and non-routine. At level 3 a person might supervise others, too.
Level 4 awards involve complex technical or professional work with a substantial degree of personal autonomy and responsibility. They may include responsibility for the work of others and the allocation of resources.
Level 5 requires application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts. This level involves personal autonomy and significant responsibility for the work of others and for the allocation of resources.
Level 6 is for those at senior management level.
Level 7 recognises the highest level of professional achievement.

Annex – 2

Example of the Philippine TVET Qualification Framework:

Descriptors of Qualification Level

Level	Process	Responsibility	Application
NC I	A worker at this level performs routine and predictable tests involving little or no latitude for judgment	Adhere to appropriate standards or specifications are usually	Assignments are usually made by a supervisor or a worker at a higher level who gives simple instructions and makes clarifications or suggestion when necessary
NC II	A worker at this level performs a prescribed range of functions involving known routines and procedures, where clearly identified choices and limited complexity applies	Work involves some accountability for the quality of outputs	Application at this level may involve individual responsibility or autonomy, or working with others as part of a team or group
NC III	A worker at this level performs a wide range of skilled operations at high level competence involving known routines and procedures. The work context involves some complexity in the extent and choice of options available	Work involves understanding the work process, contributing to problem solving and making decisions to determine the process, equipment and materials to be used	Application at this level may involve individual responsibility or autonomy, and/or may involve some responsibility for others. Participation in teams including team or group coordination may be involved.
NC IV	A worker at this level performs a wide range of application in a variety of contexts most of which are	Work involves some leadership and guidance when organizing activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature. Work at this level also requires evaluation and analysis of current practices and the development of new criteria and procedures.	Applications involve responsibility for the organization and performance of others

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