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A Milestone for the Enhancement of TVET Sector

This is a matter of pride for us to publish the 14th issue of **Technical and Vocational Education and Training (TVET) Development Journal** as a continuous series from last four years. The articles have covered TVET Planning and Policy, TVET Economics and Financing, TVET Management and Quality Assurance.

Education and training journals are considered very important resources for the intellectuals, authors, researchers and other stakeholders for study and research. Quality journals in education sector are scarce particularly in a developing country like Nepal. Moreover, specific journals in sub-sectors such as TVET are difficult to find. In this context, Council for Technical Education and Vocational Training (CTEVT) as the apex body of TVET in Nepal, has been putting its endeavors to bring out the journal in TVET sector.

The dedicated CTEVT personnel under the leadership of Mr. Saurav Ram Joshi, Director from Research and Information Division, were involved in publishing this journal. The editorial team tried to make the journal inclusive by capturing the articles of authors from various segment and identity. Whatever the difficulties encountered in the process of bringing out this issue, it is hoped that the result will pay off.

The thoughts and ideas captured in the articles from authors are expected to guide the future direction and pave way for the people who are engaged in the field of technical education and vocational training. The editorial team believes that this journal will be a milestone for TVET development in Nepal and abroad. The intellectuals, researchers, students and other stakeholders who need TVET information can obtain much of it from one piece document.

The editorial team would like to express its heartfelt gratitude to all the authors who have their articles. The team would also welcome articles from the intellectuals, professionals and others in various areas relevant to education and TVET sub-sector for the next issue of the journal.

It is believed that one more brick has been added for constructing the building of TVET sub-sector by means of this journal. We always look forward to receiving constructive suggestions from the readers that will inspire the editorial team for further improvement. The ultimate responsibility of ideas and views expressed in the articles remains on the concerned authors.

Editorial Team

TABLE OF CONTENT

Importance of Nepal Vocational Qualification Framework its proposed structure	1
Hindering Factors of Female Participation in TVET in Nepal	12
How relevant is teacher training to improve the quality of education?	19
Regulation of Technical Education and Vocational Training (TEVT) in Nepal.....	26
Knowledge Management Experiments in the TVET Sector	34
Individualized Learning	41
Soft skill Gaps in CTEVT Curriculum Guides.....	48
An innovation in TVET:Vocational Education in Bandipur Campus	53
COUNCIL FOR TECHNICAL EDUCATION AND VOCATIONAL TRAINING (CTEVT):Reflecting the PAST, perpetuating the PRESENT and directing the FUTURE ...	56
How Can Vocational Education and Training (VET) Play an Important Role on Poverty Reduction in Nepal?.....	71
Need for re-structuring PCL TVET curriculum of Nepal	76
Education system of Nepal-What is and what should be?	86
प्राविधिक व्यावसायिक शिक्षा र तालिम कोष: वित्त व्यवस्थापनमा समन्वयकालागि	94
नेपालमा प्राविधिक शिक्षा तथा व्यावसायिक तालिमको विकास, विस्तार र आवश्यकता.....	101

Importance of Nepal Vocational Qualification Framework its proposed structure

Prof. Dr.Tanka Nath Sharma¹

Abstract

The paper has advocated for the need of a national vocational qualification system in Nepal in order to open up access to wider population, develop a system of lifelong learning, recognizing prior learning acquired from informal and non-formal means and harmonizing qualification awarded by several bodies, facilitate horizontal and vertical mobility of learner and promoting wider recognition of the earned qualification. The paper has suggested four level of vocational qualifications along with three levels of literacy skills. Recognizing prior learning bridge courses have been suggested to facilitate cross mobility. Finally the paper has suggested several measures for facilitating the development of National Vocational Qualification system in Nepal.

Key words: National Vocational qualification system, National Vocational qualification Framework, Recognizing Prior Learning, Integration of various modes of learning

Introduction

Education and skill levels of labor force are essential predictors of labor productivity, increment in individual income (poverty reduction) and economic prosperity. Moreover, their relevance to the needs of the labor market is also important to facilitate employment and economic productivity (ADB, 2011). Often the educational programs are disconnected from the demands of the labor market and hence have an adverse effect on the employability of the individual. Existing employment situation and economic growth patterns also suggest that school curriculum should include enhancement of entrepreneurship skills to facilitate graduates from secondary schools starting small enterprises and engage in self-employment (ADB, 2011).

Low levels of education and skills of economically active population also contributed to the under and unemployment among them. Labor force survey (CBS, 2009) has depicted that about 47% of the total 15 years and above population (14.4 Million) has never been to school. Moreover, 10.75 percent of the labor force had below primary level of education. Similarly, 13.49 percent and 8.87 percent of 15 years and above population had only primary and lower secondary levels of education respectively. This indicates that only 20 percent of working age population had opportunity to reach to secondary levels of education. Majority of the working population who had no secondary levels of schooling have fewer chances to receive vocational training or engage in gainful employment. Because of such situation, Nepalese workers are compelled to work as unskilled labor with lower wage in the national or international labor market.

The challenging nature of work, changing skill needs which necessitate to skills updating affect the individual's income and the national productivity as a whole. This process of permanent change, obsolescence and up gradation has been accelerated by globalization and there is an increasing pressure on the TEVT delivery mechanisms in all countries to maintain productivity and competitiveness of their workforce. For this to happen, all modes of learning and all pathways towards productive work need to be seen in an integrated way: Learning does not always take place in the classroom: it also happens on the job, at home, and in the community- through hands on experience, volunteer work, independent study, travel. Knowledge and skills gained through such self-learning approach can be assessed and recognized. In a

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country like where majority of youths enter into the labor market (Sharma and Kholier, 2008) before completing secondary education, non-formal and informal modes of learning would be useful for them to progress and earn qualification.

Harmonization of skill levels and competency standards is not only an issue within TEVT but also across the other sub-sectors of education, and it has become the national agenda these days. Harmonization, though, in this context does not mean homogenization of courses and programs. It means recognition, permeability, transfer, cross recognition, and portability of education and training qualifications, where qualifications are defined as the outcomes of learning. Consequently such frameworks may encompass just TEVT (National Vocational Qualifications Framework) sectors of education (National Qualifications Framework) or even cut across national borders (Regional or International Frameworks), as one sees them coming up in certain occupations (medical, IT-sector, welding, aircraft maintenance). For Nepal, as a first step in the direction of qualifications framework development it is suggested to focus the development on occupational qualifications at the sub-academic level. For the national discussion of this issue see also: National Education Commission's Report, 1991, High Level Education Commission's Report, 1998; GON, 2007; SSR, 2008; GON 2012) where the need for horizontal and vertical mobility with the provision for skilled workers to re-enter into general/academic education by means of relevant remedial or bridge courses was highlighted. In this paper, importance, guiding principles and proposed Nepal Vocational Framework is discussed.

Importance of National Qualification Framework

Multitudes of changes and challenges confronting nations today call for reform and change in education, especially in Technical and Vocational Education and Training (TEVT) which prepares skilled workforce that competently performs in a dynamic labour market. As the world entered into 21st century, many of the fundamental assumptions about production practices, competency requirements of the work force and modes of learning skills are also changing. In order to address constantly changing skills and competency requirements of the labour market, it is vital for learning to take on a broader meaning and means. Therefore, multiple modes and pathways of learning with adequate flexibility in TEVT is being practiced in many countries. Harmonizing various modes and pathways of learning and ensuring quality of learning outcomes has become a major concern of TEVT in countries both developed and developing economies. National Vocational Qualification System has been developed in response to such challenge concerning quality standards of skills and competence gained from various modes of learning (formal, non-formal and informal).

Skill development initiatives in Nepal is fragmented and uncoordinated leading to duplication of efforts and inefficient use of resources. Various government agencies, projects, NGOs, INGOs and donors involved in skills development are conducting their programs in a piecemeal approach without being able to refer their activities to a national system of recognized qualifications. As a result there are very few opportunities for semi-skilled or skilled workers to continue their education and training through non-formal or informal means and get them recognized. While the NSTB provides for a system of recognizing prior learning due to the virtual absence of structured further learning opportunities and schemes, and the limited scope of the NSTB's services for upward mobility of the workforce is badly missing in the country.

Absence of National Vocational Framework integrating various types and modes of skill training outcomes resulted in unmanageable and uncoordinated program offerings, wildly diverging curricular standards, and all sorts of certificates without national recognition. There are no career pathways for novices, semi-skilled and skilled workers and for people intending to advance their qualifications through formal, non-formal/informal means. Even the graduates from the formal TEVT streams are having difficulties in getting admission into the next level of education in their respective occupation or in general education. Due to limited opportunities to advance in careers, TEVT and skill development programs are becoming less attractive for many Nepalese youths and have a low social image.

National Vocational Qualification (NVQ)

A qualification is achieved when a competent body determines that an individual has learned knowledge, skills and/or wider competences to specified standards. The standard of learning is confirmed by means of an assessment process or the successful completion of a course of study. (National Qualifications Authority of Ireland, 2009). Learning and assessment for a qualification can take place during a program of study and/or workplace experience. A qualification confers official recognition of value in the labor market and in further education and training. A qualification can be a legal entitlement to practice a trade. In official policy a document relating to qualifications frameworks, the word 'qualification' is sometimes used to refer to the sets of formal requirements for awarding a qualification. In other words, the 'qualification' is the statement of learning outcomes and associated requirements for awards.

National Vocational Qualifications (NVQs) are work-related, competence-based qualifications. They reflect the skills and knowledge needed to do a job effectively, and show that a candidate is competent in the area of work the NVQ represents. NVQs are based on national occupational standards. These standards are statements of performance that describe what competent people in a particular occupation are expected to be able to do. They cover all the main aspects of an occupation, including current best practices, the ability to adapt to future requirements and the knowledge and understanding that underpin competent performance ETF (2007).

What is a qualifications framework?

National Qualification Framework (NQF) is a set of principles and guidelines providing a direction, philosophical foundation and organizational set up for a qualification system.

It is **national** since it embodies a national resource representing a national effort at integrating the various modes of learning and pathways within the framework of national standards. It is a framework of qualifications that assess and records learners' achievement with respect to the nationally specified standards. It is expected that NQF (a) encourage learners to explore learning pathways providing access to and mobility and progression within, (b) provide access to education, training and career path, (c) motivate learners to improve their knowledge and skills, (d) enhance the quality of education and training; to accelerate the redress of past unfair discrimination in education, training and employment opportunities; and (e) contribute to the full personal development of each learner. The increased knowledge and skills base of the workforce implies the intellectual and functional capability of a nation resulting prosperity. . It was also regarded as a means of transformative instrument, which would 'expand the ways in which people are able to acquire learning and qualifications of high quality.

Tuck (2007) described NQFs as *"A Qualifications Framework is an instrument for the development, classification and recognition of skills, knowledge and competencies along a continuum of agreed levels. It is a way of structuring existing and new qualifications, which are defined by learning outcomes, i.e. clear statements of what the learner must know or be able to do whether learned in a classroom, on-the-job, or less formally. The Qualifications Framework indicates the comparability of different qualifications and how one can progress from one level to another, within and across occupations or industrial sectors (and even across vocational and academic fields if the NQF is designed to include both vocational and academic qualifications in a single framework). (Tuck, 2007, p. v).*

A national vocational qualification framework is a framework that connects existing qualifications of different levels and type in a coherent and consistent manner based on common or nationally agreed setoff descriptors and standards. Although there appear several variations among the countries, there appear three elements common to all NVQF: (1) reference levels describing types of skill and knowledge in various qualifications, (2) quality assurance principles and guidelines, and methods for recognizing learning gained in

different programs and contexts. Qualifications are often specified in terms of learning outcomes or competencies, which describe what an individual is expected to know, understand and able to do as a result of learning undertaken in the course of study, or through training or experience emphasizing the capacity to integrate skills, knowledge and attitudes in the application of learning (ETF/UNESCO, 2007).

The experience from other countries has demonstrated that the process of developing National Vocational Qualification is a time consuming task, requires considerable resources (both human and financial), and ask for extensive consultation with and participation of the various stakeholders in spite of its several benefits. These stakeholders include the education and training community, employers, unions, different government ministries (such as ministry of education, ministry of labor and ministry of industry), and the university sector. It assumed that NQF provide strong incentives and multiple opportunities for technical and vocational education and training providers to develop and organize relevant learning process and activities connecting with the demands of the labor market. Since qualification is awarded based on the demonstrated outcomes, NVQF is considered to provide overall quality assurance mechanism. National Vocational Qualification Framework intends to enhance the access, relevance and quality of TEVT through: (a) unified national vocational qualifications which are recognized nationally, (b) responding to the labor market needs, (c) promoting flexibility in learning, (d) promoting multiple pathways to learning and career mobility, (e) provision for recognition of prior learning (RPL), facilitating linkage between the TEVT qualifications and qualifications at the tertiary level with the provision for bridge courses, if necessary, (f) provision of credit for part of a qualification, (g) facilitating vertical and horizontal mobility offering multiple options to learners (Ministry of Labor and Human Resources, 2013).

Proposed Nepal Vocational Qualification Framework

Nepal is seeking radical change in vocational qualifications system which can respond to the rapidly changing skill demands of the economy and employment practices, open up wider access to learners and improve quantity and quality of learning opportunities, make learning relevant to the employment needs and encourage the development of competencies which equip individuals for the future as well as for the present. The national vocational qualification system is expected to improve the competitiveness of the country's economy by raising skill levels and filling skills gaps. This is expected to achieve by moving to a unitized, standards-based system with the aim of creating a qualifications system which would be:

- a. Coherent: creating clearer progression routes between qualifications in a national framework,
- b. Comprehensible: making the choice of qualifications easier for learners and providing clearer information for those who use qualifications for selection purposes
- c. Current: making the outcomes of learning more relevant to local and national employment and to enable learners to develop skills which equip them for changes of employment in the future,
- d. Credible: using forms of assessment which were valid and reliable and backed up by well-designed quality assurance.
- e. Responsive: Designing the system making it easy to respond to changes in requirements – by updating the existing standards or creating new standards within the framework of national qualifications compatible with the international standards.
- f. Flexible: allowing more learners from diverse background using learner-centered approaches to the delivery of qualification (through formal, non-formal and informal learning modes) – greater tailoring of content, methodology and pace of learning to the needs of the individual learner including utilization of open and distance learning, web-based learning, experiential education.

These expected changes in technical education and vocational training will have implications on school education and tertiary education as well. The national vocational qualification will require articulation with general education which will make easier to develop national qualification framework (CHAKROUN, 2010). Sub-sectoral connection and mobility is not possible unless technical education stream is connected with general education stream.

Guiding Principles of the Nepal's National Vocational Qualifications Framework

Care should be taken while designing NVQ in Nepal. Developing nations where NVQ had been initiated faced several challenges either over designing it or copying it from developed countries (ILO, 2009; CHAKROUN, 2010). In some countries, transition from traditional qualification system to new NVQ was unmanageable and could not produce the intended outcomes. Therefore, proposed NVQ for Nepal will follow the following guiding principles:

1. NVQ is to be built on the existing skill testing scheme. Therefore the levels of qualifications will be designed as it in practice with required upgrading of the existing skill standards to meet the occupational standards and educational standards supplemented with soft skills competencies.
2. The NVQ framework will establish parameters for nationally recognized qualifications at the non-university levels with linkages with general education at the school and the university levels. It will open pathways to learning integrating various modes of learning.
3. Systems designed to ensure quality will operate throughout: in the development of qualifications and their approval; the accreditation of providers; and verification of the assessment of the standard.
4. Qualifications within the framework will provide for recognition of merit or excellence. It is intended that development of framework will be evolutionary, to start with four levels, and cost effective, led by partnership among users or employers, providers, and government interests.
5. The primary focus of the framework will be the requirements of the learners. The framework will help in meeting needs for lifelong education and training with adequate flexibility and mobility across the sub-sector of education. The basic component will be the "UNIT OF LEARNING" defined in terms of learning outcomes, focusing on foundational knowledge, occupational competence and core competencies. Units, available from a variety of providers, will be assigned to the broad levels within the framework. It will be possible to arrange or rearrange them as appropriate into named and clearly identified qualifications.
6. Assessment will focus on the learner performance against published standards similar to what we have been doing in skill testing but in a broader frame work of knowledge and skills satisfying both educational and occupational qualifications.
7. The framework aims to facilitate maximum flexibility in the provision and acquisition of learning.
8. There will be a logical sequence of names for nationally recognized qualifications. However, attempts will be made aligning existing qualifications carefully instead of creating new ones. Assessment and certification for on-the-job learning will be assessed progressively, to complement that which occurs off-the-job education and training. All formal and non-formal/informal learning achievements will be able to lead towards certification. Competencies already achieved will be acknowledged through their equivalence to qualifications already recognized and through the recognition of prior learning.

Based on the guiding principles above the National Vocational Qualification framework may look like as presented in the Table 1 below:

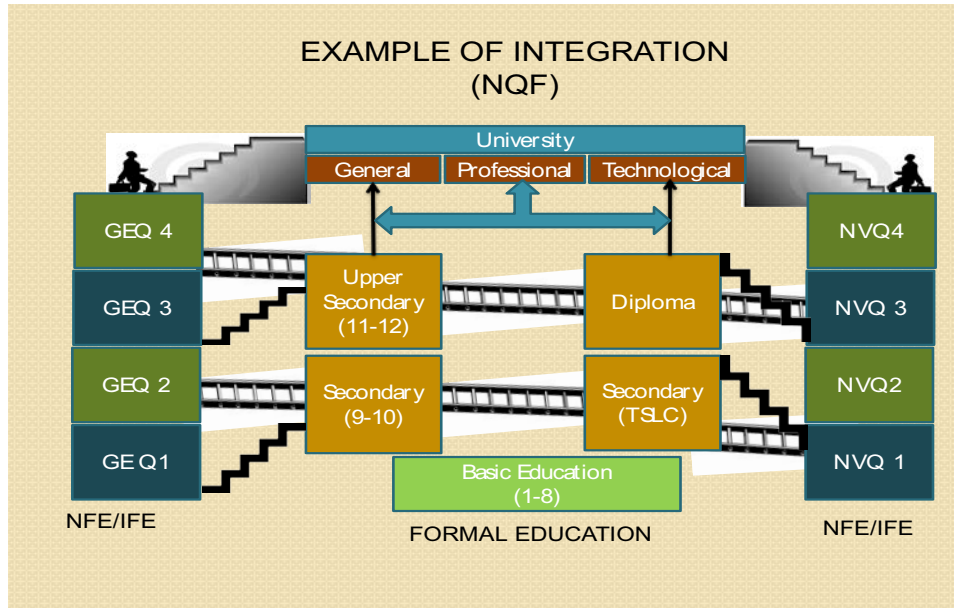
Table 1: Proposed Structure of Nepal Vocational Qualification Framework

Non-formal Education	Formal Education and Training Sub-system			NVQ Levels
	General Education	Technical & Vocational	Tertiary Education	
			PhD, Ed.D,	To be developed in the Second Phase
			Masters,	
			Post Graduate Diploma	
			Bachelors Degree. E.g. BA, BSc,B.Ed.	
GEQ Level 4		Advanced Diploma	Diploma (Post Secondary)	NVQ Level 4
GEQ Level 3	Grade 11 & 12	Diploma		NVQ Level 3
GEQ Level 2	Grade 9 & 10	Technical SLC		NVQ Level 2
Literacy Level 3 (GEQ Level 1)	Basic Education (grade 6, 7 &8)	Trade Certificate		NVQ Level 1
Literacy Level 2	Grade 4 & 5			Preliminary Level
Literacy Level 1	Grade 1, 2, 3			

Note: Qualifications shaded with yellow color are yet to be developed. Qualifications shaded with green color are proposed qualifications proposed for the first phase (next five years).

As shown in the table above, preliminary level skill developed during literacy level can be assessed and awarded preliminary certificate. NVQ level 1 is equated with the Basic education level (Grade 8), comparable with the trade certificate. Similarly NVQ Level 2 is made equivalent to Technical School Living Certificate (TSLC). NVQ level 3 is made equivalent to three years Diploma which is too demanding. We need to discuss further and look into NVQ level 3 and 4 from the perspective of non-university Diploma level. Since advanced diploma is not in Nepal, either this new qualification should be added or NVQ level 4 should be made part of the three year technician diploma. Similarly, an attempt is made to look into the horizontal and vertical mobility within the sub-sector of education with the provision of bridge courses and recognition of prior learning. The framework also intends to provide access to open assessment to facilitate mobility. A comprehensive national vocational qualification framework connected with school education and university education showing the pathways to learning integrating formal, non-formal and informal education is presented in Figure 1. The figure 1 shows how integration among the learning pathways and modes of learning takes place.

Figure 1



NVQ & Integration of Various Modes of Learning and Path Ways

Knowledge and competencies gained through formal, non-formal and informal modes of learning can be assessed and recognized to facilitate articulation and mobility from one modes of learning to another. Main elements facilitating vertical and horizontal movement among the modes of learning is discussed in the following sections. The scheme of recognizing prior learning regardless of how it was learnt using vocational qualification scheme within “National Vocational Qualification Framework” facilitates integration.

Skill training programs delivered by various providers through various modes will be harmonized or equated by developing a national competence assessment system with the provision for recognizing prior learning allowing skilled workers to have sufficient opportunities to upgrade themselves through the established linkages among, informal, non-formal, formal streams and the TEVT system. The resulting certification will allow workers to improve their horizontal and vertical mobility in the labor market. Dovetailing a cognition testing system to be adopted by MOES and the skill testing system of NSTB will especially expand the pathways available to out-of- schools youths, to semi-skilled and skilled workers. Strategies to be adopted to accomplish “integration of various training modes and pathways” will be as follows: (1) Develop a National Vocational Qualifications Framework for fair practices of assessing qualifications, (2) Harmonize learning outcomes offered by various providers through different modes of delivery, (3) Promote lifelong learning and mobility for the national workforce (CHAKROUN, 2010).

Way forward: Developing Qualifications Framework

National vocational qualifications (NVQ's) are work-related, competence-based qualifications. They reflect the skills and knowledge needed to do a job effectively, and show that a candidate is competent in the area of work the NVQ framework represents. Therefore, a **National Vocational Qualification Framework should be designed in such a way that it will** (a) Expand learning pathways, (b) be outcomes oriented to the specialized needs of labor market and economy, and respond quickly to changes, (c) promote transparency of sectoral choice between qualifications, (d) offer short-cycled learning alternatives as compared to the

formal long-term TEVT system, (d) create articulations within a coherent suite of TEVT sub-sector qualifications (common modules and possibly credit transfer between similar occupations) and with qualifications of other sub-sectors of education.

General and Vocational qualifications, to be developed developed under the framework, will be based on national educational and occupational standards. These standards will be statements of performance that describe what competent people in a particular occupation and on a specified level of competence are expected to be able to do (i.e. “the industry standard”). They cover all the main requirements of an occupation, including current best practice, the ability to adapt to future requirements and the knowledge and understanding that underpin competent performance. Similarly, educational standards at various entry levels determine the eligibility of admission into the formal general, professional or technical education programs. Bridge courses may require supplementing knowledge of mathematics, science and language for entry into the certain formal education programs within the school system or at the universities. A national framework of qualifications will define, standardize, assess and certify qualifications. The assessment will be based on demonstrated competencies regardless of where the applicant learnt those competencies.

NSTB should be upgraded into an independent Nepal National Qualification Authority. The NSTB, currently a board under the CTEVT council, should be transformed into a proposed Nepal Vocational Qualifications Authority (NVQA) and be established as an autonomous organization with a business orientation and a tripartite board at its top. This process will require legislation with the provision of adequate authority. National Vocational Qualifications Framework (NVQF): The National Occupational Skills Standards need to be transformed into National Vocational Qualifications, and a pertinent framework of standards, assessment and certifications will be developed.

New and updated National Vocational Qualifications should be developed on the basis of economic and social demand, resulting in a broader (more occupations) and deeper coverage of vocational competencies (more levels of competence with a possibility to extend into the tertiary education system). For the system to become accepted and of substantial impact a broad coverage is essential. Lead time for new standards must be minimized and the system must be perceived as alert, modern, quick and useful.

Harmonize Learning Outcomes

Vocational education and training in Nepal is highly fragmented, and there are a large number of training providers offering skill training in a variety of formats. These programs are run by several bodies: The Ministry of Education, The Ministry of Labor, The Ministry of Social Welfare and Social Affairs, Ministry of Industry, national and international NGOs and private TTP's without any affiliation. Such a fragmentation leads to duplication and seriously impairs efficiency and for the prospective trainee or student the system becomes non-transparent. Employers, too, find it difficult to interface with the training system and to value the pass outs in light of their manpower requirements.

NVQA is expected to develop different levels of qualifications within a national framework to facilitate integration of formal, non-formal and informal education/training along with provisions for recognizing prior learning and bridge courses. An assessment system will be in place for recognizing qualifications that allow skilled workers to move vertically or horizontally in career or further education/skills development.

NVQ Assessment for all learners: A system of providing NVQ assessment services for all learners and workers below the level of diploma holders will be developed. NVQ assessment will be available on several levels of competence (4 or 5) in a widening range of occupations. The assessment system will be open to any applicant, irrespective of prior schooling, training and duration of work experience. Demonstration of the required competencies will lead to the respective certification. TEVT formal programs such as TSLC and Diploma certificates will be equated to an appropriate NVQ level. NVQA will apply a scale of generic level descriptors (examples are given in Annex 1) based on which the standards for each occupation can be rated. Several competence levels of an occupation will constitute a typical career ladder (e.g. ranging from a helper, to fully fledged worker, to a supervisory level). Potential beneficiaries of NVQs include: (a) TEVT short

course participants (undergoing “end-of-course assessment”), (b) experienced workers (open assessment in their occupation and level), (c) Secondary school students (vocational stream, choosing the a low level NVQ assessment in addition to their normal coursework), (d) TSLC graduates (choosing the a higher level NVQ assessment in addition to their normal examination at the and of their studies), (e) traditionally skilled persons (open assessment), (f) people from open learning environments (open assessment), and (g) Students or workers returning from abroad (open assessment). MOES will be advised to give credits to NVQ-holders when entering higher education institutions. Bridge courses followed by cognition test may facilitate the progression or transfer into some of the higher education programs.

Life-long Learning and Mobility

The life-long learning framework emphasizes that learning occurs during the entire course of individual’s life. People learn from non-formal and informal means as they do from formal education and training. This policy is endeavouring to expand access to Lifelong learning for workers and people who had little or no access to education and training opening them new avenues to advance their education and training. People will be made aware of the new provisions, will be able to undergo counselling and discover their present state of occupational competence. e.g. by undergoing a “diagnostic” assessment. Life-long learning will be promoted by: (a) providing career guidance to potential learners, (b) assess present state of occupational competence (as the baseline), (c) opening up entry or re-entry into general education if needed through a bridge course, (d) opening up entry of re-entry into TVET and skills development, and (e) promoting a skills and knowledge upgrading market with a multitude of short course and informal learning offers.

Career Guidance: CTEVT will make necessary arrangements for the training of selected teachers and the provision of necessary materials and resources to provide career guidance services for the school-going generation at the secondary level and the workforce with special attention to unemployed and underemployed for enabling them to start a career of their interest, aptitude and ability and enrol in a program of their choice. Employment support service centres will be developed gradually by DoLEP starting from regions to district to facilitate the transition from training into employment.

TTPs will be supported by CTEVT and DoLEP to provide placement and counselling services to their applicants, trainees and graduates. Youths and adults should have information about occupations and education/training institutions to prepare them for a career of their interest and ability. Transitional supports will be provided to youths and adults seeking employment helping them to find a job or engage in self-employment. Employment support services centers are intended to bridge the gap between training providers and employers contributing to fulfill the employment needs of individual and skilled human resource requirement of the labor market.

Re-entry into General Education: CTEVT, 10+2 Board, Polytechnics, and Universities will design appropriate bridge courses to facilitate re-entry into the general / academic education stream at various levels. A market is expected to emerge, where a multitude of providers will offer such bridge courses on a fee for service basis. The end-of-bridge-course assessment will be administered by the respective “target” organisations (Dept of Education, 10+2, polytechnics, universities). In a society where skilled workers have a low image, allowing them to re-enter into the general/academic education will improve their social status and open up avenues for second chance education. Such provisions will allow deserving workforce to advance their education and engage in lifelong learning and continuing education.

Skills Upgrading for Workforce: CTEVT will assist the training providers by developing multiple layers of demand-led skill upgrading, en-bloc or modularised courses, aiming at the levels of job entry and job advancement. Training providers will be encouraged to use CTEVT’s blueprints for offering these programs (in their original or in their own customised version) to the unemployed, underemployed and employed workforce.

If the programs come in modules, these shall correspond with the NVQ-system and at the end of a sequence of designated modules an assessment and certification shall be made available on the basis of a complete set of occupational competencies. (In order to keep the system manageable it is advised that assessment will not be available for single modules.)

Education and Skills upgrading market: Education and Training providers will increase the supply of upgrading courses within the NVQ framework and develop a market for those. TTPs will have flexibility to design, offer and market such courses to the target group and in their market segment. Such courses could be run on a customised basis for individual enterprises, for development agencies or for foreign employment agencies. Dynamic marketing by providers is assumed.

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Hindering Factors of Female Participation in TVET in Nepal

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Abstract

This paper highlights the status of women in TVET and five major causes which hindering the accesses of women in TVET are: lower education levels, involvement in household work, male dominance, lack of access to information and financing. Participation of women is high in rural areas than urban in public technical schools because programs are women friendly in rural areas. Similarly, there are high women participation in urban areas in private technical schools because most of them are running health program and only in urban areas not in rural. Participation of women in vocational training is higher compare to technical education. Women access in technical education and vocational training become difficult because about half of the women are uneducated and they have not got equal opportunity as men for education, most of the time they should involve in household works, training programs are male dominance, difficult to get information about programs and lack of finance. The conventional wisdom towards women will not work to enhance access of women in technical education and vocational training programs. There are measures to overcome these problems such as women focused education programs in all levels, awareness program, design and development of women friendly programs, use of appropriate Medias and approaches to disseminate information about programs, and different financing mechanism should be applied to encourage women participation.

Introduction

Women and men make equal contributions to Nepalese economic and social development, but women are not getting equal opportunities in education and other sectors. There are 51.6 percent females and 48.4 percent males in Nepal (CBS, 2012). However, the involvement of women in the public sector service and other development sectors is negligible. However, their involvement in household work and agriculture is remarkable. There have been different women empowerment programs, but the status of women in Nepal is still not encouraging. In spite of several years of concerted efforts and different approaches of technical education and vocational training (TVET) programs, women could not benefit because their access to TVET programs was almost impossible. A research article (Subedi, 2005) claimed that women and other disadvantaged groups have had little opportunity in TVET. Similarly, women's participation in TVET programs was only 21 percents compared to 79 percent of males (Lamichhane, 2006). According to the report (SEP, 2012), the women participation in vocational skills training run by project was 53 percent. Similarly, other project has also women participation is around 30 percent. This paper highlights the status of women in TVET and five major causes which hindering the accesses of women in TVET are: lower education levels, involvement in household work, male dominance, lack of access to information and financing.

Status of Women in TVET

The status of women in TVET is not encouraging. The following tables show status from different angles. Table 1 shows the gender distribution of technical education (TE)³ graduates by location of technical training providers (TTPs). The public institutes are established both in rural and urban areas and private institutes are in urban areas only. There were 57 percent male and 43 percent female graduates in rural public schools. In urban schools, percentage of female was higher in private schools than in public schools. The percentage of

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³ Technical Education is considered Technical SLC and Diploma level.

female graduates was higher in rural areas than in urban areas. There were 22 percent female in private and 12 percent in public schools.

Table 1
Gender Distribution of TE Graduates by Location of TTPs

Gender/ Area	Total	Public		Total	Private	
		Male	Female		Male	Female
Rural	1107	631 (57)	476 (43)			
Urban	844	740 (88)	104 (12)	901	702 (78)	199 (22)
Total	1951	1371 (70)	580 (30)	901	702 (78)	199 (22)

Figures in parenthesis represent row percentage.

Source: Lamichhane, R.H. (2006). *The participation of poor and disadvantaged group in TVET in Nepal. An unpublished doctoral thesis. Kathmandu University, Nepal.*

According to the study (Lamichhane, 2006), public rural schools had run more women friendly trades e.g., health, agriculture, construction, than urban schools, where mostly mechanical, electrical, and construction trades were operated. Therefore, the participation of the females was higher in rural TTPs. Similarly, the respondents said that the percentage of the SLC failure females was high in rural areas. They went to TVET as an alternative education stream.

Similarly, private schools mostly operated health, agriculture and construction trades where female participation was high. Urban public technical schools have organized urban trades, e.g. mechanical, electrical, auto-mechanic, sanitation etc, where female participation was low. Therefore, there were more females in private than in public school in urban areas.

Table 2 shows gender distribution of vocational training (VT) graduates by location of TTPs. Female participation in vocational training in public school was high as in rural areas than in urban areas. There were 85 percent male and 15 percent female vocational training graduates in rural areas. In urban areas, there were 91 percent males and 9 percent females in both public and private technical schools. The female participation in Skills Development Training Centers (SDTCs) was more than in other schools. There were 54 percent male and 46 percent female graduates.

Table 2 Gender Distribution of VT Graduates by Location of TTPs

Gender/ Area	Total	Public		Total	Private		SDTCs	
		Male	Female		Male	Female	Male	Female
Rural	531	450 (85)	81 (15)	-	-	-	-	-
Urban	392	356 (91)	36 (9)	542	491 (91)	51 (9)	2514	1360 (54)
Total	923	806 (87)	117 (13)	542	491 (91)	51 (9)	2514	1360 (54)
								1154 (46)

Figures in parenthesis represent row percentage.

Source: Lamichhane, R.H. (2006). *The participation of poor and disadvantaged group in TVET in Nepal. An unpublished doctoral thesis. Kathmandu University, Nepal.*

According to study (Lamichhane, 2006), public and private schools conducted similar kind of vocational trainings and technical education. Therefore, justification of female participation in urban and rural areas was similar to technical education as mentioned above. Female participation in SDTCs was greater than in other schools because SDTCs run more women friendly trades e.g., beauty parlour, sewing and knitting etc., and provided free tuition with training allowance. Similarly, SDTCs have standard operational calendar for vocational training programs, which was lacking in private and public technical schools. People were aware of the training information of SDTCs and more females participated than in other schools. Private schools run vocational training programs only if they got support from donors.

Table 3 presents the status of female graduates in different trades by nature of training providers. The health, agriculture, and electrical and electronics trades had higher percentage of female graduates in technical education in both public and private institutes. In public institute, there were 50 percent, 25 percent and 17 percent of the total female graduates in technical education in health, agriculture and electrical and electronics respectively. There were no female graduates in mechanical trades. Similarly, there was high percentage of females in agriculture trade in vocational training in both private and public institutes that was 50 percent and 90.5 percent respectively. In SDTCs, more females (93%) were in beauty parlour and stitching training than in other profession. There was no female participation in construction and mechanical trades.

Table 3 Female Graduates in TVET by Trades and TTPs

Trades	Public TS		Private TS		SDTCs	
	TE	VT	TE	VT	TE	VT
Construction	48 (8)	22 (19)	31 (16)	1(0.5)	-	-
Agriculture	143 (25)	59 (50)	8 (4)	46 (90.5)	-	-
Mechanical	-	-	-	-	-	-
Electrical and Electronics	96 (17)	36 (31)	-	4 (8)	-	77 (7)
Other (Health, Beauty Parlour and sewing)	293 (50)	-	160 (80)	-	-	1077 (93)
Total	580	117	199	51	-	1154

Figures in parenthesis represent column percentage.

Source: Lamichhane, R.H. (2006). *The participation of poor and disadvantaged group in TVET in Nepal. An unpublished doctoral thesis. Kathmandu University, Nepal.*

According to the study (Lamichhane, 2006), females participated in easier and softer skills than in hard and risky ones. Therefore, their participation was higher in health, beauty parlour, sewing and agriculture related training than mechanical and construction. This finding was consistent with the findings of Nepal Human Development Report (2004, p. 52) and Sharma and Dhungel (2002). The above research reports emphasises that women were confined to socially accepted and culturally prescribed occupations, and they had to perform household work, reproductive functions and unpaid agricultural activities as three major tasks.

Causes of Hindering Female Participation

The lower education level of women is one of the major causes hindering their access to TVET programs. The average literacy rate is about 56 percent in Nepal. Out of that, female literacy is just 43 percent. As far as literacy is concerned, about 69 percent of the economically active population of Nepal is illiterate (CBS, 2001). Most of the TVET programs require at least primary level education and above. The training achievements do not only rely on the candidate's interest, because the skill-training programs are targeted to persons with academic degrees (School Leaving Certificate level education). The people with low qualifications or illiteracy therefore do not meet basic requirement for training entry. Technical and vocational training needs basic levels of literacy and numeracy, and often an understanding of scientific concepts,

without which training inputs will be compromised. Educated trainees often benefited more from training programs than their less educated friends. Therefore, basic education should be a pre-requisite to obtain entry into technical training programs (DFID, 1993). According to the journal (*African Economic Outlook*, 2010), "Gender inequalities in technical education and vocational training (TVET) reflect the lower enrollment rates of women in secondary education generally. Countries where women account for fewer than 15 per cent of TVET enrollment include Eritrea, Ethiopia, Malawi, Namibia, Niger and Uganda. For this group of countries, the share of TVET enrollment in overall secondary enrolment is less than 5 per cent, and the proportion of girls is low not only in technical and vocational education but throughout the entire education system."

The second important cause hindering the access of women in TVET program is their high involvement in daily household work. In Nepal, especially in rural area, women have to perform daily household work in addition to farm work and child care, such as preparation for cooking, carrying water and fuel, cooking, cleaning and washing clothes. Being a daughter in the family, a young girl also has to perform such activities. In urban areas, women have to do those activities in addition to their jobs. The TVET Journal (Sharma, 2005) states that women were forced to spend most of their working hours in carrying water and fuel. This made their days longer. One of the key factors that limited access was the time spent by rural poor in development activities to meet their everyday needs (ILO, 1998). Therefore, despite their willingness to participate in TVET and other education programs, women are being hindered by day to day household activities.

The third important cause hindering the access of women in TVET program is male dominance. In our society, most of the people feel that TVET programs are for men and not for women. This stereotyped of thinking has been supported by the nature of the programs such as carpentry, plumbing and sanitation, welding, furniture maker, scaffolding, shuttering carpentry, steel fixture, mechanical, auto mechanic, electrical, and commercial cooking. There are only a few trades which are women-friendly such as health, care giver, housekeeping and some agriculture related programs. Because of the programs' nature women hesitate to participate. One of the major findings of the study regarding the reasons for low female participation in technical education was heavy physical work demand and the physical structure of the female (Sharma, 2000). Similarly, other international studies have also recognized this problem. According to (Zuga, 1999), "Even though women today have an increased opportunity to enroll in technology education programs, the vast majority still chose not to. Women perceive technology education as a male domain in which they do not belong and feel even more so after having taken a technology education course. The question of whether technology educators can address this lack of participation without first understanding the differences between men's and women's choice of studies is investigated using feminist analysis." (p.1)

The fourth important cause hindering the access of women in TVET programs is lack of access to information. Information related to TVET programs published mostly in national newspapers and radios, which cannot reach to women easily and not friendly to illiterate women. There is lack of alternative sources of information to provide in rural areas especially for women. Most of the information reaches only in major cities and districts' headquarter. A study on access of TVET (Lamichhane, 2006), identified that lack of information is major cause of less female participation in TVET. Similarly, a field verification and monitoring reports of different TVET projects (SEP, 2012, & Lamichhane, 2013) highlighted that lack of information about training and scholarship to remote people was the major cause of low female and disadvantaged group participation in training programs.

The fifth important cause hindering the access of women in TVET programs is financing. In one hand, TVET programs are costly so, ordinary and poor people cannot finance easily. In other hand, due to the traditional concept towards women, parents do not like to invest much in daughter's education. Similarly, there are not any financing institutions that provide loan to the TVET students. If there is provision, they can provide against collateral only. Some TVET programs have been running without tuition fees especially for women

and disadvantaged groups. However, poor women cannot participate due to the living cost and transportation. This issues has supported by the study for British Council (The Economist, 2013) mention that not availability of finance is one of the key challenges for TVET in South Asia.

Initiatives Taken to Increase Female Participation

Nepal has taken different initiatives to increase female participation in TVET. The major initiatives are as follows.

- 1. Policy intervention:** Since 2000 AD, all periodic plan of Nepal has focused on access of female and disadvantaged group in TVET. Similarly, TVET Policy 2007 and 2012 has mentioned access and equity of female as a key policy intervention.
- 2. Women Friendly Environment:** Government of Nepal and CTEVT has made its program to provide access to women (at least 33 %), act, laws, bye laws and guidelines have been revised to make women friendly. For example, CTEVT has circulated that all technical schools should have female toilets as well. It is being implemented well. Similarly, more female teachers/instructors are developed and given priority for them to recruit.
- 3. Program and Project Intervention:** Nepal has implemented different projects targeting to enhance female participation in vocational skills training. Such projects were Skills for Employment Project (Project targeted output was 62000 graduates and female target 50% of the total output). At the end of the project, 53 percent female received vocational training and about 60% were employed (SEP, 2012). Similarly, Enhanced Vocational Education and Training (EVENT) project has been running since 2011 targeting 45000 graduates (about 30% female) and Skills for Development Project (SDP) has started from 2013 targeting 46000 graduates (40% female). Nepal government has initiated direct program intervention to bring Muslim and dalits girls in TVET by providing full scholarship since 2010. Every year, about 1000 such girls are getting benefit.

Conclusions

Despite several efforts and focused programs, participation of women in TVET is still negligible compare to the size of women population. There are some good signs in women friendly vocational trainings and health and agriculture related technical education. The access of women in TVET could be remarkable, but hindering factors are so strong to bring them in the programs. Their encouraging access in TVET is not possible without taking some positive discriminations and meaningful measures.

Suggestions to Overcome Hindering Factors

There are several measures to overcome such causes of women's lack of access in TVET programs. First of all, there should be women focused education programs to increase their access in all kinds of education. Second, TVET program should be implemented with flexible time schedule to ensure their participation and manage household work. There should be awareness programs to provide information and importance of education to females. Third, TVET programs should be designed and developed considering the demand and needs of the women, which can overcome the male - dominated of TVET. Fourth, TVET programs should be affordable which can enhance the access of women. Finally, TVET program should be implemented in mobile basis or institutions should be opened in all parts of the country. They should not be focused only in capital and major cities. Based on the suggestions, the following framework of action has been recommended.

Framework of Action

Key Areas	Major Actions	Time Frame	Responsible
Enhance Education Level	<ul style="list-style-type: none"> • Provide free education for girls • Conduct adult literacy classes as a campaign • Conduct different level of TVET targeting female 	Immediate	Ministry of Education (MoE) and CTEVT
Balance between learning opportunities and household work	<ul style="list-style-type: none"> • Conduct awareness program to men to share household activities • Conduct vocational skills training on flexible timing • Focus on mobile training rather than institutional 	Immediate Mid-term	Ministry of Women Development, MoE and CTEVT
Empower women to minimize male domination	<ul style="list-style-type: none"> • Conduct awareness to empower women • Share responsibilities to both gender • Bring gender friendly affirmative actions • Organize different empowerment programs 	Immediate Mid-term	Government
Access of Information	<ul style="list-style-type: none"> • Prepare information dissemination plan • Use appropriate media/methods to provide information even in rural areas • Conduct periodic monitoring on information dissemination 	Immediate	CTEVT
Financing	<ul style="list-style-type: none"> • Establish TVET Fund • Provide finance in a coordinated way • Take affirmative action to finance for female targeted TVET programs 	Mid and Long-Term	Ministry of Finance, MoE and CTEVT

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How relevant is teacher training to improve the quality of education?

Dr. Bhawani Shankar Subedi⁴

Abstract

Inadequate transfer of knowledge, skills, attitudes and behaviours from the training environment to the workplace environment has emerged as a global issue. Teachers' training has not been an exception. Available literature on teacher training indicates that the contribution of training can be assessed at least on five dimensions- quality, access, equity, efficiency, teacher development and overall school development. Studies conducted in the area of teacher training or teacher professional development in the context of Nepal are also evident of lack of sufficient transfer of knowledge and skills from training to workplace. There are several factors facilitating or inhibiting the extent of such transfer. Research shows that the training of teachers has contributed and can positively influence quality of education if stakeholders are made aware of and well informed about the quality and relevance of training and development interventions carefully designed and implemented for the capacity development of teachers, teacher educators or trainers.

This article has been derived from the synopsis of a comprehensive study conducted in Nepal and concluded in March 2010. Data bases of 4033 trained teachers of 45 schools from 25 sample districts were studied. This study was a blending of quantitative as well as qualitative approaches. Nine education experts and 22 field researchers were involved. The author was the team leader of the study. The only academic purpose of this article is to inspire excellence in teaching, learning and performance by means of professionalism and capacity building of teachers, teacher trainers and their employers

The **purpose** of this study was to assess the contribution of teacher training programs to different aspects of education development, including quality of teaching and learning, in the schools of Nepal. The key question that prompted this study was "What contributions have been made by the teacher training programs to the development of school education in Nepal?" Six thematic areas of possible contribution (quality, access, equity, efficiency, teacher development and overall school development) were then derived from the purpose and scope of the study to address the key question and nine other subsidiary research questions included in this study.

Trends and gaps established from a comprehensive review of related literature and previous research, including studies conducted so far before the establishment of institutional arrangement for teacher training and after, revealed that there is not sufficient national literature on teacher training in Nepal. Such literature is available in different forms. **Trends** showed that most authentic of the literature could be categorized basically under three major clusters: literature compiled under different reform oriented commissions or government documents, experience or observation-based technical reviews or assessments and limited field based research studies. Almost all of these studies were found to have been carried out in a ritualistic fashion as if they were commissioned simply to comply with the program targets. They have contributed very little in the fundamental knowledge base on the learning behaviour of students or teaching behaviours of teachers. They also have contributed very little toward theory building on teacher training.

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Major **gaps** of those studies could be identified that- these studies were carried out mostly by commercial motives and did not constitute fundamental studies to add significantly to the knowledge base, the studies were not comprehensive to include important aspects of teacher training, they lacked in both theory and practice based significance, they largely failed to pay attention to the actual behaviour patterns of trained teachers. Those studies have in general not covered the environment under which the trained teachers have to work in schools, and above all, none of those studies examined teacher training from the perspective of its impact on the various aspects such as quality, access, equity, efficiency, teacher development and overall school development as the major aspects of education system development as a whole. This review showed that earlier studies were confined to classroom analysis. Only a few studies mentioned about quality and equity, for example. Thus the present study is a comprehensive research ever done in the field of contribution of teacher training. Teacher training system was introduced in Nepal in 1946. Thousands of teachers and educational administrators have been receiving training since then. It is claimed that currently 98% of the school teachers of the government funded schools are trained but what is yet unknown is how these trained teachers are contributing to the quality, access, equity, efficiency, teacher development, and overall school development.

Quantitative information and qualitative inquiries included in this study represent a **sample** of 25 districts and 45 schools that represented districts where teacher training institutions exist, 15 other districts where such institutions do not exist and Jumla from Karnali zone. In addition to Jumla, the nine districts included Kavre, Surkhet, Bhojpur, Sunsari, Doti, Bara, Tanahun, Dhanusha, Rupandehi. Likewise, specific school case studies taken from 15 additional districts included Panchthar, Siraha, Dhading, Makawanpur, Baglung, Parbat, Puthyan, Kapilvastu, Bardia, Dolakha, Sindhupalchok, Dailekh, Rasuwa, Lalitpur and Mustang. Altogether, individual records of 4033 school teachers of 25 districts- from mountain, hill and terai- were analyzed. Of them, teachers who were observed and studied-90% were having more than 5 years' experience; 52% were SLC graduates, 35% were higher secondary school completers, 11% were bachelor degree holders, and 2% were masters' degree completers. All of these teachers had attended ten months' teacher training over the past 10 years or before.

Methodological approach adopted in this study was a blending of quantitative analysis and qualitative inquiries. Eleven sets of tools were used in this study. They were (a) School information forms (b) Student information forms (c) Teacher information forms (d) Teacher interview questionnaire (e) Head-teacher interview questionnaire (f) Focus group discussion (FGD) guiding questions (g) FGD notes (h) Observation instruments (i) School case study guidelines (j) School report summary forms, and (k) Achievement tests for Grade III core subjects (English, Nepali, Math, Social Studies) and Grade V core subjects (English, Nepali, Math, Social Studies), and Score sheet for test score records. Apart from this, the field researchers prepared 15 case studies of the teachers and the schools as well, following the school case study guidelines.

Analysis and cross-checking of the quantitative data obtained from different sources were conducted by using Microsoft Excel software in the computer. Likewise, qualitative information was clustered thematically and analyzed on the basis of informant wise classification. On the basis of these classifications, the team of researchers and educationists together, organized series of discussion sessions over the crude data and information for common understanding of the meaning and implications on the themes of inquiry. Following the discussions, individual experts from the core study team prepared the thematic chapters of the report.

Analysis of the data/information was done through periodic mutual sharing and feedback given to and received by the team of writers and the client on the thematic outcomes.

Major findings of the study showed that:

1. Teacher training has contributed to improve teacher-student relations, students are more actively involved in learning and more project works are given by trained teachers.
2. There is an apparent increase in the students' motivation to learn and succeed. Varieties of teaching methods are used by trained teachers and better results are achieved due to improved objectivity in assessments.
3. GPI has been improved in terms of enrolment, repetition, promotion, and dropouts. There is an increasing rate of female students in primary grades; underprivileged, backward, dalits and deprived communities are encouraged by the trained teachers to send their children to schools.
4. Trained teachers are supportive to school management. In most cases, teachers have become instrumental in improving school community relations.
5. Training has contributed to ensure equity in education, most school age children are found enrolled at schools. Teacher's behaviour is found largely non-discriminating. There is reduced corporal punishment where more teachers are trained and schools welcome students from all castes, tribes and communities.
6. Students' learning achievement tests showed that there is indeed an increment in the learning achievement scores. Gain score is discernible in English and Math, for example. There is an increased rate of retention, pass rate has increased, dropout has decreased, teachers' time on task has increased.
7. Teacher collegiality has improved. Trained teachers learn and try new things. Study habits have improved. Trained teachers make better use of text books and curricula as they are engaged in child-friendly teaching.
8. Trained teachers are found contributing to school image and community relations, they are supportive to SMC and head teachers, they accept non-teaching assignments that emerge and maintain better record keeping at schools.
9. Trained head teachers were found better able to utilize and preserve the ability and willingness of the trained teachers. This study found that trained teachers were instrumental in physical improvement of the schools, establishing community relations, positive image building of the school and in some sporadic cases they were improving the quality of education at par with the parental expectations.

Conclusions drawn from the reflections on findings over the contribution of teacher training towards improving quality, access, equity, efficiency, teacher development, and overall school development have been summarized as follows:

1. Teacher training helped building teacher confidence through additional knowledge and skills learned. However, the application of training program has yet to demonstrate specific impact and tangible effect on teaching and learning.
2. Teachers are increasingly involved in the process of increasing access to education. A gradual increase in enrolment is quite easily discernible however, due to the saturation of student enrolment in schools, significant increases were not apparently seen in the data records of over the last five years.
3. There is humble effort made by trained teachers in ensuring equity in all aspects of school education by motivating parents, students and local community.
4. Students' learning achievement has shown a gradual increase over the years. However, substantial contributions of teacher training towards improving systemic efficiency were not observed.

5. Teacher training has substantially contributed to increase teacher efficacy, collegiality and professional growth of teachers.
6. Trained teachers have contributed to improve positive public image of schools. The interactions between students and teachers have increased significantly including co-curricular activities in schools. Personal hygiene and sanitation has improved. Participation of communities in school management has been found influenced positively by trained teachers.
7. Additionally, (a) teachers themselves and other stakeholders have acknowledged the importance of teacher training to inculcate the required teaching skills in them, (b) training curricula expected too many things from teacher that s/he could not yield in reality, (c) teachers did not get encouraging and/or re-enforcing environment to implement their learning into action due to inadequate monitoring and follow up, and (d) teacher training programmes contributed less (as compared to what was expected) towards the improvement of quality, access, equity and efficiency; and contributed more towards teacher development and overall school development initiatives.

Recommendations, this study came up with, are derived from the study findings and conclusions. Policy makers, educationists, curriculum designers, training providers, teachers and school management could benefit from the recommendations offered to them as listed below:

1. Teacher training packages and the needs of the schools where the trained teachers work should match with each other. In other words, organizational needs and individual needs should match for training effectiveness. This matching could be made possible if we develop modular teacher training packages under a single continuum. Teacher-training package must be redesigned to address the needs of various types of schools. For this, schools should be categorized (in terms of geographical and linguistic regions) and the proposed modular teacher-training packages should be reorganized accordingly.
2. Internship or practicum component of the existing training modules should be given as first module. Based on field experiences, trainers must train the teachers not only theoretically but also practically. This provision demands a rigorous but field based master trainer programs. If provisioned this way, the training guidelines and directives should be reformulated.
3. Since every stakeholder is interested to know the difference between the behaviours of the trained and the untrained teachers, it is worthwhile to keep log on teachers' initiatives and demonstrated behaviours in the schools' contexts. For increased ownership of the process and outcome, such work-log could be prepared in consultation with teachers themselves, teachers unions and SMC/PTAs and be distributed to the teachers for their record keeping purpose. Researchers could cross check the findings of the log and prepare report for wider consumption.
4. With few exceptions, teachers and all stakeholders of education have acknowledged the importance of teacher training. Following this acknowledgement, teacher training providers should develop a form to obtain through individual schools, their intended contents and methods to be incorporated in the teacher training modules. This will help identify the gaps for designing effective teacher training courses and curricula. Materials thus collected should be analyzed at the resource centre level and be compiled at the national level for the necessary revision in the teacher training curricula. This approach will constitute a comprehensive needs assessment for training.
5. Since teachers' experiences in this study ranged from 5 to over 25 years, a longitudinal study is required to examine the relationship between trained teachers' years of experience and their contribution to improve the quality of education.
6. Teacher development demands collegiality and the trained teachers were found gearing towards it. This finding requires on going support to the trained teachers for their strengthened collegiality. Provision of reward and punishment to teams of trained teachers could help improve teacher collegiality for increased performance.

7. Trained teachers were found instrumental for overall development of the schools. On the basis of this finding, this study recommended to make trained teachers more assertive for the desired transformations in education and the system should be geared to support them through individual schools and the resource centres. Currently, resource centres are performing less than what is expected of them by the system.
8. Findings of this study showed that there is a severe lack of refresher training including follow up, monitoring and evaluation of the trained teachers' performance. This lead to the recommendation that training providers and sending schools should together design support strategies needed before, during and after each training intervention.
9. Findings indicate that trained teachers working with head teachers who were also trained in school management are better performing both teaching and non-teaching assignments. To encourage their initiatives for school development and improved community relations, head teacher training should also be revised by incorporating behaviours that could enhance possible contribution of teacher training to different aspects of quality education.

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Regulation of Technical Education and Vocational Training (TEVT) in Nepal

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Abstract

A regulation is an official rule or law designed to control or govern conduct. It plays a critical role in creating order and engendering trust and confidence in the system as a whole. Regulation also manages risk and underpins quality outcomes and the delivery of skills that the economy need. In Nepal, regulations imposed by the Council for Technical Education and Vocational Training (CTEVT) impact almost every area of Technical Education and Vocational Training (TEVT) administration. This paper describes the regulation of TEVT in Nepal and give information related with TEVT regulation as well as help to TEVT administrators to maintain the reputation of TEVT. The affiliation process and auditing of training institutions should be more rigorously enforced by CTEVT regulators to ensure quality and consistency in course delivery and learner outcomes.

Introduction

The policy sciences have sought to develop methods and practices designed to settle rather than stimulate debates; the attempt to separate facts and values has facilitated a technocratic form of policy analysis that emphasizes the efficiency and effectiveness of means to achieve politically established goals (Fischer, 1998). Principles, representing preferred practices in vocational education, can be implemented only when policy supports those modes of operation (Miller, 1985, p.6). Research is better at describing what happens to whom, why, and when and often less able to figure out better ways of crafting policy in education (Bennett and Howlett, 1992). Implementing policy is no simple task, involving conflicts and competition as well as issues of coordination and control. It consists of the “relevant actions and inactions of public officials who are responsible for helping to achieve objectives” (Baum, 1981, p.39) of programs or policies. Often, the failure of many policies lies not in unsuccessful implementation, but in an incorrect match between the problem and the proposed solution (Cooper, Fusarelli, & Randall, 2004, p. 95).

A regulation is an official rule or law designed to control or govern conduct that says how something should be done. Regulation creates limits, constrains a right, creates or limits a duty, or allocates a responsibility. In Nepal, regulations imposed by the CTEVT impact almost every area of technical education and vocational training administration. CTEVT act, rules and bylaws help institute implement key legislation, such as measures protecting institute property, academic freedom, student privacy, access and equity, and student safety. The pursuit of quality training aims at developing the full potential of students/trainees in all aspects so as to prepare them for the challenges in life. Through quality training, students are better equipped with the knowledge and skills for making contribution to and participation in the complex and rapidly changing society. The attainment of this goal calls for the joint efforts of training providers, industry and regulatory authority. To achieve this, necessary regulatory instruments are required. The quality assurance framework for training aims to achieve the due balance between providing support to training institutions through institutional improvement and exerting pressure through accountability. However, regulations also can overreach, consuming huge amounts of time and wasting scarce institute financial resources with little benefit.

A philosophy of education typically includes discussion of terms, aims and objectives, curricula, methods, the teaching-learning transaction, the role of society, and the roles of student and teacher. Skills and education create social and economic benefits through enhancing civil society, providing greater opportunities and

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generally improving life outcomes. The TEVT is combined with 'technical education' and 'vocational training'. TEVT is the source of skills training for many individuals prior to employment and afterwards on the job. It provides entry-level skills training and skills for job advancement leading to higher productivity and earnings. It offers skills enabling workers to adapt to new technologies in the workplace and to be responsive to changing employment needs. The objectives and content of the curricula followed in different programs were derived from occupational standards, or more directly from analysis of the tasks that were to be carried out on the job. The effectiveness of curricula is thus primarily determined by the extent to which trained persons can use their skills in employment.

One of the specificities of the post-2015 debates focus on global sustainability. This is illustrated by the UN Sustainable Development Goals, will inevitably raise questions on governance patterns for technical education and vocational training in terms of visions, policies, institutions and instruments. The conceptualization of TEVT and conflict has undergone a significant change over the past two decades. The linkages between TEVT and conflict have begun to emerge as a central concern for a variety of stakeholders working on sustainable development and peace building. Critically examining this relationship is important, not just in the light of the post-2015 development agenda, but also in view of societal changes taking place globally. Many developing and emerging economies are not only characterized by information and telecommunication technologies (ITCs) revolution, rising social inequalities, rampant urbanization and youth bulges, but often also by extremely high rates of violence. This level of violence is on a par with or higher than in countries affected by intra-state armed conflict or socio-political emergency. Progress is defined as development towards an improved or more advanced condition and as such, is highly subjective and subjected to various political interpretations and measurement methods. Empirical evidence has shown that correlating TEVT and growth can be hazardous, especially if only TEVT quantity (attainment levels) is measured rather than quality (learning outcomes).

Several developing countries, including countries in the Asian region have a long history of TEVT. They have vocational or diversified secondary education systems. A Vocational Education Act was passed in 1927 in Philippines stating that the "controlling purpose of vocational education is to fit pupils (persons) for useful employment" (UNESCO, 1984). Malaysia established its first technical college in 1906. South Korea and Taiwan placed high priority on special vocational education at an early stage of industrialization process in the respective countries. The very first educational development plan of Pakistan envisaged technical and commercial education as an integral part of general education, with diversification of the secondary education curriculum. The National Education Commission in Bangladesh, appointed immediately after independence, recommended in 1972 the diversification of secondary education from Grade IX onwards. China had long emphasized vocational education in its school curriculum. After 1978, quite a number of government senior secondary schools were converted into vocational schools. Polytechnic institutions, vocational schools, institutes of technical education, and technical colleges figure prominently in the educational systems in Japan, Korea, Taiwan, Singapore and India. Vocational and technical schools received serious attention in Japan even during the 19th century (Yamamoto, 1995).

In ancient Nepal the educational system was based on Hindu and Buddhist philosophy. Education was not vocational in character. Within the Hindu Varna system, vocations such as metal-works, leather crafts and tailoring were considered the work of low caste people. Informal training, the unorganized, unsystematic life-long process by which knowledge and skills were acquired through experience, observation and contact with peers and elders, has always played a major and traditional role in Nepal (Basnet et al, 2010). The Technical Education and Vocational Training Council Act of 1989 (amended in 1993 and 2006), established the Council for Technical Education and Vocational Training (CTEVT) an apex body for TEVT, is landmark in the history of TVET in Nepal. According to the act, the CTEVT is responsible for formulates TEVT policies, ensures quality control, develop skill standards and test the people who have informally acquired skills, provides training to instructors involved in TEVT sector, coordinates the entire TEVT related stakeholder and provides

services to facilitate TEVT programs to prepare and facilitate in the preparation of basic and middle level skilled human resources for economic development throughout the kingdom (Basnet et al., 2010).

Technical education, the academic and vocational preparation of students for jobs involving applied science and modern technology that underline the practice of some trade or profession. Schools in which this training is provided are known as technical schools. Vocational training is training for a specific career or trade, excluding the professions. Vocational training focuses on practical applications of skills learned, and is generally unconcerned with theory or traditional academic skills. Vocational training thus provides a link between education and the working world. It is usually provided either at the trade school or in a vocational training centre. Technical/Vocational education and training enables learners to gain qualifications for all types of employment and specific skills to help them in the workplace. In a labor market that is experiencing such a high level of change and where the demand for higher level skills is increasing, employers need to be confident that holders of higher level qualifications do possess the skills and knowledge defined by such qualifications.

TEVT aims to deliver a productive and highly skilled workforce. It enables all working age people to develop the skills and qualifications needed to participate effectively in the labor market, contribute to nation's economic future and supports the achievement of increased rates of workforce participation. This is achieved through nationally recognized training, which ensures that training meets the standards required by industry. Nationally recognized training also ensures that individuals who obtain nationally recognized qualifications can be confident that the skills and knowledge they attain are recognized and valued across Nepal. A higher skilled workforce has the capability to more readily identify, adapt and implement new ideas, positively influencing the introduction of new technologies within business communities. Increasing skills build human capital and encourages the growth of high-productivity industries that employ highly skilled workers.

TEVT has supported existing employees to have their skills formally acknowledged, developed and recognized, as well as providing an avenue for young people or unemployed to identify a clear and defined vocational pathway to help them begin their careers or go on to further study. The need for new, higher-level skills and for the certification of skills has increased both demand and the supply of vocational qualifications. The integrity of these qualifications supports individuals on their career pathways, and ensures that employers have the relevant skilled workforce to make them productive. A failure of confidence in these qualifications will not only waste the significant funding investment in training, but will also devalue the existing qualifications and undermine the functioning of the labor market.

The terminology used in technical education, vocational education, workforce education and occupational education are workplace, human performance, labor market, workforce development, competency, technical skills, basic skills, employability skills, common skills, life skills, core competencies, core skills, essential skills, generalizable skills, generic skills, key competencies, occupational survival skills, transferable skills, workforce skills, workplace basics, workplace literacy etc. The employability skills are communication skills that contribute to productive and harmonious relations between employees and customers; team work skills that contribute to productive working relationship and outcomes; problem-solving skills that contribute to productive outcomes; initiative and entrepreneurship skills that contribute to innovative outcomes; planning and organizing skills that contribute to long term and short term strategic planning; self management skills that contribute to employee satisfaction and growth; technology skills that contributes to effective execution of tasks; and learning skills that contribute to ongoing improvement and expansion in employee and company operations and outcomes. The personal attributes are loyalty, commitment, honesty/integrity, enthusiasm, reliability and balanced attitude to work and home life.

The foundations skills are basic skills, thinking skills and personal qualities. The basic skills are reading and writing, arithmetic and mathematics, speaking and listening. Thinking skills are ability to learn; to reason; to think creatively; to make decision; and to solve problems. The personal qualities are individual responsibilities, self-esteem and self-management, sociability and integrity. Regarding the application of number; take measurement, interpret information from graph and diagrams, calculate amount and size, use

charts, explain the results of calculations and analyze and interpret complex information. For developing the communication skills individual should take part in discussion at work, use a diagram to explain something when going a talk, reading materials for a project, filling in a form or writing an essay, and analyzing and interpreting complex information to a report.

Generally the level of workers can be divided in entry level skills, working with supervisions, working with minimum supervision, working independently, supervisory level skills, management level skills and planners. When someone plans to design TVET curriculum he/she should find the answer of the following questions; who is target clientele? What should be taught? Why should it be taught or what is the mission? When, at what age or level should it be taught? Where or in what educational setting should it take place? How should instruction be designed to teach it?

Purpose and Method

The primary purpose of any TEVT system is to develop sufficient people with the right skills to meet labor market demands. All TEVT systems face the challenge of matching the skills, knowledge and attitudes of the students in the system to the needs of the labor market. The skill base of the workforce in Nepal is critical in setting the foundations for micro and macro economic resurgence and consequently in making sure the nation competes internationally. As with industry, quality is seen as critical and quality assurance is being demanded in skilling the workforce.

The aim of this paper is to give information related with TEVT regulation as well as help to TEVT administrators to maintain the reputation of TEVT. The reason for choosing this subject is, a vast number of adults have either not been to school or not received any TEVT training in Nepal. As a result Nepal's workforce lacks productivity in domestic as well as in overseas labor market. The changing economy means that Nepali businesses are embracing technological and business process innovations to achieve competitive advantage in a global market place. Jobs will continue to be more complex and there will be a consequential increase in demand for a workforce with higher level skills. The connection between employment and training has always been a problem for the TEVT system in Nepal. The analysis of problem affecting reputation of CTEVT provides valuable input for the policy makers, program planners and curriculum developers to design and implement market-driven TEVT programs. In addition, this article builds a foundation for identifying the most prominent problems affecting reputation of TEVT. Within the scope of qualitative research method, the information was gathered through the examination of the written documents related with technical education and vocational training using descriptive analysis. The paper is concluded based on the information of the text and authors individual experiences and observation regarding TEVT system of Nepal.

Regulation of TEVT

Regulation plays a critical role in creating order and engendering trust and confidence in the system as a whole. Regulation also manages risk and underpins quality outcomes and the delivery of skills that the economy need. Poor quality TEVT services by a single provider can attract media attention that negatively affects the reputation of all of the technical vocational education and training system, both on and offshore. Regulation ensures that purchasers of training (whether that is the learner, government, or employer) are faced with fewer risks in term of their investment and return from training. In the training market, the expectation would be that training institutions providing high quality training at a reasonable cost will attract more purchasers than training institutions offering poor quality training. However, the ability of a purchaser of training to exercise effective choice is dependent on the availability of information on the type of training options available and performance of providers, as well as information relating to the demand for particular skills in the labor market.

Nationally recognized qualifications provide a reliable and efficient signal to the labor market of the skills and knowledge that an individual holds. To ensure the effectiveness of the signal, the integrity of nationally recognized qualifications (i.e. that a graduate possesses the skill and knowledge outlined in the qualification) needs to be preserved. The existence of nationally recognized qualifications requires appropriate regulation to underpin the delivery and assure the integrity of the qualification. Inadequate or the absence of regulation may lead to the integrity or perceived value of nationally recognized qualifications being undermined with other less reliable and efficient signals of an individual's skills. TVET in Nepal encompasses public, private, community, and project-based education and training, within the framework of Council for Technical Education and Vocational Training (CTEVT).

Standard for the Regulation

It is important to note that the standards for the regulation of TEVT providers and regulators are one important aspect of a broader regulation and quality assurance framework of TEVT market, which also encompasses: training packages and accredited courses; minimum requirement of each program; government approaches to publicly funded training; workforce development activities; internal quality assurance control of the training institutions, which could also be recognized by general quality assurance bodies (e.g. ISO 9001); provision of consumer information, which could be provided directly by the training institutions or published on individual or government websites; and voluntary memberships or partnerships.

The standard assure quality in the delivery and assessment of nationally recognized TEVT qualifications, ensuring learners, employers and prospective employers, and other education providers can be confident that the individual has the skills, knowledge, and learning outcomes as assessed and certified. It support a transparent TEVT sector with accessible information available on individual training institutions performance and regulator operations, informing decisions made by learners, industry, enterprises, governments, regulators, and training institutions. The standards enable a system whereby training institutions are responsive to their learners, clients and industry; and regulators respond to the assessed risks of providers and the market. Regulation of the TEVT sector through the setting of standards for regulation as a provider of nationally recognized training, and the application of those standards by independent regulatory bodies, is a key mechanism for ensuring quality TEVT.

The standard for regulators set out the requirements in regulating training providers against that standard and identifying the requirement for the accreditation of TEVT program and institutions. The ultimate purpose of the standard is to ensure that the qualifications issued by training institutions are consistent with the requirement outlined in Training Packages and accredited program and have integrity for employment and/or further study. Standards are also established to ensure that training institutions operate ethically with due consideration of learner, employer and community needs; and that the regulation applied to the training institutions nationally consistent, proportionate, responsive, and risk based.

Problem

Damage to the reputation of CTEVT and its recognized qualifications represents a significant threat to Nepal's prosperity and growth. The problem is considered to be of three contributing factors: inconsistent quality of training and assessment of training institutions, undermining the integrity and value of TEVT qualifications held by all individual learners and employees; lack of comparable and reliable publicly available information regarding a training institution and its performance upon which learners, employers and governments can make decision regarding training; significant diversification, growth and change in the provision of TEVT evolving and reacting to a changing economy and market. In particular the regulatory framework needs to be updated to reduce unnecessary regulation and reflect the move toward various forms of learning entitlements or subsidies and extensive and growing competition across the diverse provider cohort.

Lack of publicly available information regarding Training Institutions and its performance

Relevant and robust information is crucial for clients of the TVET system to make informed choices and decisions. The current lack of sufficient information on individual training institutions and their performance makes it difficult for CTEVT to effectively target funding, learners to select training providers and keep track of their training, and businesses to select training options that best meets their needs.

The standards are vague in terms of the type and level of information that a training institution must provide to clients, and consequently, consumers do not have reliable information on how to make an informed choice. Instances of both incomplete and insufficient information and data collection constrain decision making by TEVT consumers (learners, employers and community) and has adverse impact on TEVT investment decisions. The lack of systemic and robust data also leave TEVT consumers vulnerable to providers manipulating data for marketing purpose. Current Quality Indicator data is not useful in its current form due to concerns with its reliability, validity, timeliness and cost.

Standards do not enable a regulatory framework that supports current and future goals of CTEVT

The standards were developed when the training market was much more constrained, with the majority of public funding going to CTEVT, whereas the current situation reflect a greater flexibility within the market through varying degree of entitlement, choice and contestability. The standard for the regulation of TEVT, both training institutions and regulator standards, therefore need to evolve to be fit for purpose to the current regulatory framework.

Concerns have also been raised, regarding inconsistency in the way TEVT is being regulated within and across regulators. This is reflected in various different regulatory guidelines/policies that are used by regulators to supplement the standard. While they note that consistency is not about applying the same solution to every training institutions no matter the circumstances, they are concerned that an training institution receives different treatment and interpretation of the standards depending on who their regulator is or the auditor that undertakes the audit.

Responsive Regulation

The system needs to enable a regulatory model that is responsive to the individual circumstance of the training institutions, encompassing not only its conduct and behavior, but also its strengths, industry context and environment, and culture. A key element of the system is ensuring that effective and well regarded training institutions are supported and encouraged to continue to deliver quality training and assessment. The sound business processes are essential to support training provider viability and sustainability, the real business of TEVT is quality teaching and assessment. In effect, a balance between these two domains of TEVT and business needs to be achieved; one that assures learners, clients, industry, and government of the quality of the learning process and its outcome, as well as the continuity of service provision.

While Training Packages take primacy within TEVT, the development of new Standard for TEVT accredited courses aligns to the design standard of Training Packages. This ensure a consistent approach to the specification required for nationally recognized training products, and allowing greater portability of competency standard for workforce development purposes. Both standard provide implementation advice to support training institutions best practice and qualification integrity. Industry should engaged in the TEVT system through defining the skills and knowledge required to perform effectively in the workplace, which are translated into competency outcomes described in Training Packages and accredited courses. At the provider level, the standards require not only that training and assessment meet the requirements of the relevant Training Package or accredited course, but also for a providers training and assessment strategies to be developed in consultation with industry.

Conclusion

The integrity of nationally recognized qualification is dependent on perceived value. Integrity is jeopardized when any participant (provider, consumer or regulator) behaves or is perceived to behave poorly, raising concerns with the qualification awarded by all providers and tarnishing the reputation of CTEVT.

Over the last few years, there have been concerns about inconsistency in the quality of TVET. These include TEVT quality in some areas of the sector, and reports of unethical behavior by some TEVT providers. In the domestic market, concerns have been raised by a range of stakeholders about the significant variability in the quality of training and assessment, leading to the integrity and value of qualification held by individuals being undermined, with subsequent impact on the operation of the Nepali labor market. Reflecting on the current standard, the affiliation process and auditing of training institutions should be more rigorously enforced by CTEVT regulators to ensure quality and consistency in course delivery and learner outcomes.

In Nepal, the CTEVT role in relation to the standard for the regulators is primarily to ensure regulators effectively apply the standard for the regulation of TEVT providers and the standard for accredited courses, and that regulatory processes are managed in effective ways that support the delivery of innovative, efficient, and improved quality training services.

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Knowledge Management Experiments in the TVET Sector

Dr. Lokendra Prasad Poudyal⁷

Abstract

The importance of Knowledge Management has increased over the years. Around half of the wealth generated in the advanced industrial societies is derived from knowledge capital. It indicates that the utilization of human knowledge is a valuable organizational asset. The developing countries are gradually catching up such notion. The TVET sector is not an exception to this situation. Knowledge Management is an integral part for them in improving performance. To ensure improvements better the most of the organizations have started adopting the culture of a learning organization.

The task of Knowledge Management is to generate strategic options by collecting and analyzing task and objective relevant information. It is a tool for the organization to develop mutual understanding among the stakeholders. It helps to cultivate the culture of information sharing and learning from experience and thereby create innovations. It is a continuous process requiring action research, which subsequently needs strong experimental capacity in the organization. It is a "competence" providing support for change management process.

The TVET sector emphasizes Knowledge Management to enhance efficiency of its training programmes. It leads to increased productivity and employment opportunities in the enterprise. It requires the training service providers to move from supply-driven focus to demand-driven focus training. To make the result of such move better, the TVET sector organizations need adequate appetite for Knowledge Management.

I. Introduction

The importance of Knowledge Management is increasing to enhance productivity of the organizations over the years. It is the basis of updating information in the production system and survive competitive market environment. In this respect, it is one of the important organizational resources. The management gurus like Peter Drucker, Paul Strassmann and Peter Senge define Knowledge Management as learning character of an organization. They treat organizational stakeholders as member of the team of knowledge workers. It has given rise to share right information to the right person, as a matter of priority.

II. What is Knowledge Management

Knowledge Management is a process of enabling individuals, teams and entire organization to collectively and systematically create, share and apply knowledge for the accomplishment of objectives in an organization. It deals with the adoption of improved technologies, systems and processes. It follows holistic approach across the structure of an organization. Knowledge Management is not a new discipline. It is an integral part of the day-to-day responsibility of stakeholders aiming to achieve organizational objectives. It promotes sharing of reliable information among the stakeholders to understand issues and opportunities related to the task.

The task of Knowledge Management is to gather, encode, organize and distribute information. It examines information to generate knowledge for improvements. Knowledge Management is not just one-time event. The organization may need to use the same knowledge more than one times. The extent to which an organization can capture information and generate knowledge depends on its commitment and capacity for systematic persuasion.⁸ It needs strong communication system to inform the decision makers who translate knowledge into action.

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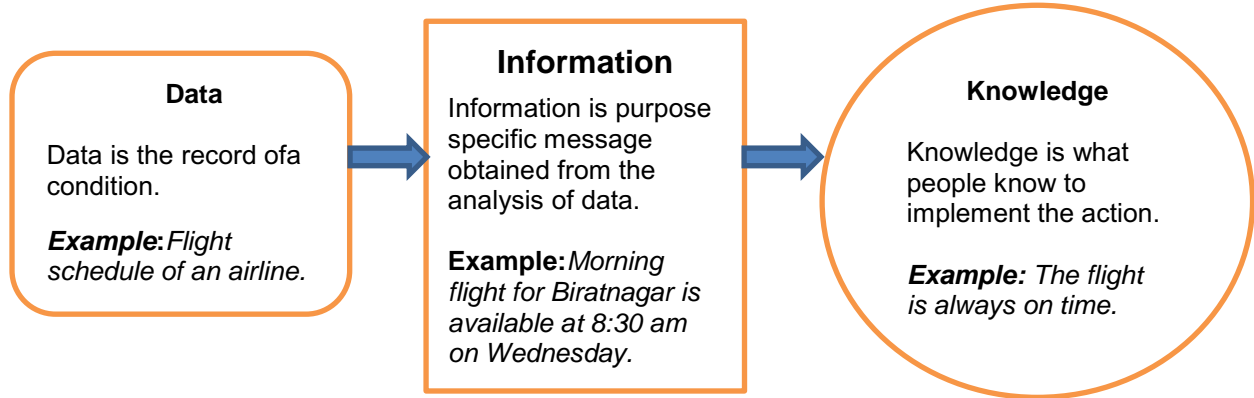
⁸ Sir John Steely Browne, BP, Harvard Business Review, 1997.

III. Relationship among Data, Information and Knowledge

Knowledge Management is a basis for ensuring mutual understanding among the stakeholders. It not only helps them to build synergy by utilizing their competence but also contributes to generate innovations. It also helps to cultivate a culture of information exchange, learning and collaboration for improved performance.

The source of "knowledge" is "information". "Information" can be derived from the analysis of "data". Following chart explains their interrelationship:

Chart 1: The Source of Knowledge



The challenge of Knowledge Management is to turn personal knowledge into corporate knowledge and vice versa.⁹ It is done to add value on the organizational efficiency and effectiveness. In order to ensure the move in a right direction, it needs to accommodate action research as its inseparable part. For this to materialize, the organizations need to strengthen their experimental capacities.

IV. History of Knowledge Management

Knowledge Management is not a new topic in the development literature. It evolved through different years since human beings applied their knowledge to make fire by using stones.

In the mid-19th century, Albert Einstein (1879 – 1955) expressed the present day components of Knowledge Management, in his words, as follows:

About the source of knowledge:

- Information is not knowledge.
- Source of knowledge is experience.
- Learning is experience; everything else is just information.
- The measure of knowledge is the ability to change.
- You can never solve the problem with a level of knowledge which created it.

About the challenges of knowledge management:

- When ends are confusing, they create genuine problems.

⁹ Wybe Van Halsema (2011), TVET Support Programme to Workforce Development Authority (WDA), Kigali, Rwanda, 30 November 2011.

- Not to stop questioning is important to keep the curiosity alive.
- Anybody may know but not understood.
- Learning is a valuable gift.
- The true art of questioning is to discover what should be known.
- Life is like riding a bicycle, as one must maintain information balance to move forward.

About the management of knowledge:

- Once we accept our limits, we can go beyond them.
- If there is an hour to solve the problem I would spend 55 minutes to think about the problem and allocate the remaining 5 minutes to think about the solutions.
- Imagination is important in the application of knowledge.
- Excellence is doing a common thing in a new and uncommon way.
- Necessity is the mother of invention.
- I never teach my pupils. I only attempt to provide the conditions in which they can learn.

Einstein indicated the use of Knowledge Management by highlighting "rule of game to the successful players". He said "*Learn the rules first then play better than anyone else*". *Knowing such rule requires analysis of information surrounding the task.*

In old days, Knowledge Management could have been understood as holding and sharing of information by the librarians and teachers, which was further extended to the level of database managers. During 1980s, "knowledge" was understood as "competence" of an organization. The economic theory also counted "knowledge" as valuable asset for the organization.

In the recent years, the task of Knowledge Management is increasingly simplified by the application of computer software. It helps managers to review the trends and make forecasts, which can then be applied as knowledge for subsequent decisions. It has made the task of information collection and processing popular in most organizations. The number of interactions has increased through strategic meetings, conferences, seminars and workshops. It has made the need of identifying explicit and tacit knowledge of the stakeholders a subject of research. These practices have led the organizations to benchmark their knowledge status and be involved in the change management process for surviving market competitions.

V. Forms of Knowledge Management

The Knowledge Management follows two information tracks: (a) People-track, and (b) IT-track.¹⁰ The people-track examines changes in the knowledge, attitude and behaviour of people compatible to business management. The IT-track transfers information into knowledge by considering "knowledge" as an "object" of information derived from the data. Both tracks are mutually supportive in the Knowledge Management process. They make use of best practices identified from the past experience.

The scope of Knowledge Management relates to both individual and organizational levels. The former contributes to ensure mutuality in the attitude of individuals, while the latter contributes to promote organizational procedures and systems. It makes people aware about the benefit of capturing, analyzing and utilizing information in the form of knowledge. It helps to obtain commitment among the stakeholders in transferring explicit and tacit knowledge to the organizational system. It provides adequate learning opportunities to the stakeholders.

VI. Knowledge Managements in the TVET Sector

¹⁰Karl-Erik Sveiby (2001), What is Knowledge Management? April 2001.

The Technical and Vocational Education and Training (TVET) sector has been emphasizing use of "knowledge" to link the training activities with market opportunities. In order to face market competition, they need to enhance efficiency as well as effectiveness in their training programmes. They should not only aim for training but also the promotion of the production system in the enterprise with supply of quality training graduates. Given that the TVET sector is increasingly receiving greater attention in the economic growth process in the recent years, its role in practicing Knowledge Management has increased significantly.

In the past, the TVET programmes mostly focused on preparing skilled workers in a supply driven mode. When the skills acquired by their training graduates did not match with the professional competence demanded by the employers, they could not contribute much to the economic growth process. It is evident from Nepal's current position of exporter of the large number of unskilled workers abroad.

In the context of the increasing globalized connections, the TVET sector in Nepal needs to develop market friendly training. This sector, once perceived as a second-class learning category sector, has now been successful to increase attraction of youths in the recent years. It could be also because of failure of general education system to ensure job to the degree holders. Currently, one student among five is enrolled in the TVET sector.¹¹ This attraction can be taken as a proxy of increased focus of the TVET sector for employment market friendly training.

The demand of skills in the employment market keeps changing overtime. It creates subsequent implication on the type of training to be offered. In order to understand such need better, the TVET service providers are required to be active for Knowledge Management. They should know market intelligence and understand their best fit to contribute to the industrial products.¹² To make this happen, they need strong Knowledge Management capacity. Since the sector has to deal with increasing industrial movements attached to the knowledge based economy, it has to follow information collection and processing strategies for "knowledge" generation.¹³ In view of this, Knowledge Management is an inseparable part of the TVET sector. According to an estimate of the Organization for Economic Co-operation and Development (OECD), around half of the wealth generated in the advanced industrial societies is derived from knowledge capital.¹⁴ It is an encouraging note for many organizations to increase investments on Knowledge Management.

The employment pattern of the industries in the recent years is shifting from stereotyped manual work to the competitive knowledge based work. The industries, which have embodied market-friendly knowledge in the delivery of their products and services, have become more successful than others. The characteristics of such industries reveal that they are largely interdisciplinary in nature, action research oriented, information-intensive and well-founded on reasoning capacity based human capital.¹⁵

As human knowledge has become important wealth for most of the organizations, the industries are keen to apply "new knowledge" for innovations and enhance productivity.¹⁶ Such realization has direct implication over the contributions that the TVET sector could make. It requires that training programmes offered through the

¹¹ Rupert Maclean and Ada Lai (2011), The Future of Technical and Vocational Education and Training, Special Issue of *International Journal of Training Research*, Volume 9 Issue 1-2 April 2011, ISBN 978-1-921729-10-2.

¹² Suriana Binti Nasir (2012), Strategy to Revitalize Technical and Vocational Education and Training (TVET): Management Perspectives, Universiti Tun Hussien Onn Malaysia (UTHM), Batu Pahat, Johor, Malaysia.

¹³ Ibid.

¹⁴ CPSC (2014), Repositioning TVET Institutions through Knowledge Management, Colombo Plan Staff College for Technician Education, Colombo, Sri Lanka.

¹⁵ Ibid.

¹⁶ Ibid.

sector should be demand driven. It means that they should be oriented more towards the tailor made training, where the role of Knowledge Management is significant.

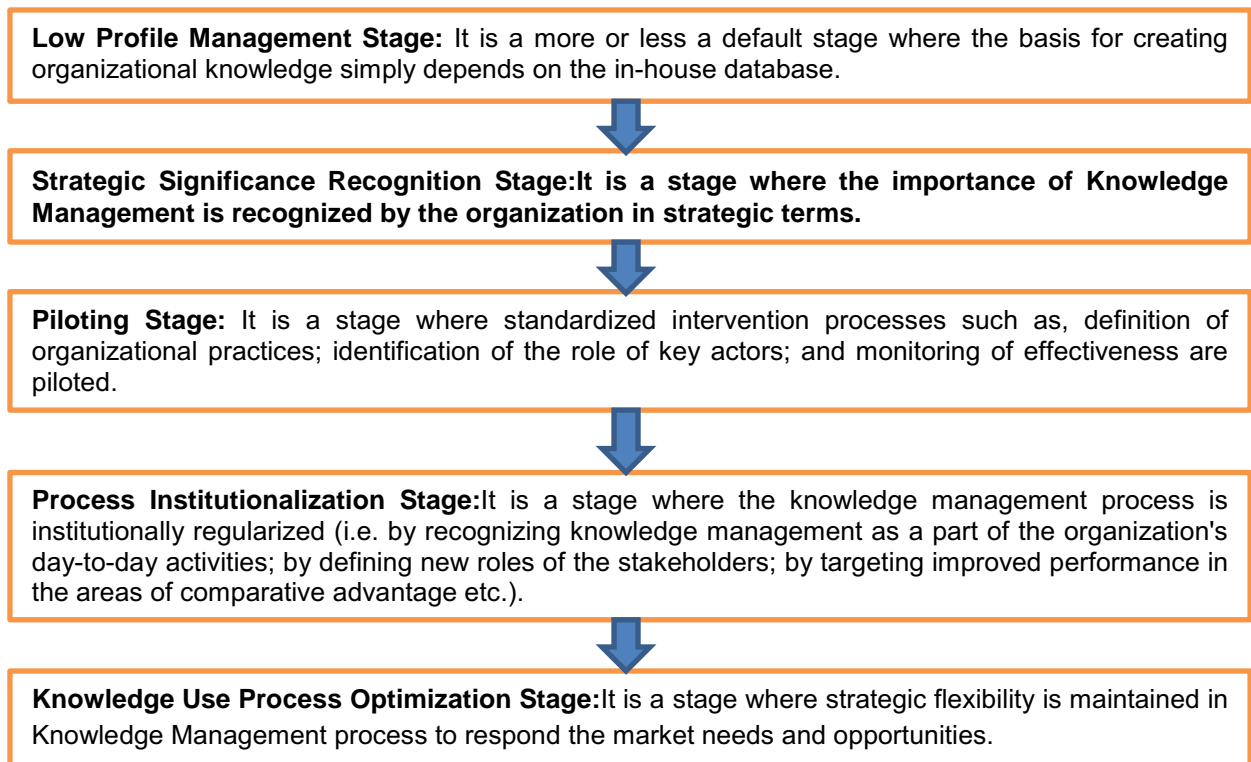
With Knowledge Management, the TVET sector can plan and implement market-friendly training. It can gain competitive edge by establishing intellectual capital in related organizations. It can adopt a practice of learning from experience.

VII. STAGES OF KNOWLEDGE MANAGEMENT

As discussed earlier, the success of an organization depends on the power of "knowledge". "Knowledge" helps an organization to keep its system up-to-date and become market friendly. It contributes to establish procedures for information acquisition, processing, dissemination and utilization.¹⁷ To make these activities market responsive, the task of Knowledge Management should be implemented regularly.

With "new knowledge", an organization can make the attitude, behaviour and competence of its stakeholders compatible to the market needs. It can also selectively apply improved technologies to promote effective delivery of services. Depending upon the maturity of the Knowledge Management process followed by an organization, their stage of development can be categorized as follows:

Chart 2: Knowledge Management Stages



¹⁷Thomas, John S. A Brief History of Knowledge Management, <http://johnstomas.wikidot.com/a-brief-history-of-km>

VIII. Sustainable Knowledge Management

All organizations across the world encounter present day complexities of competitive market environment. It puts them into a constant pressure in accommodating innovations and efficiency. It requires subsequent changes in their management system to survive market competition. In this regard, they need "new knowledge" that contributes to introduce efficiency and effectiveness in their work. It can be made possible only by generating and applying "knowledge", which is market ecology friendly.

A sound "knowledge base" in an organization contributes to capture market opportunities. The interventions founded on "sound knowledge" makes the delivery of services successful. It helps to examine the risk, if any. To benefit from these, the organizations need to develop their information handling capacity. It also requires them to have enough appetite for learning.¹⁸They should periodically benchmark their status and make adjustments to fill the gaps, if any. They should adopt forward looking process for sustainability.

IX. Concluding Remarks

Any successful tomorrow is a matter of today's preparation. For the organizations to achieve their planned targets, they should learn what information environment surrounds them and what strategic knowledge can be generated to apply for tomorrow's task. Considering this, the task of Knowledge Management should be made vision focused. In this regard, three things important to consider in Knowledge Management are: creating values from the information obtained; maintaining curiosity for improvement; and paying full attention to the task objective to be accomplished.

¹⁸Our Competitive Future: Building the Knowledge Driven Economy,
<http://webarchive.nationalarchives.gov.uk/+http://www.dti.gov.uk/comp/competitive/summary.htm>

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Individualized Learning

Dr Agni P Kafle¹⁹

Abstract

Demonstrating understanding of individualized learning by teachers has been a vital element of teaching learning process that considers the individual learner's learning ability, learning pace and performance. Actually individualized learning helps learner to learn better and faster learning and gaining mastery over technical skills and soft skills. In individualized learning, teacher just facilitates the learning process considering the personal ability and difference of learner, interest and performance against expected standard, learning resources and classroom environment. For individualized learning, competence based curriculum is a most that focuses on several factors including individualized coaching, learning outcomes, competence based assessment, learning realities, future orientation and work.

The meaningful learning can be enhanced through constructivist approach that enables the learners to enter into the technical workforce, satisfy the need of customers, cope with new management system, develop necessary soft skills like cognitive skills, problem solving skills, and critical thinking skills. In order to apply individualized learning in classrooms or workplace favorable situation must be created. The facilitator's confidence and situations are like: all can learn if adequate time given, learners must know what they are expected to do, assessment tools must be prepared in advance, ensure learners are interested in competence, encourage for practical application, reward for good performance, and help learners for searching jobs.

Individualized learning

Every individual is different in term of aptitude, learning style, interest and personal behavior. For centuries, while delivering lessons, teachers have been challenged by students having different learning abilities and multiple intelligences. Professional teachers encourage individualized learning for better achievements. In technical education and vocational training (TEVT) individualized learning plays a vital role, because it helps a person learn better and faster while acquiring technical knowledge, skill and attitude. Ultimately, individualized learning contributes towards gaining mastery of skills. While planning individualized learning in TEVT the following components are to be considered seriously: (a) learner, (b) teacher, (c) learning objectives, (d) learning environment, (e) learning resources, (f) curriculum, (g) instructional methods, (h) learner's assessment, (i) constructivism in learning, and (j) proper application of individualized learning (Bachmann, 1998; Kafle 2000).

In the early seventies, "micro-courses" were centered on content objectives. Individualized learning in instructional methods was developed under titles such as "learning activity package" (LAP), and "individualized learning package" (ILP). It was an attempt to individualize learning by enabling the student to master one unit of content before moving to another. (Russell 1074, p 3). In competency-based training, learners move to next competency when they master the previous competence.

National Curriculum for Design and Technology in the United Kingdom (QCA, 1999) placed importance on each student's ability for critical thinking, problem solving, and innovation in emerging technology with the following expectations:

"...learn to think and intervene creatively to improve quality of life. The subject calls for pupils to become autonomous and creative problem solvers, as individuals and members of a team. They must look for needs,

¹⁹ Dr. Agni Prasad Kafle is TVET expert and former Member Secretary, CTEVT

wants and opportunities and respond to them by developing a range of ideas and making products and systems. They combine practical skills with an understanding of aesthetics, social and environmental issues, function and industrial practices. As they do so, they reflect on and evaluate present and past design and technology, its uses and effects. Through design and technology, all pupils can become discriminating and informed users of products, and become innovators. "(p.15)

The learner:

In individualized learning, the learner is the focal point to maximize learning. The teacher must know the needs, abilities, and interest of the individual learner in order to involve learner in active learning. In active learning the learner is intrinsically motivated to acquire new or changed knowledge, skill and attitude. Knowledge is information stored in the mind as facts, concepts, principles, procedures, process and structure. Those skills are classified as cognitive, repetitive, and creative skills. Attitudes are internal values, feelings, beliefs, and drives that can be observed or can not be observed. The observable attitudes are personal skills and interpersonal skills and not observable skills are a person's feelings, values, and beliefs (Appendix 1). Those activities and behaviors contribute to formulate a learner's personality gradually. The active learning involves: (a) making learning goals, (b) deciding how to reach to those goals, (c) selecting activities/practices based on identified needs/gaps, (d) finding resources of information, and (e) budgeting the available time for learning. (Bachmann, 1998; Collum, 1994)

The teacher:

The teacher's role in individualized learning is as a facilitator, learning guide, and manager than a lecturer or presenter. The major activities of the teacher are: (a) assess learner's needs, (b) analyze learner's learning abilities, (c) assess learner's occupational strengths, learning styles, goals and interests, (d) assist to develop individual learning plan with objectives and activities for each learner, (e) organize the learning facilities and instructional materials for each learner, (f) guide learners through learning process, (g) provide coaching to solve problems, and (h) assess learner's performance on an individual basis. The teacher is available whenever needed and maintains balanced interaction. "It is the balance teachers create between teacher-centered and student-centered pedagogics within their technology classrooms that influences how students perceive the learning situation, and ultimately how and what they learn in technology education"(Deluca, W. V. 1992, p.44).

The learning objectives:

Learning objectives are set by the learner with close collaboration or facilitation of the teacher. The conditions and expected standards and results are set mutually by the learner and the teacher. The expected standards can become the norms for the assessment of the learner. In TEVT, competency-based curriculum is very helpful for self-regulated learning.

Learning environment:

Another important aspect of individualized learning is learning environment. Several things have to be considered to create learning environment such as classroom management, lab facilities, equipment, supplies, and furnishing. Seating space and arrangement for small group work or individual work is important for interaction between the learner and the teacher. The learner and the teacher should be able to move around without disrupting other learners. Weimer (2002) found that in traditional teaching method most of the students are passive, distracted, and extrinsically motivated for poor performance. However, Weimer supports that in learner-centered individualized learning teachers are obligated to create an environment in which students and teachers share responsibility for learning.

Learning resources:

Individual preferences and strengths must be identified before organizing learning resources for each student. Learners have different strengths, weaknesses, and learning styles. Some learn best through sensory channels. Some learn best by reading or viewing. Some learn best by listening. Some learn best by practice or hands on approach. Above all, suitable learning resources are required to fit with the learner's strengths and abilities. In labs, works and tasks can be individualized by preparing detailed instruction sheets, slides, and tape records. Learning resources and level of instructions must be prepared considering the maturity level and needs of the learner. These learning resources and materials should expose learners to new interest, new discovery and broader outlooks.

Curriculum:

Technical Education Curriculum Assessment (TECA) focused on workplace competencies, technical accuracy, and pedagogical soundness to develop effective technicians. Keiser, Lawrenz, and Appleton (2004) cited Finch and Crunkilton (1999) to list following factors to be considered while developing curriculum for TEVT. They argued those factors become must relevant to assist students to succeed in the world of work. Those factors are:

- Data-base: decisions regarding content need to be grounded in school and community data.
- Dynamic: curriculum should be responsive to changes in the workplace and modifications should be tangible improvements.
- Explicit outcome: curriculum goals should be measurable; the more explicit the outcomes, the easier it is to determine if the students can achieve them.
- Fully articulated: the scope and sequence of curricular concepts should be thoughtful.
- Realistic: student experiences should be practical and fully contextualized.
- Student-oriented: instructional approach should assist students to prepare for the world of work.
- Evaluation conscious: There should be continuous effort to evaluate the effectiveness of the curriculum.
- Future-Oriented: extent to which curriculum will be effective in the future should be determined.
- World Class Focused: formal efforts be made for world class standards and total quality management.

For individualized effective learning, students should be able to demonstrate following six facets: explanation, interpretation, application, have perspective, empathy, and have self-knowledge (Wiggins, 1993, 1998; Wiggins and Mc Tighe, 1998). SCANS (1991) emphasized on students competencies and skills related to information, basic skills, systems, thinking skills, personal qualities, resources, interpersonal skills, and technology.

Figure 1 – Theoretical Strands

<p>RESPONSIVE EDUCATIONAL EXPERIENCES Finch & Crunkilton <i>(Factors for highly relevant curricula)</i></p> <ul style="list-style-type: none"> • Data-base • Explicit outcomes • Realistic • Student oriented • Evaluation conscious 	<p>DEEP UNDERSTANDING Finch & Crunkilton <i>(Factors for highly relevant curricula)</i></p> <ul style="list-style-type: none"> • Fully articulated • World class focused <p>SCANS <i>(Competencies and skills)</i></p> <ul style="list-style-type: none"> • Systems • Thinking skills 	<p>RELATIONSHIP TO WORK Finch & Crunkilton <i>(Factors for highly relevant curricula)</i></p> <ul style="list-style-type: none"> • Dynamic • Future oriented <p>SCANS <i>(Competencies and skills)</i></p> <ul style="list-style-type: none"> • Resources • Interpersonal skills
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<p>SCANS (Competencies and skills)</p> <ul style="list-style-type: none"> • Information • Basic skills <p>Wiggins &McTighe (Facets of understanding)</p> <ul style="list-style-type: none"> • Explanation • Interpretation 	<ul style="list-style-type: none"> • Personal qualities <p>Wiggins &McTighe (Facets of understanding)</p> <ul style="list-style-type: none"> • Perspective • Empathy • Self-knowledge 	<ul style="list-style-type: none"> • Technology <p>Wiggins &McTighe (Facets of understanding)</p> <ul style="list-style-type: none"> • Application
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Classroom Setting Increased Effectiveness of Technicians

Instructional Methods:

The teacher is expected to choose an appropriate method. The teacher's creativity and preparedness plays a vital role in using the method to ensure learning in the classroom. Among the several methods applicable, the following methods can be helpful for individualized learning.

- Games
- Role-playing
- Simulations
- Case studies
- Brainstorming
- Lab work
- Peer instruction
- Independent study
- Library research and reading
- Small- and large-group study
- Project works
- Cooperative learning: A group of people who care for and are committed to one another, they are going to achieve the goal of the activity much more quickly than if each was to attempt alone.

Learner's assessment:

Learners are evaluated individually based on individual performance. One learner is not compared with another one. The assessment is done on the basis of competencies and standards set by the student and the teacher mutually. In individualized learning the learner should win himself/herself rather than another competitor. The learner should climb the ladder of progress. The following steps are relevant for individualized assessment:

- Progress should be made against set goals and objectives
- Continuous assessment should be done to enhance learning
- Students should be encouraged for self-evaluation of their own work and result
- Careful records of observation and evaluation must be kept for further instruction and learning.

"...what students are most likely to learn in a course is directly related to what they are evaluated on. Evaluation is not just something used to generate grades; it is the most effective tool a teacher has to promote learning" (Weimer 2000, p.17)

Constructivism and learning:

The theory of constructivism has positive implication in individualized learning method. In constructivist approach teachers facilitate learners for active inquiry, and also guide and coach learners for active learning. Doolittle and Camp (1999) advocated that the teacher as learning facilitator opens the doors to knowledge development and application in both academic and vocational education. According to cognitive theorists the teacher's role is to provide learners with opportunities and incentives to learn. Those opportunities are: (a) learning becomes effective when the learner actively constructs meaning from his/her learning; (b) students prior understanding about the topic or concept before instruction makes tremendous influence on what they learn during instruction; (c) the teacher's primary goal is to generate a change in the learner's cognitive structure; and (d) learning with other's cooperation is motivating because teacher comes as support, facilitator, model and coach. Doolittle and Camp (1999) believed that the major concern of adult, career, and vocational educators is the educational preparation of those entering the workforce. In order to satisfy the need of the employers the newly prepared workforce must be able to cope with new management systems, production process, and global competitiveness that require cognitive skills in critical thinking, problem solving, conflict negotiation, and high level technical and basic academic skills.

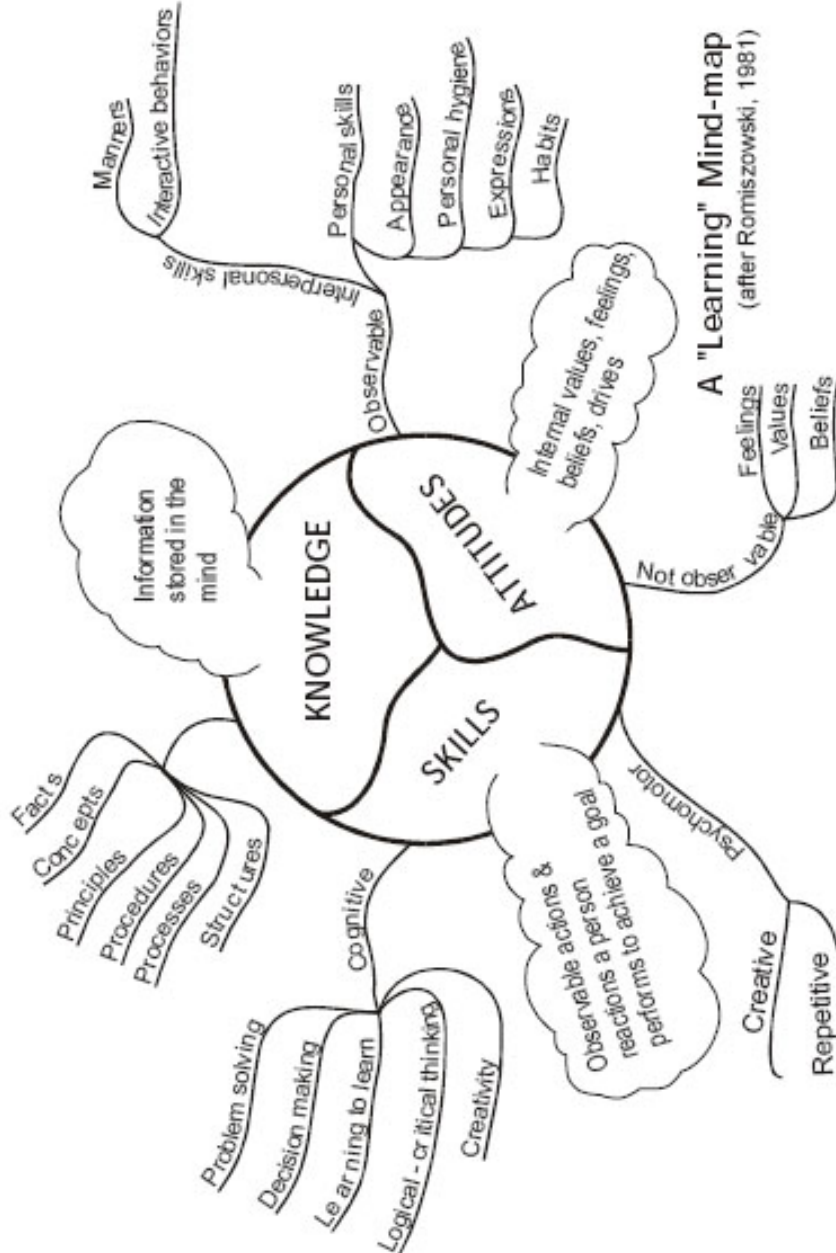
How to apply individualized learning in your situation:

- Plan for all. All can learn if adequate time and practice given. All learners can achieve the expected level of performance.
- The learning plan of one learner may not be the best plan for another.
- Learners must know precisely what they are expected to achieve.
- Learners must be focused towards mastery of learning.
- Assessment tools be used to determine the learner's readiness to move to the next learning experience.
- Lead to students learning to take responsibility for their own work.
- Don't ask students to do all the work, the teacher also must take the responsibility.
- Ensure students are interested in productivity and competence.
- Try to give students the skills they will need to be economically independent in life.
- Believe curricula should be geared to this kind of focus.
- See knowledge as enabling students to be capable of making their own way.
- Encourage practical applications.
- Ensure students like technical things and hands-on activities.
- Use measured rewards.
- Help students in job-search. ([Excel, 1998](#)).

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Appendix 1



Source: TITI, Nepal

Soft skill Gaps in CTEVT Curriculum Guides

Bhoj Raj Neupane²⁰
Dr. Hari Kumar Pradhan²¹

Abstract

Contrary to the term, 'Soft skills' are difficult but not impossible skills to teach and learn. However, they are complementary to the technical skills of any job. The paper is an attempt to define soft skills and highlight on their importance in any job of an organization. Then soft skills drawn from the gap analysis conducted on the hotel management course and three other courses operated under CTEVT curricula are taken as examples of the needs in the market to show that such skills need to be well incorporated in the curriculum guides not only in name but in practice also. A set of skills are also presented which could be used as the core soft skills for any job which could be referred while incorporating soft skills.

Introduction

CTEVT has been pioneer in the country in the development and implementation of mastery learning through the use of competency based curricula. The organization's focus on developing curricula starts from assessment of skill needs and identification of the exact skills for addressing the needs. One of the proven methods of identification of skills has been job analysis through DACum which is in use in Nepal for more than two decades in Nepal. Dr. John Collum was the first person who introduced DACum in CTEVT system in Nepal. Now it is widely used in developing the list of tasks of any job not only by CTEVT and affiliated institutions but also by others who want to identify them in a very short period of time i.e. in one or two days. It has been the most reliable source of information if used applying the procedures developed by Robert Norton. Sponsored by the British Council, Kathmandu and requested by CTEVT, the scribes conducted gap analysis of the four curricula recently used by CTEVT and its affiliated institutions during February to April of this year. The curricula were Hotel Management for Diploma level, Mechanical Engineering for TSLC, Junior Technician in Agriculture and Massage Therapy. The gap analysis very prominently showed that soft skills were missing in the present day holders of the respective jobs.

Soft skills and their role in one's profession

Here are few definitions of soft skills according to literature:

"Soft skills is a term which refers to personality traits, social graces, facility with language, personal habits, friendliness, and optimism that marks people to varying degrees." Dr. K. Alex

"Soft skills is a term often associated with a person's ["EQ" \(Emotional Intelligence Quotient\)](#), the cluster of personality traits, social graces, communication, [language](#), personal habits, friendliness, and optimism that characterize relationships with other people.^[1] Soft skills complement hard skills which are the occupational requirements of a job and many other activities. They are related to feelings, emotions, insights and (some would say) an 'inner knowing': i.e. they provide an important complement to 'hard skills' and IQ." http://en.wikipedia.org/wiki/Soft_skills

"Soft skills have more to do with who we are than what we know. As such, soft skills encompass the character traits that decide how well one interacts with others, and are usually a definite part of one's

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²¹ Dr. Pradhan was former director at CTEVT and currently works at Macro Development Synergies Inc (MDSI).

personality. Whereas hard skills can be learned and perfected over time, soft skills are more difficult to acquire and change.”<http://www.investopedia.com/terms/s/soft-skills.asp>

The above definitions indicate very clearly that ‘soft skills’ are different from technical skills sometimes referred to as ‘hard skills’. They are non-technical ones but critical to the success of any job. They are also called people skills. They encompass different traits desirable in interaction and relationship with people.

Terming them as emotional intelligence, Roger Gill lists the following characteristics covering them:

- Awareness of others
- Organizational awareness
- Interpersonal sensitivity
- Resilience
- Interpersonal connections
- Building bonds
- Compassion
- Empathy
- Personal power
- Influence
- Trustworthiness
- Conscientiousness
- Achievement orientation
- Motivation

However, Dr. Alex categories soft skills in following three categories:

Social skills:

- Communication
- Interpersonal skills
- Positive attitude
- Values
- Perception
- Etiquette
- Apply leadership and office management skills

Thinking skills:

- Creativity
- Problem solving
- Decision making

Negotiating:

- Coping with time
- Coping with stress
- Coping with emotions
- Team work

Though hard to develop, soft skills play an important role in the success of any organization or business. An organization with technically sound people without soft skills can’t prosper. Taking the hotel management in case, can we imagine the prosperity of the hotel where there best cooks but if the waiters or front desk supervisors lack the professional etiquette, will the customers return to the hotel if they could choose? Similarly, a mechanical supervisor knowing his trade well alone, does not succeed if he or she cannot deal

with the customer well. JT will not prosper himself or his office if he or she does not listen to the needs of the farmer with due attention and respect. No client will return to the massage center, where the massage worker though very skilled in the special massage in need of the client, is not polite, does not respond to his problems or questions and or shows unwelcome gestures.

Soft skill gaps in the curricula under study

During the gap analysis the following skills were mentioned as missing in the four curricula.

1. **Hotel Management**

i. **Waiter/Waitress Supervisor**

- Demonstrate positive attitude toward the job
- Maintain Personal grooming
- Respect seniors
- Be adaptive to hotel situations

ii. **House Keeper**

- Perform personal grooming

iii. **Chef the party,,**

- Sensitivity toward the guests
- Self motivation
- Initiation
- Goal/task oriented
- Punctuality
- Respectfulness

iv. **Bar Supervisor**

- Sensitivity toward guest needs

2. **Mechanical Engineering**

- Apply work planning skills
- Apply managerial skills
- Prepare CV and applications for job
- Deal with customer

3. **Agriculture JT**

- Occupational safety and health
- Environmental safety and health
- Employability
- Leadership
- Conflict management
- Presentation skills

Attitude

- Occupational discipline and honesty
- Learning and by doing
- Respect to occupation
- Professional behavior
- Rapport building
- Cultural adaptation
- Cooperative as well as competitive
- Creativity
- Research oriented
- Calm

- Polite
- Unbiased
- Patient

4. Massage Therapy

- Demonstrate respect for the occupation
- Demonstrate courtesy
- Demonstrate honesty and discipline
- Demonstrate politeness, sincerity and carefulness in speech and behavior
- Demonstrate awareness to the environment
- Demonstrate positive thinking in work and behavior
- Greet guests, clients and patients
- Demonstrate confidence in work and behavior
- Wear dress and ID card while at work
- Demonstrate sensitivity to hygiene and sanitation while serving customers
- Demonstrate diligence in work

Incorporating soft skills in the curriculum

The usual process of developing the curriculum after the job tasks are identified is task analysis. The quality and accuracy of the tasks and steps along with the knowledge components depends on the education, experience and expertise of the Subject Matter Experts (SMEs) selected for task analysis. So the challenge here is to select the well qualified and efficient SMEs who know the respective soft skills. In fact, it is difficult to identify the SMEs well versed both in hard and soft skills. It is one thing to talk about soft skills but how to practice them was never so easy. So it may be a good idea to identify persons with very good people skills. Then the skill of the curriculum expert or the facilitator is very much needed to draw the soft skills from such people in writing.

It is good to know that CTEVT has already started to revise the four curricula based on the findings of the gap analysis. It is hoped that the revised curricula will have the soft skills incorporated in them along with task analysis. The product so prepared will serve as the model for other courses. The following skills could serve as the representative soft skills for any curriculum:

- Demonstrate courtesy in work and behavior
- Demonstrate personal grooming
- Demonstrate positive attitude
- Demonstrate thinking skills
- Be a team player
- Communicate effectively
- Demonstrate confidence
- Develop creative skills
- Learn from criticism
- Demonstrate self-motivation
- Prioritize to-do list
- Look at the large picture at work

Conclusion

The intention of this paper is neither to show that technical skills are less important than the soft skills nor is it to say that soft skills are not addressed by the present curricula. The scribe only wants to say that it is time to give equal emphasis to both sets of skills while designing curriculum guides. The above facts and information show that the curricula under study lack the major part of the learning without which we cannot produce competent and confident graduates from the training programs we conduct. It may be the case with other curricula too. Therefore, they should be part of every training program which helps the workforce to be more responsive to customer demands. This suggests that other curricula also have to be studied from this angle. Though we call soft skills they are hard to learn. It is not to say that they cannot be learnt with proper training and practice. The challenge to the institutions is to revise the curricula ensuring the inclusion of soft skills along with the hard skills and monitor the progress.

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An innovation in TVET: Vocational Education in Bandipur Campus

Dr. Poorna Kanta Adhikary²²

Abstract

Bandipur, once thriving political and commercial center of the region was turned into a ghost town, when most of the residents moved away when the district headquarters of Tanahun was moved from here to Damouli and the Pokhara-Kathmandu Prithivi Highway bypassed it. An effort in 1980 made by the local community established a campus affiliated with TU, which is providing B.Ed. program. Like the graduates of most of such campuses in rural Nepal, those of Bandipur have difficulties to find employment, which has demoralized every one. In the mean time the Bandipuries have made a commendable effort to turn the town into a tourist center, which needs quality service. An effort is being made under public-private partnership (PPP) modality to introduce the hospitality related vocational education for value addition in tourism in the Campus. This can be a model to transform the existing TU Campuses in meeting the societal needs by integrating TVET in general education.

Bandipur Revisited

I was in Bandipur on the day of Mid December 1951 when firing from the army barrack killed six revolutionaries of those who were moving in mass to capture the government offices to over through the 104 years old Rana Regime. Bandipur then was a prosperous commercial and political town as it was the headquarters of Tanahun district and situated on the main trail connecting Hills, Mountains and Tibet in the north with Terai and India in the south. When I visited Bandipur in December 1960 on my trek from Chitawan to Lamjung, I found the town still thriving as before. Although Tribhuvan Raj Path was being constructed and air service was already there in Palungtar and Pokhara to connect Hills and Terai, a great deal of people and goods were still passing through the town. When the District Headquarter moved from this town to Damouli and Kathmandu-Pokhara Highway bypassed Bandipur, most of the people moved out of this place turning the once thriving commercial hamlet into a ghost town. Only very few people who had no means to move away remained behind.

After the referendum in 1980 when government announced that private initiative could be allowed to open the campuses, the decision was taken to open a campus in Bandipur. I was the main educational architect at that time and mobilized a group of enthusiastic university graduates with M.A. degree and a number of intellectuals to work together with the ones of Bandipur origin to turn this historical commercial town into an educational one, evolving towards a university. Looking towards north at the Marsyandi Valley and panorama of the Himalayan peaks from Tundikhel, one could feel that it is a perfect place to charter a development strategy of the region. Unfortunately, the group had to withdraw from the place in just a couple of years due to intolerance by the local and national politics of that time. In 1990, I went there again with a Swiss friend of mine thinking to spend an overnight there. The situation then was so bad that we could hardly stay for five minutes; the morale of the people left behind was terribly low and the local infrastructures and houses of the town were falling apart.

Nearly two decades later when I went to Bandipur again together with my colleague Bishnu Bhusal, on our way to and from Lamjung for our work in Lamjung Skill Development Foundation (LSDF) Campus at Gairi, we

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were happily surprised by the few initiatives taken to give a new face to Bandipur by rehabilitation of the old buildings and trying to make it a touristic town. While walking through the town we also met a few of the old friends of three decades back and got information about the initiative taken by some non-resident Bandipuries in this task, who were known to me since 3-6 decades back and felt like lending our support to encourage them.

TVET at Bandipur Campus for Value Addition on Tourism

The old Bandipur Campus is found providing a program in Bachelor of Education (B.Ed.) of Tribhuvan University (TU) with humanities background, which has very little opportunity of employment for the graduates. The morale of students, teachers and community members who have been supporting the Campus has been found very low — unable to do anything; they cannot close the only Campus they have nor do they see any benefit of running it just the way it is doing. This scenario is common to most of the TU campuses located in the rural areas, which have been started by local people. Except for the few, most of the graduates of such campuses find no employment adding figures to unemployed educated youth in the country. Whereas at the same time many of the enterprises have difficulties to get qualified human resources to serve them. Bandipur with all new hotels, restaurants and lodges has also been suffering from quality service in hospitality management—risking the enormous investments made by local people. If a serious action is not taken in time there is always a possibility of crashing the tourism industry in this beautiful town. We felt then that the best support we could provide in Bandipur initiative is to upgrade the service provided by the tourism industry in this town. To bring a new idea to make the Campus relevant with the societal needs, an intervention with hospitality education in it could be the most appropriate for the time being.

In the mean time we also had occasions to meet Khem Lakai, CEO and Principal of Global Academy of Hospitality Management and Education (GATE), who has a great success story of a lone entrepreneur. For this reason, we had requested him to quietly visit with us to Bandipur and see if something can be done in this line. As his response came positive then we contacted the old friends to try to take the challenge into a new opportunity by doing something new. After a series of encounters with friends both in Bandipur and Kathmandu, it is decided now to add hospitality related vocational training in the Campus within the public-private participation (PPP) modality —with an aim of making Bandipur: Value Addition for Tourism. The initiative is being registered as a private company of Bandipuries of varied background together with Bandipur Campus, GATE and Enterprise Development Company (EDC --Uddyam Byabasaya Bikas Company). The scheme will let the regular TU B.Ed. program going as usual without any intervention. Since the Campus opens only in the morning in the new building, the idea came for running hospitality related vocational training and management in the old building during the day time and evening. The students will be given the choice to take the course during this time.

The vocational course does not need any academic certificate for entry beyond a certain level of cognition of language, mathematics and general knowledge of basic education, say equivalent to 8th grade education. Those willing out-of-school youth not being able to complete SLC, students of 10+2 education in the local high schools and those of Bandipur Campus will be eligible for entry in the program that have passed the entry examination together with aptitude test. The owners of the local hotels, restaurants and lodges who are the shareholders of the new initiative will have to sponsor one student at least in providing his/her tuition fee, lodging and boarding in their place. For that the students will have to work by applying in their respective sponsor's place whatever they have learnt at the Campus on every day basis. The option will also be there for the local entrepreneurs to enroll themselves or have their own children do so who are willing to go through the hospitality related vocational education. The Program Management will strictly monitor the implementation of this scheme through a card that every student will have to carry and have it signed by both of his/her sponsor and the respective trainer. Periodic evaluation of the program will be carried out and re-planning will be done based upon Results Based Management (RBM) approach of Program Cycle Management (PCM) with application of the Logframe. Here the hospitality related vocational education has

taken the approach of direct support of the related industry so that the program becomes most relevant in transforming the industry with quality enhancement. In this way the vocational education program and the industry will have a very good symbiotic relation. A technical vocational education and training (TVET) program without a supporting related industry providing employment is simply not effective to offer the needed practical experience. The above arrangement narrows down the gap between the training institution and employers and learners obtain sufficient practical experience as well as employment opportunities.

Besides the above program, a separate agreement will be made in near future between Bandipur Campus and Lamjung Skill Development Foundation (LSDF) to start other infrastructure development related vocational and technical courses in Bandipur. Initially the LSDF students and faculty will support the program for the needed infrastructure development through EDC. As there is a big demand of the trainers for developing human resources for the growing tourism industry and infrastructure development in the country the graduates of Bandipur Campus with B.Ed. diploma together with a certificate from GATE and/or EDC/LSDF, will have added advantage of being qualified to become trainers in the field. Such graduates are very much in demand in the market in addition to employment opportunities both at home and abroad. GATE has already demonstrated willingness to provide scholarship to take their course in Kathmandu to some of the local campus graduates if they are willing to become trainers in Bandipur. With integration of entrepreneurship training the program graduates will also have the chance to start their own enterprise in their respected field for their self-employment. Those fulfilling the entry criteria for higher level of technical education in tourism and hospitality management will also be facilitated for their entry at GATE or some similar institution elsewhere. As a pilot case the scheme aims at providing value addition to traditional TU Campus to make the education more relevant to the societal needs with added opportunities for employment and self-employment of the graduates. How this spontaneous indigenous initiative will unfold in a few years to come will very much depend upon the efforts of the related stakeholders.

In line with the Bandipur experiment, efforts will be made in near future to offer similar programs in other areas of vocational education in the existing TU campuses of nearby districts. One innovation is badly needed in providing vocational training in livestock raising including animal health and organic agriculture at the level of NSTB Level 1 and 2. The experience indicates that traditional subsistence agriculture is dying as it cannot compete with other sectors of economy. Therefore agriculture sector has to be commercialized through small and medium enterprises. As the university graduates are more inclined to go after armed chair oriented white collar job both at home and abroad, the NSTB level 1 & 2 graduates with some entrepreneurship training are going to be the new hope for economic regeneration in rural areas and food security in Nepal. This is how integration of TVET together with entrepreneurship program can be done in general education which could address best the societal needs. (Kathmandu, May 2014)

COUNCIL FOR TECHNICAL EDUCATION AND VOCATIONAL TRAINING (CTEVT): Reflecting the PAST, perpetuating the PRESENT and directing the FUTURE

~ Saurav R. Joshi ²³

Abstract

Technical and Vocational Education Training (TVET) has evolved in Nepal mainly to provide individuals with the skills and knowledge needed for productive employment and to meet the demand of skilled human resource needed for national development. The TVET of Nepal has a historical genesis by initiation of Aurvedic Vidyalaya in 1929 and engineering school in 1930 to produce mid-level technical human resources. Before that, there was only name and fame of 'Arniko' and artisans who have been successful to transfer their skills from one generation to another.

Introduction of vocational subjects in secondary schools got momentum during 1960's with the initiation of multipurpose education. National Education System Plan introduced Vocational education was as an integral part of secondary education in 1971. In view of national needs of basic and mid-level technical human resources, the National Education Commission proposed development of the TEVT sub-sector as a parallel system to the formal education. A Directorate of Technical Education and Vocational Training was constituted in early 1980's and transformed to Council for Technical Education and Vocational Training (CTEVT) under the CTEVT act 1989.

This paper has been prepared to have retrospective view – the PAST, analyze current situation-the PRESENT and provide conceptual thoughts and strategic direction- the FUTURE of CTEVT emphasizing on key TVET policy-2012 areas.

1. PREAMBLE

Education is critical for economic growth and poverty alleviation. Changing technology and economic reforms are creating dramatic shifts in the structure of economies, industries, and labour markets throughout the world. The rapid increase in knowledge and the pace of changing technology raise the possibility of sustained economic growth with more frequent job changes during individuals' lives. These developments have created two key priorities for education: 1) it must meet economies growing demands for adaptable workers, who can readily acquire new skills and 2) it must support the continued expansion of knowledge. Similarly, Technical and Vocational Education and Training (TVET) in specific, has two purposes: 1) to provide individuals with the skills and knowledge needed for productive employment and 2) to meet skilled human resource needed for national development as well as employers' needs for trained workers. The sub-sector TVET is earlier known as Technical Education and Vocational Training (TEVT).

The complexity of TVET, a sector where environment is dynamic, diverse and characterized by constant change is being increasingly recognized. This nature is exerting tremendous pressure on the training and development organizations to continuously respond to the changing skill requirement by way of changes and adjustment to their training packages and related functions in the arena. The knowledge and skills that students gain from TVET institutions have become much more valuable, both to the individual and to society, thereby increasing the importance of participating in TVET program that leads to gainful employment. TVET system needs to create new opportunities for students through innovative approaches and pathways, and develop a coherent policy that integrates different dimensions in skill training and value formation as part of the the strategy for global economy. (CPSC, 2013)

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56 | Volume 1, No. 14

In these contexts, the Council for Technical Education and Vocational Training (CTEVT), an apex body of TVET sector in Nepal has a greater role in contributing in the economic growth of the country. This paper with the TVET reflection of the past, perpetuation of the present and conceptual thoughts and strategies will help to direct and shape up the better future for TVET.

2. REFLECTING THE PAST

2.1 History of TVET

After “Arniko”, Nepalese history of arts and crafts has crossed many hills. The artisans have been successful to transfer their skills from one generation to another even challenging the science and technologies of technical skills transfer. There have been many attempts to formalize the transfer of skills to future generation with training interventions. The initiation of Aurvedic Vidyalaya in 1929 is an attempt to formalize vocational education in modern form. The TVET has a legacy that originated from the opening of an engineering school in 1930 to produce needed mid-level technical human resources in the field of engineering. (D.P.Dhungel, 1998)

Introduction of vocational subjects in secondary schools got momentum during 1960's with the initiation of multipurpose education with financial and technical support of the USAID. Many schools were converted into multipurpose secondary schools with the subject like: Agriculture, Trade & Industry, Home Science and Secretarial Science. With the initiation of Ministry of Education (MOE), total of 29 Multi-Purpose High School (MPHS) were established in 1960's. Also, with the purpose of providing training to the vocational teachers of the MPHS, National Vocational Training Center (NVTC) was established in 1967. It also aimed at training students in basic skills and in various courses for industry, agriculture, business and home economics. The impact of this intervention resulted in high degree of awareness in vocational and technical education but, it was dropped after withdrawal of American support in the early 1970's. In one way, it was replaced by the concept of vocationalization of secondary education during the period of National Education System Plan (NESP).

The NESP (1971-76) introduced vocational education as an integral part of secondary education. Regardless of the kind of school and its location, at least one vocational subject was introduced mandatorily in each school. However, this experiment did not succeed due to schools' inability in providing the desired and marketable vocational skills, nor the students could be attracted then away from the formal and higher education (Belbase L.N., 1997).

The modern technical school system emerged after 1980 after the establishment of Karnali Technical School, Jumla in 1982 under National Education Committee (NEC). Balaju School of Engineering and Technology (formerly known as Balaju Technical Training Centre and Mechanical Training Centre) became the part of the Technical School system even though it was established in 1961 in another form. The other initiatives were the establishment of Uttarpani Technical School in Dhankuta, Lahan Technical School in Siraha, Jiri Technical School in Dolakha, Lalitpur Technical School in Lalitpur, Khumbeshwor Technical School in Lalitpur and Sanothimi Technical School in Bhaktapur district.

In view of the national needs of the lower and mid-level technical human resources the NEC proposed development of the TVET sub-sector as a parallel system to the formal education. A Directorate of Technical Education and Vocational Training (DTEVT) was constituted in early 1980's and finally in 1988, the CTEVT was created.

2.2 Establishment of CTEVT

The CTEVT established under a separate CTEVT Act in 1989 with the mandate of formulating TEVT policies, coordinating TEVT providers, assuring quality TEVT and implementing or facilitating to implement all types of

TEVT programs to produce skilled workforce required to bring changes in the existing socio-economic conditions in the country.

As government initiated liberal economic policies after restoration of democracy in 1990, private sector were motivated to run technical and vocational training institutes. The door has been opened up to private sector by amending CTEVT act in 1993. It has given the CTEVT a huge responsibility of setting the training standards, accrediting and certifying the training institutions, developing curriculum for training courses, conducting research activities and coordinating the other TVET partners. In this regards, number of private technical institutions have been established under affiliation of CTEVT.

2.3 Strategic directions of CTEVT in the past

In 1997, Dr. Peter Quesenberry, CTA, ADB Project expressed his views regarding CTEVT future directions "CTEVT's Guiding Policy Statement for A.D. 1997-2012". He suggested the focusing areas of CTEVT as: 1) Formulate policy, 2) Diversify services 3) Emphasise to move from institutional based training to community and industry based training, long courses to long and short courses, government training centers to non-government centers, training courses for government employment to training courses for private employment and enterprise development, primarily government quality control to involvement of industry and professional organizations in quality control 4) Coordinate for the results - cost-efficient training, more employed graduates, positive impact on a significant portion of population.

In the Ninth Plan (1997-2002), it has been mentioned that all vocational and technical programmes running at certificate level under Tribhuvan University will be gradually transferred to CTEVT. It was the initiation to bring basic and mid level workforce development under one umbrella, however, CTEVT could not grab this opportunity for various reasons. If these strategies were successful, it would have been different shape of TEVT system today.

A strategic planning process for CTEVT was initiated in late 2002 to try to bring focus in the activities of CTEVT and bring them more in line with the needs and mandate of the government, particularly the 10th Five-Year Plan. The strategic plan developed and approved by the Council calls for CTEVT to lessen its emphasis upon implementation of its own programs by moving them towards local management and to increase its focus upon policy, coordination, quality control and provision of services for the entire TVET sector. It also brought focus to addressing the access and equity issues related to the TVET sector, particularly those living below the poverty line. The CTEVT strategic plan (2003- 2008) has multiple strategies to achieve following 6 goals:

1. CTEVT will improve the quality and cost efficiency of the TEVT sector,
2. CTEVT will fulfill its social obligations towards broad access and poverty alleviation,
3. CTEVT will use 'rate of employment' as its primary measure for training program success,
4. CTEVT will become a more customer-focused, service-oriented organization,
5. CTEVT will shift its focus from implementing to guiding, facilitating and regulating,
6. CTEVT will contribute to the protection of the national job market.

In 2004, the task force team of 7 regular member and 3 senior management members have conceptualized the re-organization of CTEVT due to significant overlap of functions in several areas and many mandated responsibilities not fully addressed. The task force coordinator, Mr. Larry C. Asher and the team developed CTEVT organization structure with 3 directorates viz. Technical Service Directorate, Quality Assurance Directorate and General Management Directorate at head office and 3 Regional Directorates at Eastern, Central and Western region. The Technical Services Directorate was conceptualized as a facilitating body for the purpose of providing support services and capacity building to TVET providers or those supervising TVET activities at local level and with the functions of existing Technical, Polytechnic, Training and Research and Information Divisions. The Quality Assurance Directorate was conceptualized as a facilitative body for the purpose of protecting the TVET customer, by ensuring a high standard of training and encompasses the functions allotted to Accreditation, Examination, Curriculum (& Equivalency) and Skill Testing Divisions. The

General Management Directorate was conceptualized for the purpose of carrying out all of the internal CTEVT day to day planning, management and budgeting functions which encompasses the functions allotted to Planning and Administrative Divisions (CTEVT re-organization task force report, 2004).

Vision and Mission statements of the past

There were several vision and mission statements created in limited span of time especially in the documents of late 1990's and early 2000's. The following table 2.3.1 shows some of the vision and mission statements of CTEVT in the past.

Table 2.3.1 Vision and mission statements of CTEVT in the past

<p>Vision: CTEVT will facilitate the production of basic and middle level skilled human resources for economic development and improvement of the quality of the life throughout the Kingdom of Nepal.</p> <p>Mission: “CTEVT formulates policies, coordinates, ensures quality control, and provides services to benefit the various training providers to function effectively and efficiently.</p> <p style="text-align: right;"><i>Source: CTEVT TEVT Journal (1997)</i></p>
<p>Vision: CTEVT is the apex body of TEVT sector to contribute in the economic development of Nepal.</p> <p>Mission: “CTEVT formulates policies, ensures quality control, coordinates all the technical and vocational training related stakeholders and provides services to facilitate technical education and vocational training programs to facilitate in the preparation of basic and middle level skilled human resources for economic development throughout the kingdom of Nepal.</p> <p style="text-align: right;"><i>Source: CTEVT brochure, 2002</i></p>
<p>Vision 2020: “No Nepali should be unemployed due to lack of access to TEVT program”</p> <p>Mission: At CTEVT, skilled workforce preparation is our key responsibility.</p> <p style="text-align: right;"><i>Source: CTEVT's strategic plan 2008 (approved by CTEVT Council on October 10, 2003)</i></p>

3. PERPETUATING THE PRESENT

3.1 CTEVT in-brief at present

The CTEVT, as a national autonomous apex body of TVET is committed for quality production of required technical and skillful human resources. It mainly involves in policy formulation, quality control, preparation of competency based curriculum, developing skill standards of various occupations and testing the skills of the people, conduct various research studies and training needs assessment etc.

It has an ‘Assembly’ consisting of 24 members and a governing board known as ‘Council’ comprising 9 members. Minister of Education chairs both the Assembly and the Council. The Council has a full time Vice-Chairperson and a Member-Secretary.

In the recent past, CTEVT has develop a new strategic plan 2014-2018 with a **Vision 2030** as ‘*Skilling Nepal for People’s Prosperity*’and **Mission** as ‘*CTEVT is a vibrant organization promoting TVET system to develop a competent workforce for national and international market needs*’. The CTEVT’s new strategic plan have been approved by the Council in May 15, 2014. In order to achieve and attain the mission and vision, CTEVT has new sets strategies to achieve the following 6-E goals:

1. Expand TVET programs for ensuring access and equity	2. Ensure quality, relevant and efficient TVET system
3. Enhance effectiveness and efficiency of CTEVT management	4. Establish NVQF to ensure its compatibility with education framework
5. Extend technical input to establish TVET fund	6. Establish effective coordination with and among TVET stakeholders

CTEVT Divisions

The CTEVT's activities are being carried out through eleven Divisions: 1) Research and Information Division, 2) Technical Division, 3) Curriculum Development Division, 4) Examination Controller Office, 5) National Skill Testing Board, 6) Administration Division, 7) Accreditation Division, 8) Polytechnic Division, 9) Training Division, 10) Planning and Policy Formulation Division, 11) Technical Education in Community School (TECS) Division. Apart from these major divisions, CTEVT possesses TVET Expansion Unit, Legal Unit and Internal Audit Unit.

CTEVT Staff Structure

There are 932 staff currently working at CTEVT and its constituent institutions. The highest percentage of 30% is occupied by Assistant level 1st Class people. The distribution of staffing structure with respective percentage is mentioned in table 3.1.1.

Table 3.1.1 Distribution of CTEVT Staff according to the level and their percentage

S. N.	Level	Tech. staff no.	Admin. Staff no.	Total	in %
1.	Gazetted 1 st Class	21	7	28	3
2.	Gazetted 2 nd Class	76	14	90	10
3.	Gazetted 3 rd Class	201	41	242	26
4.	Assistant 1 st Class	162	117	279	30
5.	Assistant 2 nd & 3 rd Class	97	38	135	14
6.	Supporting staff	-	158	158	17
Total		557	375	932	100

(Source: CTEVT, 2014)

CTEVT Institutions

There are three types of technical institutions (CTEVT constituent, affiliated and TECS) under CTEVT, which are providing technical education and vocation training related to agriculture, medicine & health, engineering, forestry and tourism & hotel management programs and trades. The following table no. 3.1.2 shows type of institutions and their quantity:

CTEVT programs

CTEVT runs different programs and short term trainings in various disciplines such as health and medicine, engineering, agriculture and forestry. Most of the certificate or diploma level programs are of academic natures which have access for higher education. The table 3.1.3 shows the CTEVT's enrollment capacity in TSLC and Diploma/PCL programs.

Table 3.1.3: Enrollment Capacity in TSLC and Diploma/PCL program in CTEVT

Table 3.1.2 Type and number of CTEVT constituted and affiliated institutions

S. N.	Type of Institutions	No. of Institutions	
1.	CTEVT constituent technical schools, polytechnics and TITI	15	40
2.	CTEVT constituent vocational training centres	2	
3.	CTEVT partnership based institutions	4	
4.	CTEVT under construction polytech./institutes	19	
5.	Technical Education in Community Schools (formally known as Annex programs)	73	73
6.	Affiliated Pvt. Institutions (TSLC Programs)	155	
7.	Affiliated Pvt. Institutions (Diploma./PCL Programs)	195	
8.	Affiliated Pvt. Institutions (Short term vocational training)	200	

S.N.	Sector	Enrollment capacity of Ashad 2069 BS						TOTAL	
		Constituents Capacity		Affil. Institutions Capacity		TECS schools			
		TSLC	Dip.	TSLC	Dip.	TSLC	Dip.	TSLC	Diploma
1.	Health/ Medicine	268	212	6360	9120	0	0	6628	9332
2.	Engineering	558	864	2000	3644	1248	0	3806	4508
3.	Agriculture	422	200	1400	320	1600	0	3422	520
4.	Forestry	0	0	0	40	0	0	0	40
5.	Others (Dip. in hotel mgmt., TSLC in Office mgmt., social mobilizer, entrepreneurship)	30	80	360	80	0	0	390	160
TOTAL		1278	1356	10120	13204	2848	0	14246	14560

Source: Technical and Vocational Education Profile, 2013

With the aim of providing certain professional and vocational skills to the people who are either unable to gain higher education or are interested to gain certain vocational/professional skills for their better professional career, CTEVT through its owned managed and affiliated technical schools and training centers has been running over 237 different vocational training programs/ trades/occupations in the field of agriculture,

engineering, health, tourism, management and computer (TVET Profile 2013). Independent skill testing body, National Skill Testing Board (NSTB) has developed 264 Occupational Skill Standards (OSS)/Occupational Profiles (OP) and conducts skill test for various levels starting from elementary level to level 4.

3.2. TVET Policy in brief

3.2.1 Nepal TEVT and Skills Development Policy, 2007

The TVET policy endorsed by the government of Nepal in 2007 has five key policy areas: 1) Massive EXPANSION of training opportunities, 2) INCLUSION of and ACCESS for all citizens who need training, 3) firm INTEGRATION of various training modes and pathways, 4) enhanced RELEVANCE of courses and competencies and 5) sustained FUNDING sources and mechanisms.

3.2.2 TVET Policy, 2012

On the basis of suggestion provided by suggestion committee of CTEVT, the TVET and Skills Development Policy 2007 has been revised with new entitled 'Technical and Vocation Education and Training TVET Skills Policy 2012 (2069 BS.), which has formulated 3 objectives.

1. To establish the inclusive and equitable approach of the whole interested citizens by making **widextension of the opportunities of the TEVT** so as to prepare the capable, efficient, competitive and productive human resource for the economic development of the country and to create the opportunity of employment for all.
2. To provide **appropriate, contextual and quality TEVT** in consonance with the demand of the national and international employment market by making identification, protection, promotion and development of the traditional skill, capacity and qualification and by covering the skill that is learnt formally or informally
3. To make **maximum utilization of resources** and means by proceeding the technical education and vocational training provider agencies in a coordinative manner.

3.3 Financing and budget

3.3.1 Budget allocation and distribution

Despite very high and increasing demand of basic and mid-level technical human resources in the country, the national budget from the Ministry of Education to the TEVT sub-sector is less than 1 % of the total budget and < 3 % of education budget. The government is financing total budget of NRs. 906 million for the FY 2069/70 BS. Within this, the current budget of NRs. 327 million for FY 2069/70 BS to cover all the constituent institutions' program and activities and establish the new 15 polytechnic and technical schools with budget of NRs. 202 million.

The comparative budget distribution is mention in the table 3.4.1. There is a fluctuation of total budget allocation and basically high difference is due to new constructions of polytechnics and schools. Proper design and mechanisms for institutional and financial sustainability is a big challenges for the newly constructing institutions.

Table 3.3.1 Comparative budget distribution of CTEVT

Amount in thousand NRs.

S. N.	Description	FY 2066/67 BS			FY 2068/69 BS*			FY 2069/70 BS**		
		Current	Capital	Total	Current	Capital	Total	Current	Capital	Total
1.	Central level program	164660	147702	312362	323870	27050	600920	11900	125972	137872
2.	Tech. school/ institutional level program	124994	11425	136419	226299	88000	314299	613454	143290	756744
3.	Other programs	-	-	-	-	10000	10000	2300	10000	10000
Total		289654	159127	448781	550169	375050	925219	627654	279262	906916

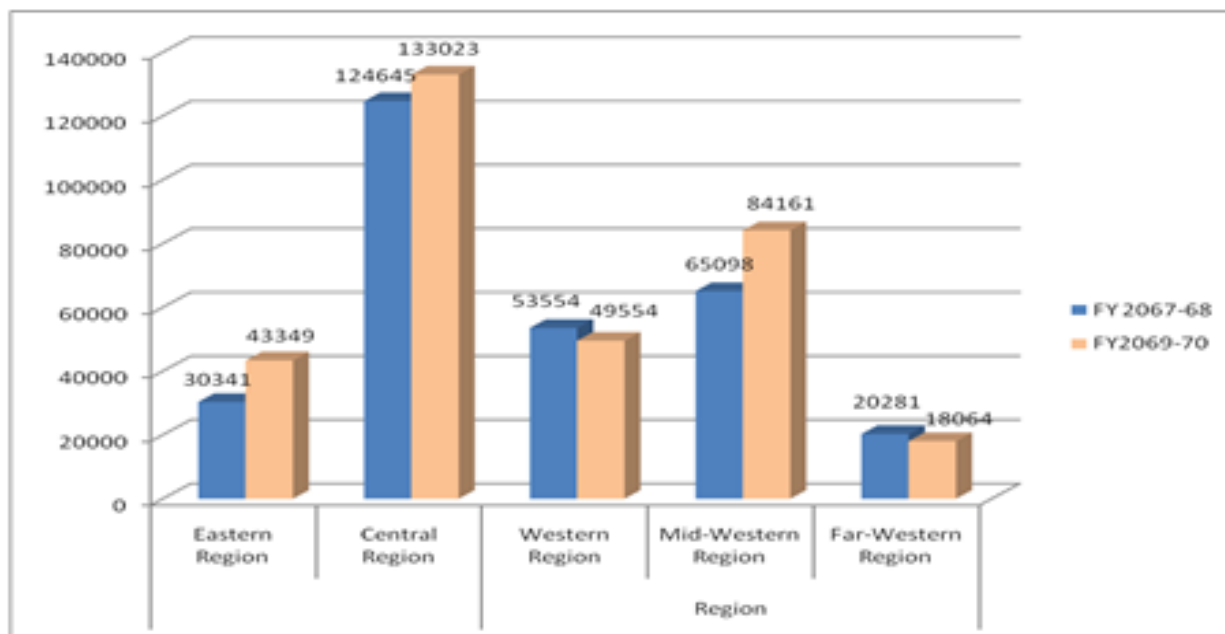
* Additional budget amount NRs. 5,500000 provided

** NRs 194,040(000) was budgeted for new construction of polytechnics and schools

Source: CTEVT, 2013

The financial distribution based on region is shown in the fig. 3.4. It also indicates the target area, priority

Fig: 3.4 Comparative CTEVT budget distribution based on region



area and directions for the future. Linking it with mapping of the institution, there is a need to establish new institution with financial equitable balance.

3.4 Problems, issues and possible solutions

Apart from strong political influence at students, staff, unions, there is a tremendous change in behavior and attitude of individuals. People are more self-centered rather than contributing for institutional, local, regional or national level. Due to these changes and lack of strong team building at collective achievement, many problems, issues have been emerged and also created. With reference to the various documents, CTEVT's

agreements with staff and student's Unions, discussion held with students, staff and managers of technical institutions and also based on foregoing analysis, the following table 3.5 shows the key problems/issues and their possible solutions:

Table 3.4 Problems, issues and their possible solutions

Problems and Issues	Possible Solutions
<p>CTEVT External Management</p> <ul style="list-style-type: none"> • Coordination gap between GoN, MOE and CTEVT and among TVET stakeholders • TVET funding mechanism and donor support • High political interference including unions involvement 	<ul style="list-style-type: none"> • Bring all the TVET program under umbrella of CTEVT at least regulation level • Carryout regular meetings with external TVET stakeholders • Minimize political interference
<p>CTEVT Internal Management and Governance</p> <ul style="list-style-type: none"> • Delegation of authority at divisional, regional and local level • Clear mandates, organizational structure and divisional responsibilities with job description to the individuals • Inter and intra divisional coordination • Transfer and deputation mechanism • Limited resources 	<ul style="list-style-type: none"> • Delegate appropriate authority at regional and institutional level • Change mode of operation of technical schools/polytechnics using PPP model • Restructure functional structure and update divisional responsibilities with provision of job description to all CTEVT staff • Minimize transfer and deputation • Develop institutional and financial sustainability mechanism and mobilize alternative resources • Advocate and provide needed logistical support
<p>Access, inclusion and program expansion</p> <ul style="list-style-type: none"> • Unequal distribution of program and institutions in the district and regional level • Communication mechanism to enhance access and inclusion • Resources –human, physical and financial management • Decentralization and involvement of local government and community 	<ul style="list-style-type: none"> • Establish new polytechnic/TS based on proper mapping (geography, sector, trade wise distribution), HR projection and plan with long term sustainability programs • Coordinate with local governments, I/NGOs and others community based organizations • Get attention for local government, community and their contribution in public-community partnership and management of polytechnics and technical schools
<p>Training Program</p> <ul style="list-style-type: none"> • Availability and updating of LMIS • Need based design of training program • Updating of curricula • Standardization of training programs • Linkage with business and industries • Integration of entrepreneurship programs • Result/outcome based programs 	<ul style="list-style-type: none"> • Make availability and update of LMIS • Conduct regular TNA • Updating of curricula by every 2 year and/or not later than 5 years • Involve business and industries people, while designing, implementing, monitoring and updating curricula • Integrate employability/soft skills • Establish placement and counseling services at central, regional and local level • Focus training success on rate of employment
<p>TVET Professionals and HRD</p>	

<ul style="list-style-type: none"> • Long-term and short term HRD plan • Fund management for HRD • Trainers qualification framework • Retention of qualified trainers/staff 	<ul style="list-style-type: none"> • Create institutional level and center level HRD fund • Develop long-term and short term HRD plan with adequate incentives • Organize trainers/staff exchange programs • Have provision of staff welfare and emergency fund
<p>Testing and Examination System</p> <ul style="list-style-type: none"> • Ineffective examination calendar, timely result publication and compatibility with general education calendar • Table of Specification/grid for valid and reliable Test items • Question bank and updated test items • Delegation of authority • Technology based management and capacity building 	<ul style="list-style-type: none"> • Prepare exam calendar with compatibility to general education • Prepare table of Specification/grid for valid and reliable test items • Delegate of authority to CTEVT regional office and institutions • Enhance capacity building and upgrade the technology for high efficiency and effectiveness
<p>Quality Assurance System</p> <ul style="list-style-type: none"> • Accreditation and proper monitoring & evaluation system • Fee structure related with quality of service delivery • Ad hoc process of establishing private school/institutions • Absence/limited support to Private Institutions • Private institution's part time trainers/trainers HRD programs 	<ul style="list-style-type: none"> • Design and Develop Accreditation system as mentioned in conceptual thought chapter-4 • Involve PTS's staff in HRD and make ToT mandatory • Initiate instructor licensing system • Delegate authority to CTEVT regional office for M&E

4. DIRECTING THE FUTURE: Conceptual thoughts

4.1 Restructuring of CTEVT functional structure

As per discussion in the various occasion including discussions with ADB consultants of Skills Development Project, there is a need of restructuring of CTEVT for efficient functions. The proposed functional Structure (see fig. 1) with various divisions with departments is suggested.

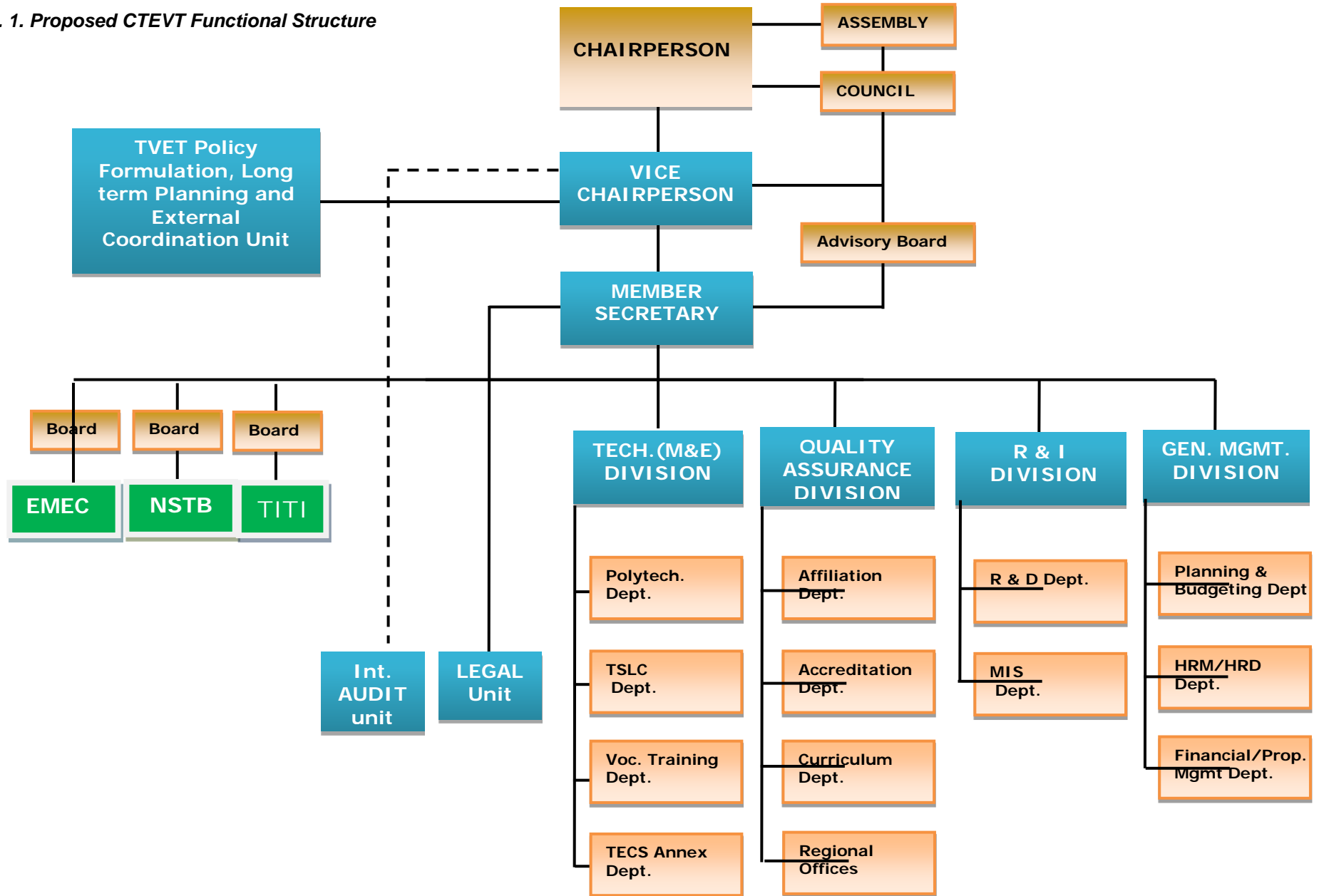
In addition to the responsibilities carried out within the five CTEVT divisions, there will be/separate three units which relate to the executive level through they may receive input from the divisional levels. These units are as follows:

1. **Policy Formulation, Long Term Planning and External Coordination Unit** (directly under Vice-Chairperson)
2. **Audit Unit** (under Vice-Chairperson)
3. **Legal Unit** (under Member Secretary)

Furthermore, there will be/separate three independent offices/institutions under CTEVT with their own by-laws and regulations.

1. **Examination Management and Execution Centre (EMEC)**
2. **National Skill Testing Board (NSTB)**
3. **Training Institute for Technical Instruction (TITI)**

Fig. 1. Proposed CTEVT Functional Structure



4.2 Institutional sustainability

For institutional and operational sustainability, CTEVT constituent institutions should have provisions of quota for long term and short term programs which can be separate and/or mixed as follows:

1. Regular (subsidized) student/participants/programs
2. Full paying student/participants/programs
3. Sponsored student/participants/programs

Production unit/business administration cell could be established with proper and detailed operation guidelines in line with CTEVT and public organizational rules and regulation.

4.3 Staff retention programs/policy

CTEVT and its constituent institutions should focus/initiate staff retention policy, not hampering the personal growth with the following provisions:

1. *Performance based incentive system:* Depending upon institution's location (remote/urban), capacity and performance there should be incentive system at institutional level and individual level. Delegation of authority for appropriate decisions to the institutions can be provided, however, consent of CTEVT head office is a must.
2. *Proper HRD and HRM system:* Need based and performance based HRD and HRM program should be emphasised.
3. *Regular and emergency staff benefit system:* The regular staff benefits covers health check up, insurance, family and children support programs etc. and emergency staff benefits covers health problems, accidents and natural calamities etc.

Functions such as best children achiever of employes' children should be encouraged for motivation towards the parent's organization. Furthermore, public-private partnership, public-community partnership or community-private partnership or program has to be initiated under regulation of CTEVT.

4.4 Accreditation concept

There will be grade A, B and C category based on detailed designed factors and parameters. Those who want to have 'A' grade category, the institutions will apply for the accreditation and accredited according to the developed criteria. The existing all the institutions are assumed to have B grade category and those who are blacklisted or could not maintain the quality will be categorized as C grade. In the course of time, all institutions will be accredited.

The range of fee and other structure will be established according to the accreditation grade.

4.5 Financial sustainability

For financial sustainability, there should be following sustainability programs and funds mechanisms in CTEVT head office as well as it's constituent institutions.

1. *Operational sustainability:* creating separate fund mechanism such as revolving fund mechanism, HRD fund mechanism etc.
2. *Assets sustainability:* creating separate fund mechanism such as replacement fund mechanism, maintenance fund mechanism etc.
3. *Liability sustainability:* creating separate fund mechanism such as retirement fund mechanism, emergency staff benefit fund mechanism etc.

There is a need of identifying detailed assests and property in the institutional level and proper inventory and property database is required for proper procurement and financial management.

4.6 Fund management

For making transparent, effective and efficient fund management, the following could be some areas of thoughts and activities:

1. *Income fund management:* For making transparent income fund mechanism, there should be development/revision of guidelines for customized programs, consulting services and other income generation activities.
2. *Expenditure fund management:* Performance Auditing should be initiated and internal audit should be restructured

4.7 Transparency mechanism

For making transparent, effective and efficient management, the following could be some areas of thoughts and activities:

- Develop Yearly Plan of Operation (YPO) based on CTEVT SP (2014-2018)
- Publish annual report with balance sheet financial information
- Prepare quality manual with all guidelines
- Develop clear job description of individuals as well as units, departments and divisions
- Establish centre-based accounting system with access to institutions accounting system
- Establish accrual based accounting system instead of cash based accounting system
- Conduct social auditing

4.8 Overall key prioritized strategies for improvement

There is a fast change in technological advancement and possible structural change in the local and global market, whereby Nepalese workforce will be in demand. With proper identification of the economic trend and job market, we need to open skill development pathways and provide better quality technical and vocation education and training, matching the standards of targeted country of employment. The key prioritized strategies would be as follows:

1. Advocate for allocation of budget of at least 3.5 % of total education budget for TVET sub-sector, which will produce skilled human resources through TVET.
2. Establish institutional and financial sustainability through different fund development mechanisms
3. Systematize the fund available for TVET sector, if possible one door funding mechanism and make effective use of it.
4. Coordinate with related TVET agencies/institutions for equivalence related problems and issues
5. Make TVET sub-sector available for remote, marginalized ethnic group of people through expansion of Technical Education in Community Schools and other means such as establishment of satellite community training centers
6. Conceptualize the national vocational qualification framework (NVQF)
7. Implement skill testing policy to assure the quality of various training programs provided by different training providers and link it with NVQF
8. Improve the monitoring and evaluation mechanism
9. Develop long term and short term plan for professional TVET staff development
10. Establish and improve training management information system and employment promotional activities
11. Avoid political and other interferences in decision making at personal level, rather emphasize on enhancing occupational professionalism and good governance.

5. CONCLUSION

Skills and competence acquired through appropriate training would be meaningful for both individual and society. If the individual is benefited from employment and earning, then the nation will be benefited through the increase in productivity, income and image. Thus, for the socio-economic prosperity of the country, we should not only depend on the natural resources that we have but also have ability to develop appropriately trained human resources and efficiently utilize human resources needed for the industrial and economic development process.

Being an apex body of TVET sub-sector, the CTEVT's role is vital in improving the reputation and respect of TVET graduates. The blue color job is still not admirable and perceptions of the people toward it are still not vivid. It's us who have to change the mindset of people by formulating proper policies, quality assurance mechanism and facilitate to achieve decent job in TVET sector.

Let's go with new vision 'Skilling Nepal for People's Prosperity'. Let's change the image of CTEVT, making it more respectable, responsible and more accountable through increment in effectiveness and efficiency in implementation of programs/activities and showing pro-activeness in addressing national and global TVET issues and concerns. Through proper coordination within CTEVT internal stakeholders, among external and tertiary stakeholders, linking TVET with economic development, we, together can change our country moving towards the direction of the developed World.

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How Can Vocational Education and Training (VET) Play an Important Role on Poverty Reduction in Nepal?

Kushmakar Bhatta²⁴

Abstract

The poverty focus of what may be called the world's development agenda and its targeting of minimal goals for social development in primary education, gender equality, basic health care and family planning have led to a major preoccupation of the development community with service delivery rather than with growth, productive capacity, or with wider development policy frameworks (King, 2005d). The consequence of this targeting of poverty and of minimal standards of social development has been that, for many donors, basic education alone out of all levels of education and training was picked out as having a priority role in poverty reduction. However, it is realized that enterprise development or vocational skills development should also be emphasized in terms of their close connections to poverty reduction.

The benefits of education vary from direct income effect to positive externalities, which can help reduce poverty. Different studies discuss income variable income growth and income inequalities as possible determinants of poverty and provide mixed evidence, when we assume on the basis of these findings that income variables do not explain poverty alleviation, and then we need to explore other possible determinants of poverty eg. Lack of vocational education and training (VET).

Introduction

From the various definitions of poverty, we may attempt to define poverty as a state of shortage or deficiency of meeting basic needs. A person is to be said to be in poverty if he/she cannot meet basic minimum needs for an ordinary survival. One of the most disturbing features of the world, particularly the third world which Nepal belongs is poverty. It remains one of the most familiar enemies and obstacle in the way of development of most third world countries. In Nepal, poverty is one of the very many problems of serious magnitude confronting this land locked country. Major causes of poverty in the sense of a country includes over –population, illiteracy, unemployment, environmental degradation and insensitive of the government to the welfare of the people. The effects of poverty are homelessness, malnutrition and starvation, il²⁵ness, crime, violence, youth migration, and anti-social behaviour.

Past many decades' were spent by international organizations focusing predominantly on income growth to alleviate poverty. Policy makers at the national level often aim for higher per capita income or reduction of income inequality to achieve the objective of poverty reduction. But in the recent years most of the international organizations and governments of the developing countries focused their attention on educational programs as a powerful tool of poverty reduction and many projects on vocational education and trainings have been running for the objective of skill development and employment generation. The education level of an earning household member is an active factor in poverty risk, not only for him/herself but also for his/her family. Harper, Marcus and Moore (2003) provide a comprehensive review of the literature on poverty reduction. The study covers a number of key social processes that effect poverty. Education have significance contribution in poverty reduction, a good quality formal education widens horizons and increases future employment opportunities. Similarly, education can facilitate upward economic and social mobility, a

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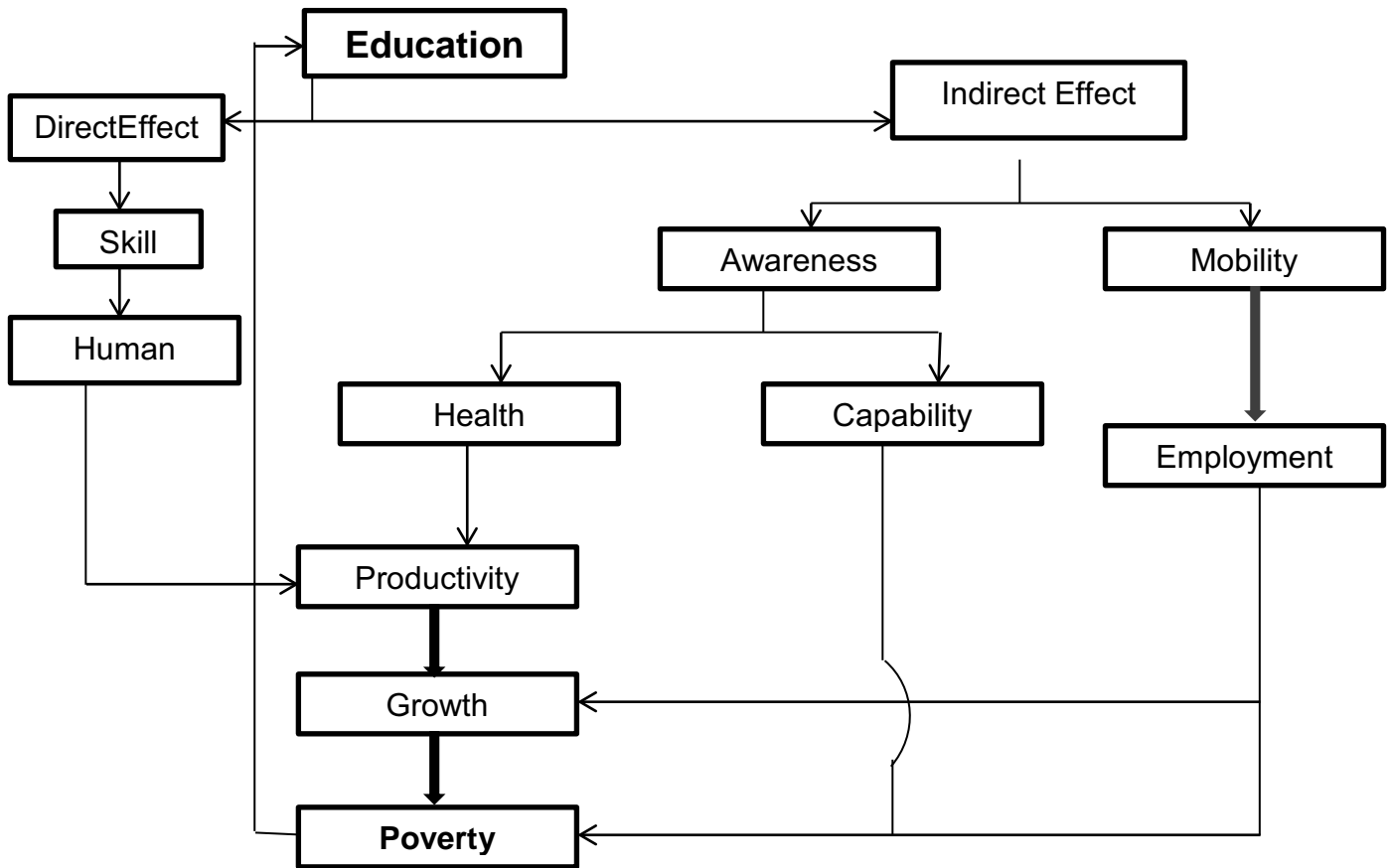
better paying and safer job, and general wellbeing. There are some cases that vocational education and training have changed some lives within a short period of time.

VET as Powerful Tool for Poverty Reduction

Improved vocational education can bring about a large and relatively quick reduction in poverty due to its effect individuals earning and growth. The globalization process, knowledge economy and the emergence of new modes of production in industries in the 21st century has brought about new challenges for the developing economies and their labor markets. However, there it's a clear indication now that human skills plays an important role in sustaining the current pace of growth and development through enhanced productivity of human capital. According to the study of Gundlach, Pablo, and Weisert (2002), the relationship between education and income inequalities, the findings, "Education is not distribution neutral. Education seems to improve the income distribution and thus may allow the poor to benefit from growth to a greater extent. Accordingly, a focus of economic policies on education in order to reduce poverty and to speed up development appears to be justified." Since vocational education and training can affect a person's earnings positively, estimates of the effect of education on poverty levels are useful for anti-poverty policy prospective.

Harper and others highlight the significance of education as a means of poverty reduction, and argue that "a good-quality formal education widens horizons and increases future employment opportunities." They conclude that education can facilitate upward economic and social mobility, a better-paying and safer job, and general wellbeing. This confirms the importance of education in breaking different aspects of the poverty cycle, ranging from individual earning to parental and family effects. Berg (2008) says: "Throughout the world it has been found that the probability of finding employment rises with higher levels of education, and that earnings are higher for people with higher levels of education." It can further describe as the connection between education and poverty. Good /quality education has more opportunities to earning more and wider social benefits that improve economic as well as social living. These findings support the view that the benefits (direct and indirect) of education result in changes in people's behaviour and this behavioural change inevitably has an impact on poverty alleviation. UNESCO clarified the scope of VET as an integral part of general education, increasing effective participation in the world of work, lifelong learning aspect, instrument for promoting environmentally sound and sustainable development and a method of facilitating poverty alleviation.

Figure-1. Impact of Education on Poverty Alleviation (Adopted from Pervez)



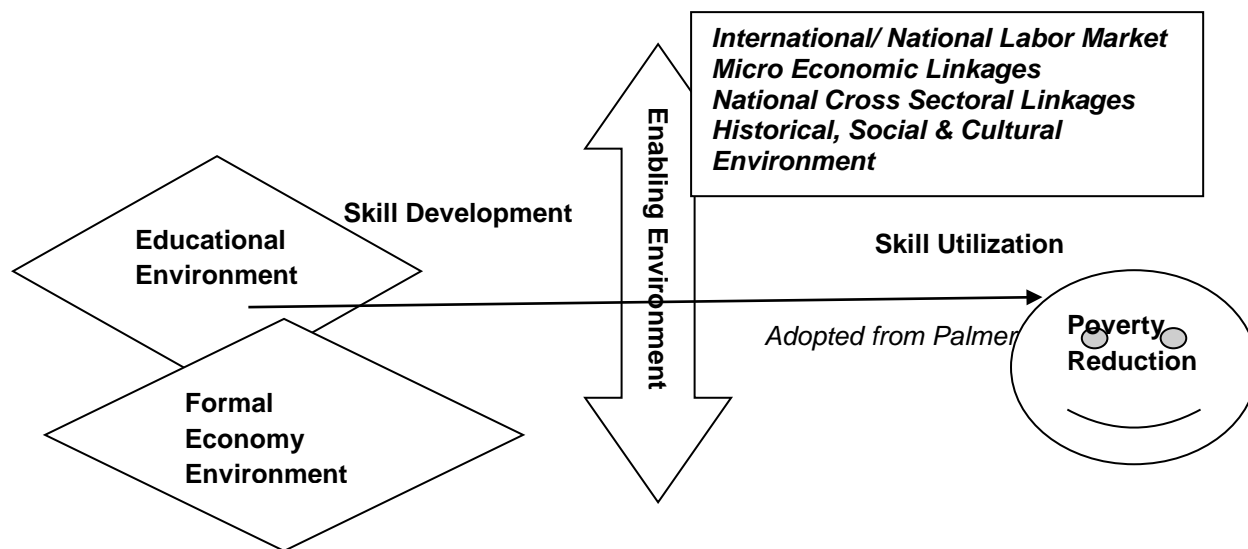
Skill development vs. Skill Utilization

Skills development, resulting from general education and agricultural education and training, ‘is a vital part of the package needed to control youth migration, utilization of the available resources, advance farm productivity, raise incomes, reduce poverty and make the transition to a more productive non-farm sector. However, there is the strong need of other initiatives to develop marketing activities and increase motivation in the local resource based production (King, 2007). Without the support of other reinforcing initiatives, that enable an education and training system to impact on agricultural productivity and support the trend towards more commercial production include: a proper macroeconomic and regulatory framework, including trade policies and adherence to standards procedures; innovative private firms and non-governmental organizations; adequate communication and transport infrastructure; and other factors such as access to global knowledge resources and market conditions that support innovation (Saint, 2005: 1-2).

Hence, skills training on its own may be a key variable, but it is not a determinant of poverty reduction, growth or of job creation. The quantity and quality of human resources produced depend on both the delivery capacity of the formal and informal education and skills system, and on the demand for these resources in a given country. It is not simply a case of increasing the supply of educated and skilled workers through investing heavily in expanding the provision of education and training. Education and training, alone, do not result in increased productive capacity in the form of employment. Nor, by the same token, do they, alone,

result in poverty reduction. If the skills cannot be put to use, potential capacity may be increased, but actual productive capacity will not be. There is a difference between skills development (the capacities acquired) and skills utilization. Not only do the skills acquired need to be of good quality, but they need to be produced in a positive climate for their adoption (World Bank 2004b).

For skills to translate into poverty reduction - and growth - there needs to be the development of other factors, external to the education and training system. Hence, the extent to which the traditional skills learnt through basic education and traditional forms of TVET can contribute to the development of a county's productive capacity will be influenced both by the development and utilization of a country's higher-level skills, and by the development of a supportive enabling environment that allows skills to be utilised productively. Among the most critical factors in such an environment will clearly be work and employment.



Recommendation

Several genuine attempts were made to widen the opportunities for participation in VET courses, including that of poor, women and excluded group of people by establishing the technical schools in the rural area and increasing the number of technical schools and training centers in the country. However such efforts have been inadequate to reach to the wider segment of population. There are very few provisions for the people from economically backward mid-western and far-western regions. There appears a difference in trend rates of poverty reduction among geographical regions of the country attributed to differing growth rates of farm yield per acre and differing initial conditions; regions starting with better infrastructure and human resources saw significantly higher long-term rates of poverty reduction. In this scenario vocational education programs as a mean of poverty reduction should be mostly focused on regions like Far and Mid-western development regions along with infrastructure development in these regions. Here are some recommendations for the effective conduction of VET in context of Nepal.

- Assessment of actual need of the market and youth motivation in such skill areas are an essential to achieve the return of the trainings.
- Supply and value chain analyses should be integrated with vocational training programs, microfinance services, and business development grants to assess the supply and demand linkages necessary for for sustained business growth.

- Counselling services for the youth in the rural areas should be conducted to control the youth migration and side by side there should be provision of rural development through the establishment of skill acquisition center for youth and adults
- Agricultural aspect of the nation should be assisted through infrastructure development, technological enhancement and providing soft loans to the farmers.
- Government should initiate itself or motivate private individuals to establish Industries in the rural areas based on the available natural resources.
- Skill development, employability and entrepreneurs training should be facilitated in rural areas empowering and participating youth.
- Increase in sufficient demand, political stability, population stability along with massive expansion in market need based skill training programs.
- Skills development along with creation of enabling environment for skills utilization from the service provider is an important for converting of the skills and trainings in employment creation.

Conclusion

The stock of people with knowledge, skill and good attitude is commonly known as human capital, and the basic source for acquisition of human capital is education. The role of vocational education and training programs or human capital management is to foster economic growth just not only education, skills and training but by enabling appropriate environment to skill utilization, increasing employment, earning and promote economic growth. Earnings and returns on education can take the shape of services, goods or financial means. The volume of returns on vocational education depends on the nature and quality of required skills, knowledge, and attitude. There are many benefits to addressing markets for utilization of the skills and livelihood promotions. When market need is accurately addressed, and training packages are carefully designed, market-based interventions at the market level can generate greater opportunities for larger group of people. In context of Nepal, a focus of economic policies on vocational education in order to reduce poverty and to speed up development appears to be justified.

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Need for re-structuring PCL TVET curriculum of Nepal

Wakil Jha

Abstract

Nepal is in the list of a least developed country although it has a plenty of natural resources and huge number of productive age, healthy and energetic human resources. It is facing problems of un and under employment as well as migration of huge number of unskilled youth in international job market. Technical institutes are increasing day by day and producing majority of technicians. But the produced technicians are not being recognized by the world of work and facing unemployment problems. The purpose of this paper is to elaborate the applicability of existing TVET curricula in real world of work. Focus Group Discussion (FGD) methods were applied to collect information from TVET graduates under phenomenological method of qualitative inquiry. This paper elaborates participants view on the context and structure of TVET curriculum development, use of existing curricula in real world of work and their suggestions for making more applicable curriculum in real world of work.

Key words; context and structure of curriculum, applicability, restructuring.

Overview of the paper

Nepal is a country of diversified geographical, cultural and demographic characteristics. Despite great attraction in TVET, workforce of Nepal is facing un/under employment. Nepal is also known as a supplier of unskilled workforce in the world of work. It shares many challenges and issues that are fundamental to improve the quality and relevance of TVET as a means of human resource development. TVET of Nepal is following the curriculum of at least 50 years old following from the time when there were no technicians, communities were quite dependent of traditional services in any sector that may be health, agriculture, engineering and others. TVET of Nepal adopted the policy of minimum services to maximum people and the objective of curriculum was to produce technicians of “jack of all masters of none”. But this is the time of supplying specialized services by specialized skilled technicians. This is the time of producing technicians having in-depth knowledge in brain and appropriate skills in hands. Nepal must consider a logical strategy for human development in which TVET plays an important role. Issues that must be considered when planning TVET curriculum are: whether our technicians are academically strong, technically skilled and vocationally specialized?

The success of TVET in any developing country can be considered as a key indicator of the country's TVET advancement in development. Any country that evolved into a technological advanced one, TVET must have played an active and vital role. Learning for work and gaining strong academic capabilities is the jointnecessity of TVET graduates to get fit in the world of work, and of a variety of stakeholders in the formal and informal socio-economic environment.

With rapid transformation of societies in social, political, economic, technological, and education spheres, there has been a change in the perspectives on the need and nature of TVET. Production of academically strong and technically specialized human resource has begun to emerge as new challenges due to the demand of nature of job market.

Introduction

TVET is a most effective means for society to develop its members' potentials to respond to the challenges of the future. However, schools and other institutions of the formal education system alone cannot achieve education and training for sustainable development in terms of human resources. In Nepal, production of TVET is the oversight responsibility of related ministries responsible for providing services, although some specialized vocational training programs fall under the planning, supervision and control of CTEVT and Universities in Nepal.

Annual per capita income of Nepal is USD 340 and the ranks for human development index is 138th position, 31% people are living below poverty line, and estimated unemployment rate is 3.8 percent. 300,000 to 350,000 people enter into the labor market each year (CBS, 2005). Vocational education would contribute to such progress, both by reducing unemployment, through creating employment in the fields of pre-vocational specialization and self-employment, and by engendering a higher propensity for labor force participation at the end of TVET, improving productivity, and correspondingly resulting in higher graduate earnings.

Vocational and technical education can establish a closer relationship between academic ability and specialized work. Increasing trends in foreign employment are dominated by unskilled category. About 85% of students enrolled in primary level but are forced to quit the school before SLC (DoEd, 2006). Daily about 1000 Nepalese are flying aboard to enter in the job market. Majority of them are unskilled. There are 5 TEVT Approaches: Those are Universities/Colleges, Ministries / Governmental Line Agencies, NGOs/ INGOs, Organized and Unorganized Private Sector and CTEVT (constituent and affiliation institute)

All are providing comprehensive TVET following the curricula of about half a century old. Those curriculums were made to fulfill the objective of providing minimum services to the maximum persons. It was the demand of that time due to unavailability of technical and vocational workforce of any sector especially in the rural areas. But now, national and international job market needs academically strong and technically specialized technician to achieve the objectives of commodity production and maximum specialized service from one person. Therefore, majority of TVET products are denied of job opportunities from national and international job market due to lack of employable skills at hand. TVET provider organization are not capable to accommodate the employment need of the people un/under employment prevails due to lack of academically strong and technically specialized human resources to fit in national and international job market.

Introducing the issue

Technical education is giving technique to deal certain skill skillfully with giving scientific logic behind. Technical education itself is a specialized education. Volumes of skills making life more comfortable are increasing day by day. What was a single skill yesterday will change into bundles of skills tomorrow. Caring a needy person was a single skill known as nursing, now rapidly changing into caring in different specific stage with different levels of standard. The primary nurses were providing general care for all needy persons but the modern nurses are providing specialized care for specific needy person. Not only in nursing but each and every sector of technical fields is rapidly changing from comprehensive technical education to specialized technical education. What is now comprehensive was specific in earlier time. Reality is constructed and re-constructed depending upon volumes of information gathered, experience gained and need felt.

I've been researching the pros and cons of specialization versus generalization. There's a debate about which one will serve a person better throughout their career. In conversations with friends and colleagues and observing the reality of world of work, my impression has been changed towards specialized skills with strong academic knowledge. They've indicated that having a comprehensive knowledge has diversified their opportunities by allowing them to adapt and apply their knowledge into a variety of TVET. It hasn't really fundamentally changed for the past 50 years; it's (only) changed in small ways. TVET of Nepal still rely on the traditional curriculum and formal classroom lectures, expecting students to retain large quantities of information that they may or may not use. Some experts note that students are at the mercy of whatever situations present them when they're on a practical rotation.

Educational advocates say that now is the time for TVET to catch up and offer new models and ensure that TVET graduates are well prepared to meet the challenges posed by an ever-changing job fields. In this connection Tilak (2001) mentions that Nepal is caught in a vicious circle of low enrollment, low levels of literacy, low levels of skilled and academic labor force, lower rates of economic growth, and lower levels of

living (p. 233). The role of technical and vocational education and training (TVET), especially in relation to delivering quality education, has been the subject of considerable discussion, research and policy reforms. TVET is now perceived largely as a possible second chance educational opportunity for students who are not academically inclined. Moreover, in response to the rapidly changing nature of the workforce and the skills required to perform effectively within the changing context, TVETs are now being called upon to provide programs that support greater understanding of the world of work. Such programs are intended to equip students with those skills and abilities that they would need to use in their working lives.

UNESCO Second International Congress on Technical and Vocational Education, held in Korea in 1999, called for: A new holistic approach ... so that education for the twenty first century will include all domains of learning incorporating general and vocational education to enable the learner to launch into a lifelong continuum of knowledge, values and attitudes, and competencies and skills (UNESCO 1999:4). Now we are observing differentiation of occupation in the developing economies. That requires TVET graduates with specialized skills and strong academic performance. Because of changes in production processes resulting from technological advances, the nature of the demand for skills, both in terms of quantity and quality, changes.

As an antidote to urban-biased elite education, vocational education will promote equity with a rural bias and serve the needs of relatively poor people. Also as Grubb (1985, p. 527) states, vocational education has been seen as the answer to an enrolment problem: the tendency of some students (especially lower class students) to drop out of schools without occupational skills -- a problem that vocational education promises to resolve by providing a more interesting and job-relevant curriculum. In this context, Lillis and Hogan (1983) mentions, more specifically, it is believed to be an effective answer to rural problems, "to alleviate unemployment; to reorient student attitudes towards rural society," to halt urban migration; to transmit skills and attitudes useful in employment, and as an important measure of development for disadvantaged youth in rural and urban areas.

Some claim that too much attention and resources is given to comprehensive rather than academic and specialized TVET. Those are not fit to enter in national and international job market. It should be academically strong and technically specialized. UNESCO (1999:4) mentions, the name TVET to something nearer to "Technical Skill & Academic Knowledge Development for Employability". Here in this issue I would like to raise the discussion on how do graduates of PCL TVET of Nepal perceive appropriateness of existing structure of curricula in real world of work?

Purpose

The purpose of this paper is to explore the applicability of existing curriculum of TVET of Nepal in real world of work.

- To explore the existing structure of TVET curriculum
- To explore the uses of learned knowledge and skills in real field
- To explore participants view for re-structuring more applicable curriculum in global job market

Methodology

The purpose of this paper will be fulfilled by the collection of data from both primary and secondary sources of data. In this study I am going to describe the use of existing curriculum in real world of work. It tried to review the structure and context of curriculum development from starting of TVET in Nepal and how TVET graduates of different discipline perceive the use of existing curriculum in real world of work. Therefore, exploratory design is employed to gather necessary information and data of the study issue. It is qualitative in nature.

In this study, qualitative research methods have been used. In this connection, Phenomenological method was used to dig out the subjective realities. Both primary and secondary data were employed. Primary data were collected through focus group discussion with the participants. Secondary data were taken from the

review of previous studies, published and unpublished documents of GOs, NGOs and other institutions and the review of TVET curriculum of Nepal.

Based on the research issue, I collected related information by applying focus group discussion among three groups of separate discipline PCL graduates having more than five years experience in related field. There were six members in each group. Groups were formed separately from graduates of agriculture, Certificate in Medical Lab Technician) CMLT and civil engineering working in Kathmandu valley.

Context and Structure of TVET curriculum of Nepal

The first theme is to elaborate the context or the period and different situations when the curricula were developed. The information related to context were collected by reviewing the literatures, where as related to the structure of curriculum were collected based on the perceptions of the participants. Therefore this theme could be elaborated with the elaboration of following two sub-themes.

Context of development of TVET curriculum in Nepal

An Aurvedic school was established to train Aurvedic physicians in 1929 which can be accepted as one of the pioneer formal attempts to produce technical human resource in Nepal (CTEVT, 1994, p.2). Since then, various attempts have been made in order to develop technically capable human resources in Nepal. Different institutions have been established and technical knowledge and skills have been transferred.

Training for compounders and dressers started in 1934 in the newly opened Civil Medical School. A program for the middle level-nursing workers began with the formation of a nursing school in 1956 under the Directorate of Health Services. Separate school for training another category viz. Health Assistant started in the same year with a two year course. An AHW School was started under the aegis of the Ministry of Health in 1962. The training of a cadre to provide midwifery care was started in 1958. Similarly training for agricultural technicians was started under Ministry of Agriculture and Mechanical training center was started in Balaju Technical training center. Government made its efforts to attach vocation education to general education from grade 6 to 10 in the 1960s CTEVT (2005). The main purpose of this attempt was to impart vocational knowledge and transfer technical skills to the students of grade 6 to 10. In general schools, 20 percent of the credit was allotted to a vocational subject and in vocational schools, about 40 percent of the time was allotted to vocational subjects (CTEVT 1994, p.2).

However, the graduate students from secondary schools could not compete with the students who graduated from vocational schools (CTEVT, 2005). Then, the government realized that more intensive skills should be given to the students for getting jobs in the market. One hour vocational teaching in school was not adequate to obtain intensive skills (CTEVT, 2005). Thus, the idea of establishing formal technical schools for providing intensive skills and more focused knowledge on vocational subject emerged. Hence, ultimately, various efforts made by the government for producing basic and mid-level skilled human resources supported to form the Council for Technical Education and Vocational Training (CTEVT).

It was contended that since education is considered the key to effective development strategies, technical and vocational education and training (TVET) must be the master key that can alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and help achieve sustainable development. With this, TVET has to re-orient its agenda for action so as to continually provide scientific and technical skills in relevant and responsive programs, and consequentially develop a new generation of human resources and CTEVT is a recognized organization for TVET in Nepal.

Existing structure of TVET curriculum of Nepal

Here I am going to discuss only about the curriculum of certificate level. CTEVT of Nepal is conducting more than thirty courses in certificate level. Those are health, agriculture, engineering and in other fields. The duration to complete each course is three years. Structures of curriculum of all courses are all most similar.

First year is followed by general academic and connected subjects and the full marks for first year are 900 marks. Similarly second and third year contains only technical subjects both theory and practical. Curricula have been also designed for both indoor and out door practical activities. In a FGD the participants from agriculture graduates said:

Total hours for all general and science subjects are almost similar but in real field some topics of certain subjects are more used in real field and there is not or less use of some of topics, therefore the curriculum designer should identify and include the topics as the need and demand of the course.

The above statement describes that the curriculum designers have not critically think about the topics while designing curricula. They also realized that some unwanted topics have been included but some needed topics are not been included or inadequately included. In support with the above statement the participants of engineering group said that:

Some of the topics we do not or less use have been elaborated adequately but some which we use frequently have not been elaborated as the demand of the course.

Similar statement came from engineering participants. In this connection, Haq and Haq (1998) mentions the low level of educational development in South Asia has constrained "the immediate potential for human resource led development," and it has also "stunted the future prospects for rapid human development in the region". Due to this reason graduates are facing the problems of low quality education and facing difficulties both in the job market as well as in career development. In the support of the above statement the CMLT graduates told that:

CMLT and Certificate in diagnostic radiography both learn the same course of physics, chemistry and mathematics. In second and third year CMLT needs more chemistry and very few physics but diagnostic radiography needs more physics and less chemistry. There is not so much use of the whole courses of mathematics except some.

The above statement is like a justification for proving the deficiencies in existing curricula. Some not needed topics can give space to adjust some topics for intellectuality development, development of entrepreneurship capabilities, communication capabilities and others. Re-structuring of curricula will help to solve this problem and produce intellectually and academically strong technicians for knowing and dealing the changing world of work.

Uses of learned knowledge and skills in real world of work

TVET of Nepal has been established to achieve the objective of minimum service to the maximum people by the products of TVET. It was the time based need of TVET to produce graduates of comprehensive knowledge and skills due to scarcity of technicians for providing minimum essential services to the rural people. For example, the goal was set by ministry of health "Health for all by 2000 AD". It was based on providing primary health care to the rural people. Hence, technicians were equipped with general knowledge and skills of all subjects of health. In this connection in a FGD with agricultural group it was found that:

We learn about all agricultural crops found in Nepal. We can provide basic service to all ecological belt of Nepal. It is the time of scientific agriculture for commodity production needs technicians having specialized knowledge in apple or paddy or maize or orange or others. We are not using our knowledge and skills of other subjects while working in specialized sector.

The above statement describes that, experts designed the models of TVET containing all superficial information of specific technical field like health, agriculture, construction and so on. The products are jack of all but master of none. In this connection civil engineering group graduates agreed that:

We have learned all the subjects like road, irrigation, building construction and water supply but one technician is working in one sector. If we had a deeper knowledge of one sector we could do better in one hand and in other way we could not get any pain of our not used knowledge and skills.

Now the TVET providing organizations have hundreds of institutes producing thousands of TVET graduates each year. All institutes are following almost similar curriculum and producing graduates of comprehensive nature. But, the nature of job market is already changed in Nepal. International job market also needs specialized TVET graduates having strong academic knowledge based on the level of TVET with specialized skills to provide specialized service. In this connection CMLT graduates opined that:

The basic standard of hospital is fifty beds needs high quality laboratory services with separate units of at least four areas of laboratory diagnosis. One technician works in one unit and facing the problem of not having deeper knowledge of that sector and the pain of not using knowledge and skills of other sectors earned by a very laborious labor.

It is sure that, they will serve in one sector in future. A CMLT graduate gets equal knowledge and skills about microbiology, biochemistry, hematology and histo-pathology. But there is separate unit in the hospitals for the investigation of these all subjects and that technician will work in one unit. A generalist can not provide the service like specialist. Similarly PCL products of other sectors of health like general medicine, medical laboratory technology, pharmacy and others are getting knowledge and skills of all subjects of their respective disciplines. Similar conditions are for agriculture, engineering and other TVET products. Then the issue is why they are getting knowledge and skills of all subjects of one discipline.

Participant's view on re-structuring of curriculum

University education is different from TVET. The former gives academic education and skills and the later equips with skills of specialized action to perform. A TVET graduates can not be competent without knowing the skills of catching opportunities of world of work and selling their skills at appropriate place and in appropriate ways. In this connection civil engineering group graduates opined that:

Now we are living in a global village and we have global job market the need is to equip the youth with a strong academic knowledge for dealing successfully in global job market with specialized skilled hands and logical brain for dealing the skills.

The above statement describes that, TVET graduates need to be equipped with three types of knowledge and skills and need to continue as life long learning. As UNESCO (1999) describes it as new holistic approach, so that education for the twenty first century will include all domains of learning incorporating general and vocational education to enable the learner to launch into a lifelong continuum of knowledge, values and attitudes, and competencies and skills. It involves academic course, knowledge of related or connected subjects and knowledge and skills of specialized course. In this connection, Crossley (1990) mentions, this approach is an attempt to integrate academic and vocational curricular components in order to promote a unified education system without streaming. We believe that the performance of graduates will be improved through continuous review of the curriculum to ensure that its relevance to the needs of the job market is maintained. This requires an ongoing assessment of the technological changes in the workplace as well as consideration of the non-technical competencies required of graduates. The opinions of three group participants could be categorize by the following three sub-themes.

Academic knowledge and skills

Academic education helps to develop intellectuality. With intellectuality TVET graduates could link technical skills with socio-cultural, political, economical, moral, ethical and environmental conditions of national and international context. In this connection agricultural group participant argued:

If we have a good communication skills dealing with national and international job market for searching and marketing our jobs, good skills of developing entrepreneurship, good knowledge of understanding of society and culture and so on more. It could be helpful for making our job more salable and could be also helpful in future career development.

The above statement describes that academic knowledge empowers for giving logics and preparing scientific documentation based on the levels of their learning. Academic flavor also helps for continuing life long learning. In this connection Grubb (1985, p. 548) mentions, vocational education is considered helpful in developing what can be termed as 'skill-culture' and attitude towards manual work, in contrast to pure academic culture and preference for white collar jobs; and to serve simultaneously the "hand" and the "mind", the practical and the abstract, the vocational and the academic.". It includes skills of written and verbal communication with appropriate knowledge of language, national and international socio-cultural situation and its connection with specialized skills as well as related economical, demographic and environmental conditions.

In this connection, Ramadas (2003) mentions technology has wider implications that extend beyond science to subject areas like vocational education, social studies, art, ethics and value education. In general, vocational education and training forms a separate parallel system within the education system with its own institutions, programs, and teachers. This situation tends to reinforce the perception of inferiority of the vocational track.

It is therefore important to create articulation pathways between vocational education and general education. Ramadas (2003) further mentions that it is strongly recommended that vocational training be integrated into general education so that it becomes less dead-end. In addition to the acquisition of vocational, agricultural, technical, and business skills, it is necessary to incorporate political and citizenship skills into the curriculum. A technology curriculum that involves 'learning by doing' will have to take cognizance of factors that range from the availability of human and material resources to ecological features, the epidemiological characteristics of the population and social relations in the locality.

Knowledge of related or connected subjects

Different subjects of science related to the course, students need to know to use in their specialized skills like physics, chemistry, zoology, botany, mathematics and other technical subjects which are connected to the specialized subjects are the related or connected subjects. Knowledge regarding these subjects in the quality and quantity helps students to connect the facts and realities with their specialized course. The term technical education is also understood to include the theoretical and practical scientific knowledge and skills that permit a person receiving such education to solve technical problems in his/her specialty. In this connection CMLT participants opined that:

We are learning all the subjects in equal quantity. But if it is changed into one specialized subject contained wider range other as connected subjects in smaller amount needed to know for the technicians of that very specialized subject. It could be more applicable in real world of work.

The above statement describes that among many subjects of the course one subject should be as specialized subject should contain more teaching hours both in theory and in practical and other subject should be as connected subject should contain less teaching hours with less depth topics which are needed to know for those specialized course. Science and other subjects could be seen as a means of supporting the development of language and of reinforcing literacy and numeracy. Connected or related subjects could help students for better performance in their technical field and also help them for giving scientific logic behind their specialized skills.

Knowledge and skills of specialized subjects

Specialized education is just what the term suggests: a course of study focused on a particular subject. Specialized education is often focused on training to prepare students for the workplace. In this connection Ramdas (2003) mentions specialized education is an essential aspect of technology education is practical work, including planning, design, construction and experimentation. An example of a specialized educational institution is a vocational school where students study skilled trades. In this connection, Shukla (2001) mentions the Indian policy documents on science and technology education emphasize the importance of practical work. In this connection civil engineering group participants opined:

If we have deeper knowledge in one sector we could easily get job in international job market. In national market also it is easier to get good job and better salary as well as we could also develop our own entrepreneurship.

The above statement describes that for someone who is certain about his/her chosen profession, a specialized education can be the right choice. Vocationally oriented specialized education curricula can give the student a definite advantage in the job market. Besides the much focused course of study, specialized education programs often offer their students enclosure or other work-related experience.

Larson (2010) mentions specialized Skill delivers its services and products to valued clientele organizations without compromising in the entrusted quality of skill as well as academic ability helps to think and deal intellectually in the TVET sector. Specialized education programs can often be completed in a shorter time than comprehensive education programs, which can save a significant amount of money. Because, from the curriculum development teams to textbook writers, teacher-trainers, teachers and students, innovation, improvisation and the building up of ideas and resources are needed at all levels. Many working adults pursue specialized education programs to begin or resume their careers in the least possible amount of time. Specialized subject in TVET courses could help students for better performance in their fields.

Conclusion

Specialized education certainly has its benefits, but comprehensive education can also be valuable in successfully navigating the job market as well as in providing a well-rounded education. Especially in challenging economic times, the value of a comprehensive education can come into question. In this connection, Ramdas (2003) mentions, in the current culture of schooling, there is a real danger that technology might be interpreted in a very academic way, as mere information about applications, processes and machines. However, there are usually far fewer electives offered in a specialized education program than there are for a comprehensive education program.

Therefore, TVET has to be strongly linked with the world of work in companies and other employers. Efforts to achieve TVET for realistic human resources development requires a systematic and / or cooperation in the international framework under this objective.

One of the most critical challenges of this 21st century is the attainment of full employment and sustained economic growth in the global economy. TVET can be synonymous to the backbone of quality life as it contributes significantly to promoting the interests of individuals, enterprises, economy and society. By making individuals employable and informed citizen human resources development through TVET activities contribute to economic development and to achieving full employment. The economy becomes more productive, innovative and competitive through the existence of more skilled and academic human potential.

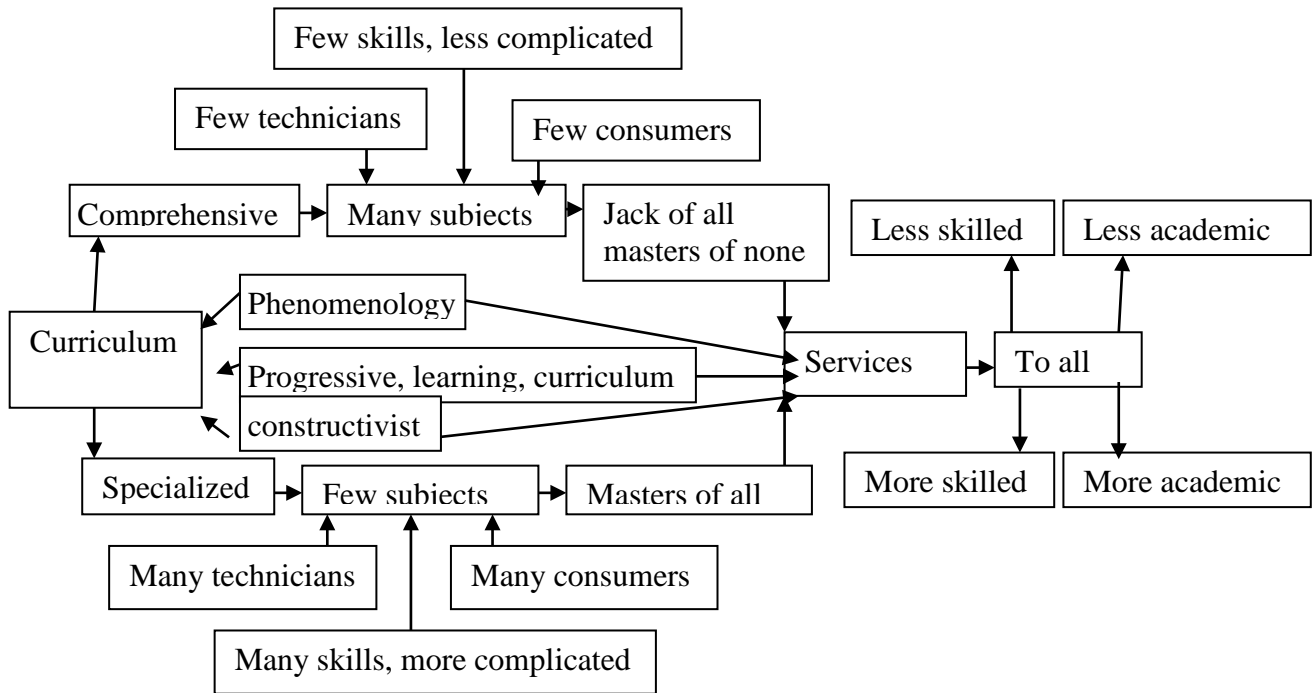
At last it could be concluded that the TVET curriculum of Nepal is more comprehensive, designed to produce technicians having basic knowledge and skills for providing basic comprehensive services of graduated discipline. It is very hard for them for getting well fitted in changing world of work. It needs re-structuring of

curricula to produce technicians having strong academicity or intellectuality with specialized technical skills in hands and logics in the brain to deal the skills. So, they could be well fitted in changing world of work.

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Conceptual Framework



SEAMEO (2001) identified eleven important trends and directions for TVET in its member nations, as follows:

- o Clear national policies for TVET;
- o The concept of lifelong learning;
- o Competency-based training (CBT);
- o Development of demand-driven TVET;
- o Flexible TVET delivery systems;
- o Encouraging a competitive spirit among TVET providers;
- o Strong public TVET systems;
- o Recognition of TVET;
- o Quality output and outcome;
- o Research and evaluation to improve TVET;
- o Apprenticeship systems

The overriding objective is quality of life.

Education system of Nepal-What is and what should be?

Anoj Bhattarai²⁶

Abstract

Despite of having various educational plans and programs and giving the due emphasis on the concepts of globalization, modernization, decentralization and localization, majority of people are losing faith in the current education system.

The question here is whether our education system is reliable or worthy enough to satisfy the ever-changing needs of the 21st century. The question here is whether we are “spending” or “investing” in education. This paper scrutinizes the current educational system of Nepal with respect to various educational philosophies and establishes some plans to address the concerns of the people.

Introduction

Throughout student life, students strive to perfection in hope that not too far in the future, they will be a part of a job market that will satisfy their needs. Their needs however, are completely different to hungry people whose first priority is food and shelter. Also, due to the advancement in communication sector, the world today seems to have become smaller. The youth of today dream of working for multinational companies across the ocean. Nepal is a multilingual and multiethnic country. The challenge from a politician’s standpoint is to establish an inclusive and equitable representation of all beings in all aspects. The question is, is our education system reliable or worthy enough to satisfy all these and ever-changing needs of the 21st century? This paper will scrutinize the dilemmas from different perspectives. In addition to that, the paper will establish some plans to address the concerns of the people.

Existing education practices in Nepal

Like in many parts of the world, Nepal also practices many forms of education such as formal and non-formal. The formal education system is hierarchically structured, chronologically graded education system and running from primary school to university. Non-formal education on the other hand is any organized activity outside the established formal system (Baniya, 2012).

In formal setting, six years old is the prescribed age for admission into grade one. Most of the private schools practice the concept of pre-primary levels of education ranges from Nursery, Lower Kindergarten to Upper Kindergarten. Officially, school education includes grade one to 10. A national level School Leaving Certificate (SLC) examination is still practiced at the end of grade 10. Grades 11 and 12 are considered as higher secondary level. Higher Secondary Education Board (HSEB) supervises higher secondary schools. Previously these grades were under the university system and were run as proficiency certificate level. Though some universities still offer these programs, the policy now is to integrate these grades into the school system. Higher education consists of bachelor to PhD levels. Bachelor’s level may be of three to five years' duration. The duration of master’s level ranges from one and half years to two years. Some universities offer programs like M Phil and PhD. Besides, currently there are several students enrolled in online classes offered from foreign universities.

Generally, two types of schools/colleges exist in the country: public and private. The public schools receive regular government grants whereas schools themselves or other non-governmental sources fund private schools.

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From 2009, the government of Nepal has also been implementing a School Sector Reform Plan (SSRP: 2009-15), which aims to restructure school education by better integrating the various levels into basic education and secondary education, in hopes of boosting school retention rates and overall enrollments. The SSR program has resulted in significant improvements in access to primary education, with knock-on effects in participation rates at the secondary and upper secondary levels (Clark, 2013).

By giving the due emphasis on globalization, modernization, decentralization and localization of curriculum in the Nepalese context, Government of Nepal in 2007, has developed the National Curriculum Framework for School Education in Nepal, the school system in Nepal consists of basic education and secondary education. Basic education consists of three stages. First stage ranges from grade one to grade three. Recommended area to be covered are language, mathematics, social studies, creative arts, and local need based education. Based on integrated curriculum, an activity book covering the major areas of learning should be developed and implemented. Second stage of the basic education ranges from grade four to grade five. Recommended areas to be covered are Nepali, English, mathematics, social studies. Compulsory subjects are Nepali, English, mathematics, social studies. Schools can select two local need based additional subjects. The curriculum for social studies should be local need based and it should integrate subjects like science, health and physical education. Third stage of basic education ranges from grade six to grade eight. Recommended area to be covered are language, mathematics, social studies, science and local subject. Compulsory subjects are Nepali, English, mathematics, social studies and science. Schools can select Language/Others as optional first and local subjects such as vocation, business and trade) as optional second. Secondary Education ranges from grade nine to grade 12.

In addition to general stream, a vocational stream has also been introduced under the new system, which will enable students on a vocational track. General stream covers language, science, mathematics, social studies and local subject. Vocational/technical stream covers agriculture, forestry science, medical science and engineering. The curriculum framework aims all-round development of the nation with well-managed school education system (Government of Nepal, 2007). However, the National Curriculum Framework for School Education in Nepal, which was supposed to be implemented since 2007, and School Sector Reform Plan, which were supposed to be implemented since 2009, has still not fully come into practice.

The initiatives for non-formal in Nepal formally stated in 1951 and continued in the First Five Year Plan (1956-1961). It introduced non-formal education as an important mode of education (Baniya, 2012).

Under the Council for Technical Education and Vocational Training (CTEVT), constituted in 1989, there are many technical schools aiming to produce lower to middle level vocational and technical human resources (Karki, 2012). CTEVT looks after both formal and non-formal education system. One of the programs run by CTEVT is technical school leaving certificate (TSLC), which is equivalent to national level SLC but for employment purposes only. In addition, equivalent to proficiency certificate level or grade 12 diploma courses on technical areas are offered by CTEVT to produce middle level technical workforce.

Besides these, there are several others educational programs that focus on non-formal education. For instance, out of school programs (*Shiksha Sadan*), adult education programs, literacy programs, community reading centers, distant education, and many more organized by various governmental and non-governmental organizations (Baniya, 2012).

Current problems/issues

About 400,000 youths enter the labor market annually (Lamichhane, 2013). On a daily basis about 1,300 Nepalese workers leave the country seeking for jobs. 62% leave school by grade five, over 75% by grade eight and about 48% never attend school (KOICA International Cooperation Agency, 2013). Most of these youths head towards Gulf countries and are forced to compromise with lower level jobs. They are prone to be

cheated in every steps and every corner of their life. In addition, there is a mismatch between job market and job seekers. There is also a shortage of competent workforce for the domestic market (ibid).

In my understanding, as a consequence of the aforementioned, it is not surprising to see a majority of people losing faith in the current education system. It might be the result of them being forced to move to Gulf countries and work under suppression. The indignation might be the result women having to be suppressed and sexually harassed. It could be the result of unskilled hungry people having to struggle for bread and butter. It could be the result of the parent, who cannot afford to send their children to school. It could be the result of educated people, who cannot find a job in the job market because their education was not up to par. It could be the result of have-nots being suppressed by the haves.

This may be the result of effacing our pristine (*Maulik*) educational system. This may be the result of implementing an imported, forced and pressurized education system instead of implementing context based sustainable education system. It might be a consequence of failing to provide contemporary, skill based practical education. It could be a result of disrespecting traditional cultures and occupations. It could be a result of not being able to establish a certain level of respect towards all occupation. It could be a result of not being able to perceive or act for the society, religion, family or the whole world. It could be a result of considering education to be a compulsion rather than a necessity. It could be a result of the education providers considering education to be a profitable business rather than a service. It may be the consequence of existing education system, which disseminates ruling-class ideology as understood by most of the Marxists.

The Marxists education philosophy considers education to be a proponent of the ruling class. According to the French Marxist and philosopher Louis Althusser, education fosters most effective means of control of ruling class over working class (<http://www.egs.edu>, n.d.). But on the other hand, as mentioned by Durkheim, it is by respecting the school rules that the child learns to respect rules in general (Hoenisch, 2005). Talcott Parsons who supports Durkheim adds that through schooling an individual moves from 'particularistic standards' to 'universalistic standards' (uchicago.edu, n.d.). So the question arises, what is the perspective in which the youngsters see the current education system of Nepal? Do they lean more towards Althusser's perspective or towards Durkheim and Talcott'?

And, what has gone wrong? Is that their fault? Or, is it because of the culture or because of the politics, or because of the teacher's attitude? Although it is easy to make youths scapegoats, it is necessary to realize that they are the treasure of the nation. Every year the nation collects a huge amount of revenue in the form of remittance. During eleven months of 2012/13, the remittance inflow rose by 21.3 percent to Rs. 388.46 Billion (Nepal Rastra Bank, 2013/14). According to Krishna Dawadi of Department of Labour and Foreign Employment Promotion, if educational systems were to be improved and skills were to be upgraded, this amount will increase by 25% with the same workforce (Rai, 2008).

On the flipside, a huge crowd of the students seeks to pursue their further education in developed countries. They try to convince by saying "there is no opportunity for anything in this nation". They blame the nation. Even their parents support morally and financially and encourage them to leave the country forever. Because of this one directional flow, huge amount of money way outs the nation. According to the UNESCO Institute of Statistics, there were over 24,000 Nepali students studying overseas in 2010 (Global Education Digest: 2012), up from approximately 17,700 in 2008. It is a total waste of investment on education if they do not choose to help the nation back.

For the past couple of years, most of the donor driven projects primarily focus on training and education. Every year they proudly announce a handsome number of trained and educated people in different areas and extend their stay in the nation. In the name of capacity building, without need assessment, they provide training and education to anybody. If not carried out properly, this might have negative consequences on education.

To address the concerns of all people with a single stroke is not an easy task. However, if there is one stroke to solve this problem, without doubt, it has to be a well-implemented educational system. Let us scrutinize the current educational system of Nepal with respect to various educational philosophies.

Basis for analysis

Does the current education system of Nepal give the continuation of the concept of Para/Aparavidya or the concept of Chaturvidya as practiced during the Upanishadic or Vedantic period? Can the current education system address the concept of Trinity Education? Does the current education system promote the student to get rid of fear, terror and punishment of teachers and pressure from parents? Does the current education system address the immediate needs of the people? Does it emphasize on technical and vocational education and training? Does it incorporate life skills and entrepreneurship skills so that people act as employer rather than employee? Does the current education system equip the student to cope with uncertainties of 21st century? Does it address the four pillars of education as suggested by Delors's Report? Does it address multilingual and multiethnic setting of the country? Is it inclusive?

Education Anticipation and Reality:

Education is the act of learning, of acquiring knowledge, whether it is done in a school setting or anywhere else. Schooling ends sooner or later, but education is a continuous process for which death is the only terminal behavior (Richmond, n.d.). Swami Dayanand Saraswati (n.d.) maintains education is a process beginning right from the mother's womb. Shankaracharya views education as realization of the self. Veda regards education as something, which makes an individual self-reliant and selfless.

Gandhiji says, "By education, I mean an all-round drawing out of the best in the Child and man-body, mind and spirit." Education, to Gandhiji, was a means to achieve perfection of individuality on the one hand and an instrument of service to the nation on the other. He emphasized that the people should be educated through arts and crafts, work and play, voluntary activity and self-chosen activity (Khanna, 2009).

In a rapidly changing society, people have to keep learning in a continuous basis to deal with new information and technology. There is a need for lifelong learning. In the context, learning throughout life will be one of the keys to meeting the challenges of the twenty-first century. Delors report (1996) has proposed four pillars that are the foundations of education: learning to know, learning to do, learning to be and learning to live together. The first pillar: learning to know focuses on combining sufficiently broad general knowledge with the opportunity to work in depth on a small number of subjects. The second pillar: learning to do emphasis is on the learning of skills that would enable individuals to effectively participate in the global economy and society. The third pillar: learning to be emphasizes on self-analytical and social skills to enable individuals to develop to their fullest potential psycho-socially, affectively as well as physically, for an all-round complete person development of human potential to the fullest. Lastly, in the current context of globalization, the fourth pillar: learning to live together places emphasis on to expose individuals to the values implicit within human rights, democratic principles, intercultural understanding and respect and peace at all levels of society and human relationships to enable individuals and societies to live in peace and harmony (Delors, 1996). Becoming literate is not education, getting a degree; gaining knowledge and learning new skills should not be considered as education. Education is when people become capable of doing something different from what they could do earlier. If they could not apply or transfer to other for the benefit of self or society then that is not complete education. Gandhi's and Delors's views maintain this.

Pathik (2011) states an old saying, *शिक्षा विकारे सकलो विकार, शिक्षा सुधारे सकलो सुधार* "(If education is corrected, everything is corrected; if education is diseased, everything is diseased). Education is the only panacea to establish the culture of peace, tolerance and democratic attitudes, openness to international understanding and cooperation and a new attitude towards the environment. Only education plays a pivotal

role in developing patriotic, disciplined and productive human resources. Educating the people means strengthening the institutions of democracy and civil society.

Pathik foundation for Trinity Education claims that the government is not being able to control the wars in the name of caste, religion, beliefs and values. All kind of racial, sexual, status discrimination exists. There is the problem in our relationship with existence, society, family, office. All value systems are corrupt and meaningless. There is injustice, inefficiency, sluggishness; our productivity is turning less and less day-by-day. Unemployed people are increasing day-by-day.

Foundation recommends “Trinity Education” to overcome the weakness and shortcomings in prevalent education system. According to the foundation, the structure of present education has to be changed into a three dimensional education or trinity education. Trinity education has feet, hands and conscious brain and this education seeks to put all three dimensions in the brain simultaneously. Feet mean trained citizens, which can stand; hand indicates skilled people; and brain means balanced people, who can imbibe thoughts of human consciousness (Pathik, 2011). Trinity education emphasizes on the amalgamation of soul, social and competency based education as three vertexes of a triangle.

If we compare the concept of Trinity Education with the nature of education practiced during the Upanishadic or Vedantic period, we do not find much difference.

As per the Mundokopanisad, students were required to study two types of the Vidyas, viz., the “*Paravidya*” and “*Aparavidya*”. The *Paravidya* was considered as supreme knowledge, which pertained to study the relationship between human being (*Jeeva*), world (*Jagat*) and God (*Paramatma*). The entire personality is purified through knowledge and thereby the individual attains *Brahma*. The ultimate goal is to achieve salvation. *Aparavidya* or the study of secular subjects formed the basis for *Paravidya* or spiritual realization or self-realization (Chaube & Chaube, 2002). It focuses on developing skill culture and attitude towards work which helps to fulfill primary physiological needs such as food and shelter.

The ideal scenario would be for our education system can incorporate both “*Paravidya*” and “*Aparavidya*”. This would satisfy the needs of students striving for success and workers looking for food and shelter respectively. However, in a pragmatic sense, since several Nepalese are seeking for immediate job placement at this time, prioritizing on “*Aparavidya*” would be a great place to start. The people will be prepared for industry-demanded work and be self-reliant.

The final stage of “*Chaturvidya*” is freedom from *Samsara*, the cycle of birth and death, i.e. salvation. It implies union with Brahman – the only Absolute Reality. Moksha is the eternal, intrinsic nature of the *Atman* and is the chief goal of life. Self-realization or realization of the *Atman* (Self) as the reality of the universe is moksha. The key is detachment from the phenomenal world and union with Absolute Reality. To reach the final stage of *Chaturvidya*, one should go through the other three stages viz. education, reflection and spiritually sequentially. Three ways have been prescribed by which one may attain perfection, or be liberated from the bondage of *Samsara*. The *KarmaYoga* i.e., the path of work is the practical method, the *JnanaYoga* i.e., the path of knowledge is the theoretical method, and the *BhaktiYoga* i.e., the path of devotion is the emotional method (Merbianang, 2003).

Whether we talk about *Paravidya* or *Chaturvidya*, the ultimate aim is to achieve salvation. Then the questions arise. Is it still valid and relevant to the modern education system?

Education plan

In my opinion, there are several actions we can undertake to develop the education system in Nepal. Like, I mentioned before, focusing on technical and vocational education and training is must. Although it is considered a very expensive business for a country like Nepal to focus on technical and vocational education due to the huge spending demands on various tools, it is also absolutely necessary. The EFA Global Monitoring Report estimates that for every US \$1 spend on education, the return on investment in economic

growth is around \$10-15. The report further states that skills development is vital in reducing unemployment, inequality and poverty, and promoting growth (UNESCO, 2012). Therefore from a long-term investment view, it is the most effective system. Not only it helps achieve the goals, but it is also accommodating to Nepal's current needs.

This is because several people ideally cannot afford and separate time for formal education. Our society build-up requires a majority of people to look after not only them, but others too.

The following strategies can be implemented in order to solve the problem related to high costs.

First of all, rapid expansion of a system that allows people to learn at work should be implemented. For a country like Nepal, with 25.4 percent of people under absolute poverty line (Census 2011), it is of extreme importance to construct a system of work-based learning. Adhikari (2013) suggests providing vocational training/education with a combination of a part in school and part at work. This is called Dual Education System, which assures the availability of skilled workforce and solve the economic and dependency on the state spending problems.

The government should help subsidize or provide low to no interest loans on educational costs for people who cannot afford for their own. After all, the government will be investing for a long-term benefit.

Also if local and inexpensive resources including indigenous knowledge were to be utilized, the cost for technical and vocational education and training would significantly decrease. Simultaneously, it promotes sustainable development while providing employment for people who develop these resources.

Once these strategies are successfully applied, it accommodates to people of all financial and cultural backgrounds to be a part of the proposed educational system. Apart from this, people should be educated to respect ethnicities and jobs of all sorts. One of the problems with formal education system is that several people cannot afford to be a part of it. For example, if a shoemaker, so called a lower caste, cannot afford to send his/her children to school, a system that allows study at work must be implemented. On top of that, if every profession were to be recognized with dignity, the children, when adult, would be self-reliant, self-satisfied and several time efficient than their ancestors. This would also pave the path for those children to send their children to formal schools.

I also believe that the National Curriculum Framework for School Education in Nepal and then School Sector Reform Plan promise some great initiatives. Unfortunately, they have not been practiced to their full potential. If these plans were to be implemented in an organized fashion, the education system would take better direction.

Although global standard recommends five percent of GDP and 20 percent of total budget towards education, Nepal only allocates nearly four percent of GDP and 17 percent of national budget (KOICA International Cooperation Agency, 2013). Being a developing country, it is a top importance to prioritize education. The government must focus on increasing allocations because this can have a long-term benefit on GDP itself. The government must realize that this is not a spending but an investing.

Conclusion

It is not that we have not been able to come up with good plans and prospects. The problem is that we have never really been successful in implementing them. After half a decade since school reform support plan was introduced, the system has still not fully responded to the changes. This to me is the root of the problem. If the plans look good on paper, we should stick to implement them on practice. Along with this, I think we should also focus on developing our infrastructure. If we can merge these two together, I think we can surely

say that we have successfully invested in our youths and our education system. All round development of the nation depends not only on a well-planned education system but rather on a well-implemented one. Although we know that the country needs technical and vocational education and training based educational system with respect to the needs and demands of the people, the government seems to be obstinate not to take that direction. This is a major problem. It is understandable that the cost is high. But, it is what Nepal needs at this point in time for a bright future. The government should invest or find ways to make the implementation cost effective.

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सारांश

सरकारले जनतासँग गरेका प्रतिवद्धताहरु पुरा गर्नका लागि सार्वजनिक नीतिको तर्जुमा गर्दछ । नीति कार्यान्वयनका लागि सार्वजनिक स्रोतको आवश्यकता पर्दछ । नीतिले घरपरिवार एवम् निजीक्षेत्रको स्रोतलाई निर्देशित गर्ने सामर्थ्य पनि राख्दछ । सरकारले शिक्षामा गरेका प्रतिवद्धताहरु पुरा गर्नका लागि सार्वजनिक स्रोतको विनियोजन गरेको हुन्छ र निजीक्षेत्रको स्रोतलाई पनि निर्देशित गरेको हुन्छ । शिक्षामा बजेट उपलब्ध गराउनु पहिलो कार्य हो भने उपलब्ध बजेट शिक्षाभित्रका विभिन्न उपक्षेत्रमा सन्तुलित ढंगबाट बाँडफाँड गर्नु अर्को महत्वपूर्ण कार्य हो । यी दुवै कार्य गर्नका लागि उपयुक्त वित्त नीतिको आवश्यकता पर्दछ । शिक्षाका अन्य उपक्षेत्रहरुमा जस्तै प्राविधिक व्यावसायिक शिक्षा र तालिमको क्षेत्रमा सरकारी र गैर सरकारीक्षेत्रबाट सार्वजनिक स्रोतको विनियोजन भई आएको छ । यस क्षेत्रमा सरकारी स्रोत शिक्षा मन्त्रालयबाट मात्र नभई विभिन्न विषयगत मन्त्रालयहरु र अन्य अर्ध स्वायत्त निकायहरु एवम् स्थानीय निकायहरुबाट प्रवाह भइ आएको छ । दातृ निकायहरुको सहयोग सरकार र विभिन्न अन्तराष्ट्रिय गैर सरकारी संस्थाहरुबाट प्रवाहित छ । यसैगरी अनौपचारिक क्षेत्रबाट प्रवाह भएको स्रोतको मात्रा ठूलो हुनसक्छ तर त्यसलाई एकित गर्न कठिन छ । प्राविधिक व्यावसायिक शिक्षा र तालिमको क्षेत्रमा एकिकृत नीति र प्रणालीको विकास गर्न सकिएमा उपलब्ध स्रोतको उच्चतम रूपमा सदुपयोग हुन सक्ने देखिन्छ । उपलब्ध स्रोत प्राथमिकताप्राप्त कार्यमा प्रयोग भई अपेक्षित प्रतिफल सहज ढंगबाट हासिल गर्न सकिने हुन्छ । यसक्षेत्रको वित्त पक्षमा आवश्यक समन्वय गर्नका लागि प्राविधिक व्यावसायिक शिक्षा र तालिम कोषको गठन आवश्यक छ । यसको गठन पश्चात कार्यक्रम कार्यान्वयनमा समन्वय हुनुका साथै हाल देखिएका समस्याहरु सम्बोधन गर्न पनि सहज हुन्छ । तर यसको व्यवस्था गर्ने कार्यमा हालका कर्ताहरुको बीचमा छलफल, कार्यक्रम कार्यान्वयनमा समन्वय र एकिकृत कार्यक्रम विकास र कार्यान्वयनजस्ता चरणहरु छुट्टयाई सोही बमोजिमका कार्यहरु अगाडि बढाउन उपयुक्त हुन्छ । यस कसमा नीतिगत, कानूनी र संरचनागत व्यवस्था कमश विकास गर्दै लैजानु आवश्यक छ ।

विषय प्रवेश

सार्वजनिक नीति सरकारको प्रतिवद्धता हो । उक्त प्रतिवद्धतालाई व्यवहारमा रुपान्तरण गर्न सार्वजनिक बजेटको आवश्यकता पर्दछ । नीतिको अभावमा बजेट छरिने सम्भावना बढी हुन्छ भने बजेटको अभावमा नीति कार्यान्वयन गर्न कठिन हुन्छ । तसर्थ मुलुक विकासका लागि नीति र बजेट दुवै उत्तिकै आवश्यक छन् । नीति र सार्वजनिक बजेटबाट कुन विषय वा क्षेत्र के कस्तो प्राथमिकतामा रहेका छन् भन्ने एकित गर्न सजिलो हुन्छ । यसले राज्यको ध्यान के मा छ भन्ने विषयसमेत निर्धारण गर्दछ । नीतिले सार्वजनिक बजेटलाई नियन्त्रण गर्नुका साथै व्यक्ति वा निजीक्षेत्रको लगानीको दिशासमेत निर्धारण गरिरहेको हुन्छ । यो त नियन्त्रण र सहजीकरणको प्रमुख साधन पनि हो जसबाट सरकार, निजीक्षेत्र र व्यक्तिस्वयम्का कार्यहरु प्रभावित हुन्छन् ।

सार्वजनिक वित्तमा सार्वजनिक स्रोतको विनियोजन एउटा पाटो हो भने यसको बाँडफाँड अर्को महत्वपूर्ण पाटोको रूपमा रहेको हुन्छ । तसर्थ शिक्षा बजेटका बारेमा बहस गर्दा मुलत दुइओटा पक्षमा ध्यान दिनुपर्छ । पहिलो शिक्षा मन्त्रालय वा अन्यक्षेत्रसमेतबाट गरी शिक्षाले के कति बजेट प्राप्त गरेको छ भन्ने हो भने दोश्रो पक्षअन्तर्गत शिक्षामा उपलब्ध बजेट शिक्षा भित्रका विभिन्न उपक्षेत्रहरुमा के कस्तो ढाँचामा बाँडफाँड हुने गरेको छ भन्ने विषय पर्दछ (ओइसिडी, २००२) । शिक्षा विकासका लागि सर्वप्रथम शिक्षाले पर्याप्त बजेट पाउनु पर्दछ अनिमात्र शिक्षा भित्रका सबै उपक्षेत्रहरुमा प्राथमिकताका आधारमा उक्त बजेटको विनियोजन हुनसक्दछ । यसमा सन्तुलन र समन्वय आवश्यक पर्दछ किनकी

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शिक्षाभित्रका विभिन्न उपक्षेत्रहरूको बीचमा अन्योन्याश्रित सम्बन्ध रहेको हुन्छ, एउटाको विकासले अर्को उपक्षेत्रको विकासमा सहयोग गरिरहेको हुन्छ। उदाहरणको लागि साक्षरताको विकासले प्राथमिक शिक्षाको भर्नादर, टिकाउदर र सिकाई उपलब्धिमा सुधार ल्याउने जस्ता कार्यहरूमा सहयोग पुगिरहेको हुन्छ, भने प्राथमिक शिक्षाको विकास हुन सकेमा साक्षरता दरमा उल्लेख मात्रामा सुधार हुनसक्छ। यसैगरी निम्नमाध्यमिक तहको उत्तीर्ण दरमा भएको सुधारले सीप प्राप्त गर्ने व्यक्तिको संख्यामा उल्लेख्यरूपमा सुधार भएको हुन्छ (यूनेस्को, २०१४)। तसर्थ शिक्षा विकासको लागि सार्वजनिक स्रोतको पनि सन्तुलित ढंगबाट विनियोजन गर्नुपर्ने हुन्छ। यसका लागि वित्त नीतिको आवश्यकता पर्दछ, जसले कुन विषय वा क्षेत्रलाई कुन प्राथमिकतामा राख्ने भन्ने विषय तय गर्दछ, निश्चित क्षेत्रमा निश्चित समयमा हासिल गर्न खोजिएको प्रतिफल प्राप्त गर्नमा सहयोग गर्दछ, र हरेक वर्षजस्तो फेरबदल हुने प्राथमिकता र बजेट छर्ने पद्धतिलाई निरुत्साहितसमेत गर्दछ। प्रस्तुत लेखमा शिक्षाक्षेत्रभित्रको प्राविधिक व्यावसायिक शिक्षा र तालिमको क्षेत्रमा भईरहेको वित्त व्यवस्थालाई केन्द्रमा राखी यससँग सम्बन्धित कोषको विकास गर्ने कार्यलाई थप केलाउने प्रयास गरिएको छ।

शिक्षामा वित्त व्यवस्था

शिक्षालाई व्यवस्थापकिय दृष्टिकोणबाट विभिन्न तह र संरचनामा बाँडिएको हुन्छ। यी तह र संरचना निर्माणमा आफ्नै अनुभव र विश्व परिवेशसमेतको उपयोग हुनसक्छ। शिक्षाभित्रका यी तह र संरचनालाई उपक्षेत्र १)काद(कभअतयच० भन्ने गरिन्छ। नेपालको सन्दर्भमा शिक्षाका उपक्षेत्रहरूमा १) पूर्व प्राथमिक तह (बालविकास कार्यक्रमसमेत), २) प्राथमिक तह, ३) निम्नमाध्यमिक तह, ४) माध्यमिक तह, ५) उच्चमाध्यमिक तह, ६) उच्चशिक्षा तह, ७) प्राविधिक शिक्षा तथा व्यावसायिक तालिम र ८) साक्षरता एवम् निरन्तर शिक्षागरी जम्मा आठओटा तह छ भन्न सकिन्छ। तर विद्यालय क्षेत्र सुधार कार्यक्रमका अनुसार प्राथमिक र निम्न माध्यमिक तहलाई आधारभूत तह एवम् माध्यमिक र उच्च माध्यमिक तहलाई माध्यमिक तह मान्दा शिक्षाक्षेत्रभित्र जम्मा छ ओटा उपक्षेत्र कायम हुने देखिन्छ। यसैगरी समग्र विद्यालय शिक्षालाई एउटा उपक्षेत्र (यस भित्रका चारओटा तहलाई विद्यालय शिक्षा उपक्षेत्र मान्दा) शिक्षामा जम्मा पाँचओटा उपक्षेत्र छन् भन्न पनि सकिन्छ। प्राविधिक शिक्षा र व्यावसायिक तालिमलाई शिक्षा भित्रको एक उपक्षेत्र मान्ने गरिए तापनि यो आफै एक क्षेत्रको रूपमा रहेको तर्क पनि नगरिएका होइनन्। यसको वित्त व्यवस्थापनका सम्बन्धमा चर्चागर्दा यसलाई एक क्षेत्रको रूपमा हेरिएको छ। फेरी यसको नामका सम्बन्धमा पनि एकरूपता देखिदैन। कतिपय अवस्थामा यसलाई प्राविधिक शिक्षा र व्यावसायिक तालिम (Technical Education and Vocational Training) भनिए तापनि प्रस्तुत लेखमा प्राविधिक व्यावसायिक शिक्षा र तालिम (Technical Vocational Education and Training) को नामबाट सम्बोधन गरिएको छ।

शिक्षामा उपलब्ध बजेट यिनै उपक्षेत्रहरूमा बाँडफाँड गर्नुपर्ने भएकोले शिक्षाभित्रका उपक्षेत्रहरूको संख्याको आफ्नै महत्व छ। शिक्षा भित्रका कतिपय क्रियाकलापहरूमा शिक्षाभन्दा बाहिरका क्षेत्र तथा उपक्षेत्रहरूबाट पनि बजेट जाने विद्यमान अवस्थामा शिक्षा मन्त्रालयमा उपलब्ध बजेटबाट मात्र शिक्षाभित्रका उपक्षेत्रका क्रियाकलापहरू सन्चालित छन् भन्न कठिन छ। तसर्थ शिक्षामा राज्यले के कति बजेट विनियोजन गरेको छ भन्ने बहसमा शिक्षा मन्त्रालयमार्फत विनियोजन हुने बजेटभन्दा पर गई शिक्षा मन्त्रालयबाट विनियोजित बजेट र अन्य क्षेत्र तथा उपक्षेत्रबाट शिक्षाका लागि विनियोजित बजेट समावेश गर्नु आवश्यक देखिन्छ। हालको अभ्यासका कारण समन्वयको अभावमात्र देखिएको होइन, यी विभिन्न निकायहरूबाट एकै प्रकृतिका कार्यहरू हुनसक्ने सम्भावनालाई पनि नर्कान सकिदैन। यसैगरी छरिएर जाने स्रोतबाट देखिने प्रतिफल १)खुक्कडभि इगतउगतक० हासिल हुन पनि कठिन छ।

नेपालको सन्दर्भमा शिक्षाका लागि एकिकृत ढंगको वित्त नीति १)प्लबलअप्लन एयडिअथ० छैन। ऐन नियम तथा विभिन्न दस्तावेजमा छरिएर रहेका प्रावधानहरूको आधारमा शिक्षाका लागि बजेट उपलब्ध हुने गरेको छ र शिक्षा बजेटको बाडफाँडमा पनि यस्तै विभिन्न दस्तावेजहरूमा भएका प्रावधानहरूको प्रयोग भईआएको छ (अर्थ मन्त्रालय, २०६५)।

स्पष्ट र एकिकृत वित्त नीतिको अभावमा कहिलेकाँही बजेट छरिने र प्राथमिकताक्रम बदलिने गरेको पनि छ । तथापी शिक्षा बजेट बाँडफाँडमा शिक्षा मन्त्रालयबाट हरेक वर्ष देहायका नर्म्स (Norms) र आधारहरू (Criteria) को प्रयोग भएको पाइन्छ (शिक्षा मन्त्रालय, २०७० र शिक्षा विभाग, २०७०) ।

१. बालविकास कार्यक्रम विद्यालय शिक्षाको सरंचनाभित्र भन्दा पनि कार्यक्रमको रूपमा संचालित छन् । अभिभावक, स्थानीय समुदाय, संघसंस्था एवम् सरकारको संयुक्त साभेदारीमा यो कार्यक्रम संचालन हुनुपर्दछ भन्ने मान्यतामा सरकारले यसका लागि सार्वजनिक स्रोतको विनियोजन गर्ने गरेको छ । यसैगरी निजीक्षेत्रबाट संचालित कार्यक्रमको प्रमुख लगानीकर्तामा अभिभावक रहेका छन् ।
२. प्राथमिक र निम्न माध्यमिक तहको शिक्षा राज्यको अनिवार्य दायित्वभित्र परेको महसुस गरी सामुदायिक विद्यालयहरूबाट निशुल्क आधारभूत शिक्षा उपलब्ध गराउनका लागि सार्वजनिक स्रोतको विनियोजन गर्ने गरिएको छ । यस तहको शिक्षा अनिवार्य हुनु पर्दछ भन्ने अवधारणा पनि प्रबल बन्दै गइरहेको छ । सामुदायिक विद्यालयभन्दा बाहिर अध्ययन गर्नेका लागि यस तहको शिक्षा निशुल्क छैन । यसको लागि व्यक्ति स्वयमले लागत व्यहोर्नु पर्ने अवस्था छ ।
३. माध्यमिक तहको शिक्षा समग्रमा लागत साभेदारीको अवधारणा अनुरूप हुनुपर्दछ भन्ने मान्यतामा सरकारले सामुदायिक विद्यालयहरूमा सार्वजनिक स्रोतको विनियोजन गरिरहेको छ । तर कतिपय क्षेत्र र वर्गका लागि निशुल्क माध्यमिक शिक्षाको व्यवस्था हुनुपर्दछ भन्ने अवधारणामा रही सरकारले सामुदायिक विद्यालयहरूलाई अनुदानसमेत प्रदान गर्ने गरेको छ । यस तहको शिक्षामा निजीक्षेत्रको पनि महत्वपूर्ण योगदान रहेको छ तर सो को लागतको परिपूर्ति शिक्षा प्राप्त गर्ने व्यक्तिबाट भई आएको छ ।
४. उच्चशिक्षा लागत आपूरण सिद्धान्तको आधारमा संचालन गरिनु पर्दछ भन्ने गरिए तापनि नेपालको सन्दर्भमा उच्चशिक्षामा वित्त ढाँचा अन्योलताका बीचबाट गुज्रिरहेको छ । त्रिभुवन विश्वविद्यालय र नेपाल संस्कृत विश्वविद्यालयका अधिकांश कार्यक्रमहरू सरकारको अनुदानमा निर्भर छन् । निजी क्षेत्रबाट संचालित शैक्षिक कार्यक्रमहरू लागत आपूरणमा आधारित छन् भने सामुदायिक शैक्षिक संस्थाहरू विद्यालय तहको स्रोत र जनशक्ति प्रयोग गरी परनिर्भर ढाँचामा संचालित छन् ।
५. साक्षरता कार्यक्रम र निरन्तर शिक्षाका कार्यक्रमहरू वार्षिक रूपमा स्वीकृत हुने बजेट तथा कार्यक्रमका आधारमा कोटा प्रणाली अनुरूप संचालित छन् । स्रोतको उपलब्धताका आधारमा कोटा निर्धारण हुने पद्धति कायम रहेकोले समयसमयमा यसको लक्ष्यमा फेरबदल हुनु अस्वभाविक भएन ।
६. प्राविधिक व्यावसायिक शिक्षा र तालिमको क्षेत्रमा सरकारको अनुदानबाट अनिवार्य दायित्वका सिमित कार्यहरूको व्यवस्थापन गरी बाँकी रहेको बजेटबाट कार्यक्रमका कोटा निर्धारण गर्ने पद्धति रहेको छ । कोटा प्रणालीभन्दा बाहिरका क्षेत्रहरूमा या त निजीक्षेत्र या स्वयम व्यक्तिबाट स्रोत व्यहोर्नु पर्ने व्यवस्था रहेको छ । यही कारणले गर्दा कार्यक्रमको विस्तार आवश्यक मात्रामा हुन सकेको छैन ।

शिक्षाका उपक्षेत्रहरूमा हरेक अर्कोवर्षको बजेट विनियोजनको मुख्य आधार विगतको ढाँचालाई मान्ने गरिएको छ (अर्थ मन्त्रालय, २०६५ र राष्ट्रिय योजना आयोग, २०७०) । दातृ निकायबाट प्राप्त सहयोगको मात्राले बजेटको आकारमा फेरबदल ल्याउने गरेको छ । अर्थ मन्त्रालयबाट प्रकाशित रातो किताबमा उपलब्ध बजेट विश्लेषणको आधारमा के भन्न सकिन्छ भने शिक्षाका उपक्षेत्रहरूभित्र रहेका अनिवार्य दायित्वका विषयहरू सरकारको स्रोतबाट संचालित छन् भने विकाससँग सम्बन्धित कार्यहरू मुख्यरूपमा दातृ निकायको सहयोगमा निर्भर छन् । घरपरिवार एवम् निजीक्षेत्रबाट शिक्षामा ठूलै धनराशी प्रयोग भएको छ तापनि एकिन तथ्यांक उपलब्ध छैन । यही बजेटलाई अर्को ढाँगाबाट हेर्दा सबै उपक्षेत्रमा विनियोजन गरिएको बजेटको ठूलो मात्रा चालु खर्चमा प्रयोग हुने गरेको छ (अर्थ मन्त्रालय, २०७०) । लगभग उही बजेटको आकारभित्र चालु अर्थात उपभोग खर्चमा निरन्तररूपमा भइरहेको वृद्धिले विकास कार्यका लागि न्यून बजेट रहेको पक्ष इंगित गर्दछ, जसलाई त्यति सकारात्मक मान्न सकिदैन ।

प्राविधिक व्यावसायिक शिक्षा र तालिम क्षेत्रमा वित्त व्यवस्था

साधारण प्रकृतिको शिक्षामा जस्तै प्राविधिक व्यावसायिक शिक्षा र तालिमका लागि सरकारी र निजीक्षेत्रबाट स्रोत उपलब्ध भई आएको छ । यसलाई अर्कोढंगबाट सरकारी र गैह्र सरकारी स्रोतको रूपमा पनि उल्लेख गर्न सकिन्छ । सरकारी स्रोतअन्तर्गत सरकारी निकाय, स्थानीय निकाय र अन्य स्वायत्त वा अर्ध स्वायत्त निकायहरू पर्दछन् भने गैह्र सरकारी स्रोतअन्तर्गत निजी, सामुदायिक एवम् गैह्र सरकारी संघसंस्थाहरू पर्दछन् । दातृ निकायहरूको सहयोग सरकारी र गैह्र सरकारी दुवै प्रणालीबाट प्रवाह हुने गर्दछ । प्राविधिक व्यावसायिक शिक्षा र तालिमका लागि उपलब्ध स्रोतलाई औपचारिक र अनौपचारिक प्रकृतिका निकायहरूबाट प्रवाह हुने गरी पनि वर्गीकरण गर्न सकिन्छ ।

औपचारिक प्रकृतिका निकायहरू अन्तर्गत औपचारिक रूपमा गठन भएका वा गरिएका संगठित संघ संस्थाहरू पर्दछन् । यस किसिमका संघ संस्थाहरू भित्र सरकारी, गैह्र सरकारी र सामुदायिक संघसंस्थाहरू पर्दछन् । यी संस्थाहरूबाट विनियोजन भएको रकमको लेखाङ्कन गर्न सकिन्छ । तर सबै निकायको रकम एकिकृत गर्ने सम्बन्धमा भने मुलुकले तय गरेको राष्ट्रिय ढाँचामा निर्भर गर्दछ । तर सरकारले चाहेमा यस किसिमका संघसंस्थाबाट विनियोजन एवम् खर्च भएको रकम एकिकृत गर्न सक्छ । औपचारिक रूपमा गठन नभएका तर सीप विकास सम्बन्धी काम गरिरहेका संस्था वा निकायहरू जस्तै घर, परिवार वा अन्य कुनै संगठन आदिबाट भए गरेका कार्यहरू र खर्चहरू यस शीर्षकमा पर्ने गर्दछन् । यस किसिमका कार्यहरू र तीनमा प्रवाह भएको रकमको मात्रा एकिन गर्न सजिलो छैन । अनुमानका आधारमा भन्ने हो भने व्यावसायिक तालिमको क्षेत्रमा यस शीर्षकबाट खर्च भएको रकमको मात्रा ठूलो हुन सक्छ ।

माथि उल्लेख गरिएजस्तै प्राविधिक व्यावसायिक शिक्षा र तालिमका क्षेत्रमा स्रोत उपलब्ध गराउने प्रमुख निकायको रूपमा सरकार रहेको छ । सरकारबाट यस क्षेत्रका लागि उपलब्ध गराइएको सबै स्रोत शिक्षा मन्त्रालयबाट मात्र प्रवाह हुने गरेको छैन । व्यावसायिक तालिमको क्षेत्रमा शिक्षा मन्त्रालयका अतिरिक्त अन्य विषयगत मन्त्रालय र निकायहरूले पनि विभिन्न कार्यहरू सन्चालन गरिरहेका छन्, यस क्षेत्रमा विनियोजित सार्वजनिक कुल स्रोतमध्ये लभभग दश एघार प्रतिशतमात्र शिक्षा मन्त्रालयबाट प्रवाहित भएको देखिन्छ, सरकारी निकायहरूको बीचमा समन्वयको अभाव छ, विभिन्न निकायहरूले एकै प्रकृतिका कार्य सन्चालन गरेको देखिन्छ (पराजुली र शाक्य, २०१२) । मुलुकले यस क्षेत्रको विकास र समन्वयको लागि प्राविधिक शिक्षा र व्यावसायिक तालिम परिषद् ऐन २०४५ तर्जुमा गरी प्राविधिक शिक्षा र व्यावसायिक तालिम परिषद् गठन गरेको २५ वर्षभन्दा बढी भईसक्दा पनि यसको नेतृत्वमा सबै कार्यहरू समन्वयित ढंगबाट सन्चालन हुन सकेको छैन । यस किसिमको परिस्थिति आउनुका पछाडि यसको नेतृत्व क्षमतामा कमी पनि हुनसक्छ यसैगरी अन्य निकायहरूको आफ्नै क्षेत्र विस्तार गर्ने नियत पनि हुनसक्छ ।

प्राविधिक व्यावसायिक शिक्षा र तालिमको वित्त व्यवस्थापनसँग सम्बन्धित समस्या तथा चासोहरू माथि नै उल्लेख भइसक्यो कि प्राविधिक व्यावसायिक शिक्षा र तालिमको क्षेत्रमा सार्वजनिक र निजी स्रोतलाई मार्गनिर्देश गर्न वित्त नीतिको अभाव छ । एकिकृत प्रणालीको अभाव छ । यसले गर्दा एकातिर निजीक्षेत्रलाई समन्वय गर्न सकिएको छैन भने अर्कोतिर दातृ निकाय एवम् अन्तराष्ट्रिय संघसंस्थाका कार्यहरू आआफ्नै प्राथमिकताका आधारमा सन्चालित छन् । व्यवस्थापकिय, प्राज्ञिक, प्रशासनिकलगाएतका कार्यहरू पनि वित्तसँग जोडिएर आउने हुनाले कुनकुन कार्यहरू वित्तका मात्र हुन र कुनकुन कार्यहरू अन्य पक्षसँग मात्र सम्बन्धित छन् भनेर छुट्याउन त्यति सजिलो छैन । तापनि यसक्षेत्रमा रहेका समस्या तथा चासोहरू, जुन वित्तपक्षसँग सम्बन्धित छन् भनेर मानिएको छ, यसलाई देहाय बमोजिम लिपीबद्ध गर्ने प्रयास गरिएको छ ।

१. एकिकृत सोच, नीति र प्रणालीको अभाव ।
२. मानव संशाधन विकास योजना र जनशक्ति प्रक्षेपण कार्य नियमित रूपमा गर्न नसकिनु ।
३. प्राविधिक व्यावसायिक शिक्षा र तालिमको क्षेत्रमा एकिकृत योग्यता प्रणाली र ढाँचाको अभाव ।
४. राष्ट्रिय आवश्यकता र प्राथमिकताको आधारमा स्रोत प्रवाह हुन नसक्नु ।
५. संस्थागत, कार्यक्रमगत र कार्यान्वयनगत रूपमा समन्वय हुन नसक्नु ।

६. आवश्यकताको आधारमा संस्थागत क्षमता अभिवृद्धि र पूर्वाधार विकास गर्न नसकिनु ।
७. निजीक्षेत्रको न्यून संस्थागत क्षमता र भएकासँग पनि प्रभावकारी रुपबाट सहकार्य गर्न नसकिनु ।
८. निजीक्षेत्रको न्यून सार्वजनिक जवाफदेहीता र उत्तरदायित्व ।
९. श्रमबजारको माग अनुरूपको जनशक्ति उत्पादन गर्न नसकिनु ।
१०. पाठ्यक्रममा समानुकुल सुधार गरी यसलाई उद्योग र श्रमबजारको मागसँग आवद्ध गर्न नसकिनु ।

प्राविधिक व्यावसायिक शिक्षा र तालिम क्षेत्रको वित्त व्यवस्थापन सुदृढ गर्न गर्नुपर्ने कार्यहरू

प्राविधिक व्यावसायिक शिक्षा र तालिम क्षेत्रको वित्तव्यवस्था सुदृढिकरणका लागि शिक्षाको वित्तव्यवस्था सुदृढ हुनु आवश्यक छ । तापनि यो क्षेत्र एक विशिष्ट प्रकृतिको भएको हुनाले यसको वित्त व्यवस्था प्रभावकारी बनाउनका लागि देहायका उपायहरू उपयोगी हुन सक्छन् ।

१. मुलुकले कुन तहको जनशक्ति केकस्तो प्रक्रियाबाट उत्पादन गर्ने भन्ने बारेमा स्पष्ट नीतिगत मार्गदर्शन तय नगरिएसम्म यस उपक्षेत्रका लागि के कति लगानी गर्ने भन्ने पक्ष निर्धारण हुन कठिन छ । सीप विकासका क्षेत्र र दायराले पनि लगानीको मात्रा एकिन गर्न सहयोग गर्दछ ।
२. विद्यालय शिक्षा र अन्य तहका शिक्षामा लगानीको ढाँचा के कस्तो हुने भन्ने सम्बन्धमा स्पष्ट मापदण्ड बनाई कार्यान्वयनमा ल्याउनु पर्दछ ।
३. प्राविधिक व्यावसायिक शिक्षा र तालिम प्रदायक निकायहरूको संगठनात्मक स्वरूप, निजी क्षेत्र सँगको सहकार्य, अनौपचारिक क्षेत्रबाट हासिल गरेको सीपको समक्षता र प्रमाणिकरणको प्रक्रियाआदिले पनि वित्तमा प्रभाव पार्ने भएकोले यसको संरचना र कार्यविधि तय गर्नुपर्ने देखिन्छ ।
४. कार्यरत जनशक्ति पनि लगानीको ढाँचा र मात्रा तय गर्ने अर्को प्रमुख आधारको रुपमा रहेको हुन्छ ।
५. प्राविधिक व्यावसायिक शिक्षा र तालिमअन्तर्गत प्रयोगमा ल्याइने पाठ्यक्रम, शैक्षणिक प्रकृया, प्रयोगात्मक कार्य, परियोजना कार्य तथा इन्टनसीप आदिले पनि वित्तमा प्रत्यक्ष प्रभाव पार्ने भएकोले यसलाई स्पष्ट गरिनु पर्दछ । साथै जनशक्तिको व्यवस्थापन र सो को क्षमता विकास वित्त व्यवस्थापनमा समावेश हुने अर्को महत्वपूर्ण पक्ष हो ।
६. प्राविधिक व्यावसायिक शिक्षा र तालिमको क्षेत्रमा प्रयोग गरिने योग्यता प्रणालीको प्रारूप वा ढाँचाले समग्र वित्तपक्षलाई निर्देशित गर्ने भएकोले यसको विकास एवम् कार्यान्वयन अति महत्वपूर्ण पक्षको रुपमा रहने गर्दछ ।
७. प्राविधिक व्यावसायिक शिक्षा र तालिममा वित्त ढाँचा, स्वरूप र मात्रा निर्धारण गर्ने अर्को महत्वपूर्ण पक्ष श्रम बजार र माग पनि हो । यसलाई जनसंख्या, बसाइ सराइ, श्रम शक्तिको उपलब्धता र प्रयोग रोजगारीको अवस्था, वैदेशिक परिवेश आदिले पनि प्रभाव पार्ने भएकोले मुलुकको बृहत नीति ९:बअचय एयिष्ठिअथ० पनि उत्तिकै सान्दर्भिक र महत्वपूर्ण हुने गर्दछ ।

प्राविधिक व्यावसायिक शिक्षा र तालिम कोषको परिकल्पना र कार्यान्वयन

माथि उल्लेख गरिएका सबै सुझावहरू उत्तिकै महत्वपूर्ण र आवश्यक छन् । यस क्षेत्रको विकासका लागि नीतिगत, कानूनी व्यवस्था आवश्यक छ जसले समन्वय, नियमन र सहजीकरण गर्न सहयोग गरोस । यसको लागि समय पनि लाग्न सक्छ । तसर्थ पहिलो कार्य भनेको हालको नीतिगत र कानूनी संरचना भित्र रहेर गर्न सकिने कामहरू पहिचान गरी कार्य थाल्नु हुनसक्छ ।

पहिलो चरणमा हाल कायम रहेका संरचना र सन्चालित कार्यक्रमहरूको बीचमा समन्वय आवश्यक छ । यस क्रममा कसले के काम कुन क्षेत्र वा विषयमा सन्चालन गरिरहेको छ भन्ने एकिन गर्नुपर्ने देखिन्छ । विभिन्न निकायहरू र उनीहरूले कार्यान्वयन गरिरहेका कार्यक्रमहरूको बीचमा समन्वय गर्नका लागि पनि सँगै बसेर छलफल गर्नु आवश्यक छ । यसबाट कार्यक्रम दोहोरिएको नदोहोरिएको बारेमा जानकारी प्राप्त हुन्छ, कुनकुन क्षेत्र छुटेको रहेछ भनी पहिचान गर्न

पनि सहज हुन्छ । यो कार्यका लागि कार्यक्रम सन्चालन गर्ने सबै निकायका पदाधिकारीसहितको आवश्यक संयन्त्र निर्माण गर्नुपर्ने हुन्छ । यही संयन्त्रमा प्राविधिक व्यावसायिक शिक्षा र तालिम नीति र यसको उद्देश्यका बारेमा छलफल गर्न सकिन्छ । नीतिले लिएका मार्गदर्शनका बारेमा स्पष्ट बनाउन सकिन्छ । कोषको व्यवस्था गर्ने दायित्व शिक्षा मन्त्रालयलाई दिएको भए तापनि सोका बारेमा सबैको विश्वास जित्न नसकिएको वर्तमान परिप्रेक्ष्यमा यस किसिमका छलफल र अन्तरक्रिया थप सहयोगी हुन्छन । प्राविधिक व्यावसायिक शिक्षा र तालिम कोष स्थापना गर्नका लागि पनि यो पहिलो कदम अति आवश्यक छ ।

दोश्रो चरणमा कानूनी संरचना निर्माण र कोषको कार्यविधि तर्जुमा गर्ने कार्य सँगै लैजानु पर्छ । यस क्रममा विभिन्न निकायहरुबाट भई आएका कार्यमा दोहोरोपन नपर्ने गरी कार्य गर्न संयुक्त कार्यटोली वा कार्य समूह बनाउन सकिन्छ । यसले कार्यक्रम तर्जुमालाई अन्तिम रूप दिन सक्छ । यसरी अन्तिम रूप प्रदान गरिएका कार्यक्रमहरु आआफ्नै निकायहरुबाट सन्चालन हुन सक्छन भन्ने यर्थाथतालाई यहाँनेर विर्सन हुँदैन । तर कार्यान्वयन र अनुगमनमा के कसरी एकिकृत ढाँचा विकास गरी थप समन्वय कायम गर्न सकिन्छ भन्ने बारेमा थप उपाय खोजी गर्नुपर्ने देखिन्छ । एक अर्थमा यो चरण भनेको कार्यक्रमहरुको संयुक्तरूप निर्माण र कार्यान्वयन एवम् अनुगमनमा समन्वय हो । यसमा सरकारी निकायका अतिरिक्त विभिन्न अन्तराष्ट्रिय संघसंस्था एवम् निजीक्षेत्रलाईसमेत सहभागि गराउनु पर्दछ । पहिला सरकानरी निकायहरुको बीचमा समन्वय कायम गरिसकेपछि अनि अन्य संघसंस्थाहरूसँग सहकार्य गर्न अगाडि बढ्नु पर्दछ ।

तेस्रो चरणमा कोषको स्थापना गरी कार्यक्रम तर्जुमा र कार्यान्वय गर्नु हो । कानूनी संरचना पछि गठन हुने कोषको सचिवालयले कार्यक्रम निर्माण एवम् कार्यान्वयनमा सहजीकरण गर्दछ । यसको उच्चतम रूप भनेको सबै निकाय तथा संस्थाहरुका स्रोतलाई एकिकृत गरी (Pooled Mechanism) कार्यक्रम तर्जुमा र कार्यान्वयनमा ल्याउनु हो । तर यसको लागि समय र थप तयारी आवश्यक पर्न सक्दछ, संस्थागत पुर्नसंरचना गर्नुपर्ने पनि हुनसक्छ । तसर्थ यस चरणको शुरुमा कार्यक्रमको सर्ब स्वीकार्य ढाँचा (Framework) विकास गर्ने र रकमको प्रवाह विभिन्न मोडलमा आधारित हुनसक्छ भन्ने धारणा बमोजिम कार्य प्रकृया अगाडि बढाउनु हो । कुनै संस्थाले कार्यक्रमको ढाँचा स्वीकार गर्न सक्छ तर स्रोतलाई एकिकृत नगरी आफ्नै ढंगबाट प्रवाह गर्न सक्दछ । तसर्थ कोषले विभिन्न मोडलमा आधारित ढाँचा प्रयोगमा ल्याउनु पर्ने भएकोले यसले सबै निकाय तथा संघसंस्थाहरुलाई मान्य हुने किसिमबाट त्यस्ता मोडल विकास गर्नुपर्दछ ।

चौथो चरणमा कोषले एकिकृत र समन्वयात्मक ढंगबाट आफ्ना कार्यक्रमहरु विकास गरी कार्यान्वयन गर्दछ । यो चरणमा हालका सबै नीतिगत, कानूनी र संस्थागत संरचनाहरुको पुर्नसंरचना भई कोषअन्तर्गत आवद्ध हुन्छन । यही अवधारणालाई आत्मसाथ गरी अबका कार्यहरु निर्देशित गर्न सकिएमा हालकै स्रोतबाट पनि प्राविधिक व्यावसायिक शिक्षा र तालिमका क्षेत्रमा धेरै उपलब्धि हासिल गर्न सकिन्छ । निजीक्षेत्रलाई आकर्षित गर्ने ढाँचाहरु विकास गर्न सकिएमा यसक्षेत्रबाट पनि मनग्यै रूपमा स्रोत उपलब्ध हुनसक्छ ।

सन्दर्भ सामग्रीहरू

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नेपालमा प्राविधिक शिक्षा तथा व्यावसायिक तालिमको विकाश, विस्तार र आवश्यकता

शिव शंकर घिमिरे*

मानव र मानव समाजलाई आवश्यक पर्ने ज्ञान र सीपलाई नै प्राविधिक तथा व्यावसायिक शिक्षा भनिन्छ । यो शिक्षा जिवन उपयोगी हुनुपर्छ । समाजको विकास संगसंगै ज्ञान र सीपको आवश्यकता परिवर्तन हुदै जान्छ । यहि परिवर्तनले यसको विकाश निरन्तर भइरहन्छ । यस अर्थमा प्राविधिक तथा व्यावसायिक शिक्षा मानव सभ्यता शुरु संगै शुरु भएको पाइन्छ । शुरु शुरुमा पुर्खाहरुले आफना सन्तानलाई जिवन उपयोगी अर्थात जिविको पार्जन गर्न आवश्यक पर्ने ज्ञान र सीप सिकाउने प्रचलन थियो । यो प्रचलन ठाउ र परिस्थिति अनुसार विभिन्न स्तरमा हालसम्म कायम नै छ । तर औपचारिक रूपले संस्थागत प्राविधिक तथा व्यावसायिक शिक्षा वि.स. २००४ साल देखि नै शुरु भएको पाइन्छ । औपचारिक प्राविधिक तथा व्यावसायिक शिक्षा विकाशलाई हेर्दा निम्न चरणहरुमा यसको व्याख्या गर्न सकिन्छ ।

प्राविधिक तथा व्यावसायिक शिक्षाको विकाश

- १.१ गुरुकुल/गुम्बा/विहार आधारित वि.स. २००४ साल भन्दा अगाडि हिन्दु धर्म मान्नेहरुले गुरुकुलमा र बौद्धधर्म मान्नेहरुले गुम्बा विहारमा हुने दिक्षामा आधारित भएर जिवन उपयोगी ज्ञान र सीप सिकाउने गरिन्थ्यो । यस प्रणालीले कुलिन जातका विद्यार्थीहरुको मात्र पहुच पुग्ने तर सर्वसाधारण जनताका सन्तानको पहुच पुग्दैनथ्यो । तर पारिवारिक पृष्ठभूमिको सीपमुलक व्यवसायबाट सीपको तालिम पारिवारिक परम्परागत पेशागत रूपमा व्यापक रूपमा प्रचलित भएको पाइन्छ । यहि कालखण्ड वि.स. १९९५ मा राणा प्रधानमन्त्री जुद्धशमसेरले एउटा प्राविधिक शिक्षालय तथा घरेलु उद्योग तालिम केन्द्रको स्थापना गरेको पाइन्छ (भ्रलक २०६९) ।
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- १.३ बहुउद्देश्यीय विद्यालय (वि.स. २०१५ देखि २०२७ सम्म): आधारभुत विद्यालय कार्यक्रमले निरन्तरता पाउन नसकेपछि प्राविधिक तथा व्यावसायिक जनशक्ति देशभित्रै उत्पादन गरी आवश्यक पर्ने निम्न स्तरीय जनशक्ति पूर्ति गर्ने प्रयास स्वरुप देशमा बहुउद्देश्यीय माध्यमिक विद्यालय कार्यक्रम लागु गरिएको थियो । विद्यार्थीहरुलाई वाणिज्य, कृषि, औद्योगिक शिक्षा तथा गृह विज्ञान विषयहरुमा व्यावसायिक तालिम प्रदान गर्ने लक्ष्यका साथ सञ्चालन गरिएको यस कार्यक्रम अन्तर्गत कम्तीमा हरेक जिल्लामा एक एकवटा बहुउद्देश्यीय माध्यमिक विद्यालय स्थापन गरी देशभर ७५ वटा विद्यालयमा कार्यक्रम विस्तार गर्ने लक्ष थियो । तर लक्ष जस्तोसुकै भए पनि २०२८ साल सम्म जम्मा २९ विद्यालयहरुलाई बहुउद्देश्यीय माध्यमिक विद्यालयमा रुपान्तरण गरिएको

*नियन्त्रक, परीक्षा नियन्त्रण कार्यालय, प्रा.शि.तथा व्या.ता.परिषद्

*यो लेखमा उल्लेख गरिएका तथ्य तथा सूचना प्रा.शि.तथा व्या.ता.परिषद् कार्यालयका विभिन्न महाशाखा, शिक्षालयहरुको प्रतिवेदन तथा प्रकाशित/अप्रकाशित कृतिहरुलाई सन्दर्भ मानी तयार गरिएको छ । यो एउटा अनुसन्धानात्मक नभई जानकारी मुलक लेखका रूपमा तयार गरिएको छ ।

थियो । देशमा आवश्यक पर्ने प्राविधिक तथा व्यावसायिक जनशक्ति उत्पादन गर्ने यस कार्यक्रमले पनि सफलता प्राप्त गर्न सकेन । यसले सफलता पाउन नसक्नुका कारणहरूमा स्थानीय आवश्यकता र पाठ्यक्रम बीच सामन्जस्य नहुनु, कार्यक्रम लागु गर्न व्यवस्थापनको इच्छा नहुनु, संगठन र व्यवस्थापन कमजोर हुनु, सञ्चालन खर्च पर्याप्त नहुनु तथा समुदायले आफना बालबालिकालाई प्राज्ञिक ज्ञान सिकाउने साधारण विद्यालयमा पठाउनु रुची राख्नु आदि छन (स्मारिका २०६५) ।

१.४ राष्ट्रिय शिक्षा पद्धति योजना (वि.स. २०२८ देखि २०३७ सम्म): वि.स. २०२८ साल देखि देशभर सबै साधारण, माध्यमिक विद्यालयहरूमा क्रमशः अनिवार्य प्राविधिक तथा व्यावसायिक विषयहरू समावेश गरी माध्यमिक विद्यालयहरूलाई व्यावसायिक माध्यमिक विद्यालयहरूमा रूपान्तरण गरियो । यो योजनालाई समान्य बोलिचालीमा “नयां शिक्षा योजना” भनियो । २०३५ -३६ सालको विद्यार्थी आन्दोलनले नयां शिक्षा योजना असफल भएको घोषणा गरायो । अन्ततः माध्यमिक शिक्षाको व्यावसायिकरण गर्ने कार्य देशको विकासको अवस्थासंग मेल खान नसकेको निष्कर्ष निकालियो । युनेस्कोले यो योजनाको मूल्यांकन गरी असफलहरूको कारणहरू उल्लेख गरेको छ । मुख्य मुख्य कारणहरूमा स्थानीय आवश्यकता, संस्कृति, रितिरिवाजसंग व्यावसायिक विषयहरूको मेल नखानु, मन्त्रालय, क्षेत्रीय शिक्षा कार्यालय, जिल्ला शिक्षा कार्यालयहरूमा परियोजना सञ्चालन क्षमताको कमी, विद्यालयमा प्राविधिक तथा व्यावसायिक शिक्षक औजार उपकरणको कमी आदि रहेका थिए (जर्नल २०१०) ।

१.५ राष्ट्रिय प्राविधिक शिक्षा तथा व्यावसायिक तालिम समिति (वि.स. २०३७ देखि २०४५ सम्म): प्राविधिक तथा व्यावसायिक शिक्षाको विस्तार र विकाशको लागि गरिएका विभिन्न प्रयास असफल हुँदा हुँदै पनि प्राविधिक तथा व्यावसायिक शिक्षा मुलुकको भौतिक संरचना तथा सामाजिक विकाशको लागि अपरिहार्य हुने अपेक्षा गरी तत्कालिन सरकारले राष्ट्रिय शिक्षा समितिको सिफारिसको आधारमा प्राविधिक शिक्षाको छुट्टै योजना तयार गर्यो । यसै योजना अन्तर्गत मध्य पश्चिमाञ्चल क्षेत्रको जुम्लामा पहिलो प्राविधिक शिक्षालयको रूपमा “कर्णाली प्राविधिक शिक्षालय” २०३७ सालमा स्थापना भयो । यस योजनाले देश भित्र आधारभुत तथा मध्यमस्तरका प्राविधिक जनशक्ति उत्पादन गर्न राष्ट्रिय विकासका आवश्यकतासंग मेल खाने गरी प्राविधिक तथा व्यावसायिक शिक्षा र तालिमलाई संस्थागत गर्ने प्रयास गरेको छ । गुणात्मक प्राविधिक शिक्षा प्रदान गर्ने प्राविधिक शिक्षालयहरू देशका दुर्गम र महत्वपूर्ण ठाँउहरूमा स्थापना गरी स्थानीय जनशक्तिको आवश्यकता परिपूर्ति गर्ने लक्ष्य राखेको छ । उल्लेखित लक्ष्यलाई पुरा गर्न प्राविधिक शिक्षालय कार्यान्वयन सम्बन्धी नीतिगत मार्गदर्शनका लागि सन १९८२ मा राष्ट्रिय शिक्षा समिति अन्तर्गत रहने गरी “राष्ट्रिय प्राविधिक शिक्षा तथा व्यावसायिक तालिम समिति” गठन गरिएको थियो । शिक्षालयहरूको व्यवस्थापन तथा प्रशासनिक कामकाजका लागि प्राविधिक तथा व्यावसायिक शिक्षा निर्देशनालाय स्थापना गरिएको थियो । सीप परिक्षण सम्बन्धी कार्य छुट्टै संस्था “सीप परिक्षण प्राधिकरण” मार्फत हुने गरेको थियो । कामको फराकिलो दायरा शिक्षालयहरूको विस्तार संगसंगै निर्देशनालयको स्वरूप र आकार पनि परिवर्तन गर्नु पर्ने महसुस गरी सन १९८९ मा “प्राविधिक शिक्षा तथा व्यावसायिक तालिम परिषद् ऐन २०४५” पारित भई प्राविधिक शिक्षाको विकास र विस्तारको लागि “प्राविधिक शिक्षा तथा व्यावसायिक तालिम परिषद्” नामक एक स्वायत्त संस्थाको गठन भयो (जर्नल २०११) ।

१.६ प्राविधिक शिक्षा तथा व्यावसायिक तालिम परिषद् (२०४५ देखि हालसम्म): प्राविधिक शिक्षा तथा व्यावसायिक तालिमको नीति/योजना, कार्यान्वयन, समन्वय तथा गुणस्तरीयता कायम गर्ने उद्देश्यले वि.स.२०४५ मा प्राविधिक शिक्षा तथा व्यावसायिक तालिम परिषद् (Council for Technical Education & Voational Training, CTEVT) को स्थापना भएको हो । सीपयुक्त दक्ष जनशक्ति नै विकाशको मुल श्रोत हो । “बोली खाने भन्दा गरी खाने” शिक्षाले गरिवि, बेरोजगारी कम गराई विकाशको आधार मजबुद गर्दै आर्थिक सामाजिक रूपान्तरणमा टेवा पुऱ्याउने तथ्य निर्विवाद छ । यस्तो राष्ट्रिय लक्ष्य पुरा गराउन CTEVT सभा, CTEVT परिषद्, ११ वटा महाशाखा रहेको केन्द्रीय कार्यालय, तीनवटा क्षेत्रीय कार्यालय तथा ४२ वटा आंगिक संस्थाहरू छन । १० वटा पोलिटेक्निक निर्माणाधिन छन । २०७१ जेष्ठ मसान्त सम्म सम्बन्धन प्राप्त संस्था ५५१ वटा छन (स्तर निर्धारण महाशाखा अभिलेख २०७१) । यी संस्थाहरूले एस.एल.सी. पछि ३ वर्षे डिप्लोमा/प्रमाणपत्र तह, १५ महिने/२९

महिने टि.एस.एल.सी. तथा विभिन्न अवधिको छोटो तालिमहरु सञ्चालन गरिरहेका छन् । २०७१ साल जेष्ठ मसान्त सम्म डिप्लोमा/प्रमाण पत्र तहमा २४५६९, टि.एस.एल.सी.मा १२६४८० जना उत्पादन भई सकेका छन् (प.नि.का. अभिलेख २०७१) भने विभिन्न तहको सीप परीक्षणमा उत्तीर्ण हुनेको संख्या १६७०११ छ (राष्ट्रिय सीप अभिलेख २०७१) ।

१.७ सामुदायिक विद्यालयमा प्राविधिक शिक्षा तथा व्यावसायिक तालिम:प्राविधिक शिक्षा तथा व्यावसायिक तालिमको पंहुचलाई सहज बनाउन जिल्लामा कम्तीमा एउटा सामुदायिक विद्यालयमा प्राविधिक शिक्षा (Technical Education in Community School) कार्यक्रम संचालन गर्ने लक्ष्य अनुरूप हाल ७३ वटा जिल्लाका एक-एक सामुदायिक विद्यालयमा यस्तो कार्यक्रम चलिरहेको छ । अनुगमन, प्राक्टिकल, कक्षामा सामान, औजारको अपर्याप्तता, शिक्षकको अभाव वा छिटो छिटो परिवर्तन लगायतका समस्या भए पनि समग्रमा प्रभावकारी रहेको देखिन्छ । कक्षा ९ देखि नै प्राविधिक शिक्षा तथा व्यावसायिक तालिम दिने लक्ष्य लिई देशभर १०० वटा सामुदायिक विद्यालयमा परीक्षणको रूपमा (Piloting) छुट्टै कार्यक्रम सञ्चालन भैरहेको छ । यी कार्यक्रमहरुको व्यवस्थापन, अनुगमन, प्राविधिक सहयोग, परीक्षा सञ्चालन, प्रमाणपत्र वितरण आदि विषयमा स्पष्टता नभएको हुनाले अन्यौलता नै रहेको छ । वेलैमा माथि उल्लेखित मुद्दाहरुको स्पष्ट र व्यवहारिक निकास खोजिएन भने २०२८ सालबाट शुरु भएको नयां शिक्षा पद्धति योजना जस्तै कार्यक्रम असफलतामा टुंगिने सम्भावना छ ।

प्राविधिक तथा व्यावसायिक शिक्षाको आवश्यकता :

नेपालमा २००८ मा भएको श्रम सर्भेले देखाए अनुसार १५ वर्ष वा सो त्यो भन्दा माथिका ४६.६७ प्रतिशत जनताले स्कूलमा कहिले प्रवेश गरेका छैनन । २००९ को राष्ट्रिय तथ्यांक अनुसार स्कूल प्रवेश गरेका मध्ये १०.७५ प्रतिशतले प्राथमिक तह तथा ८.८७ प्रतिशतले निम्न माध्यमिक तह भन्दा तल नै विद्यालय छोडेको पाइन्छ । माथिका दुई वटा तथ्यांकलाई विश्लेषण गर्ने हो भने १५ वर्ष भन्दा माथिका करिब २० प्रतिशत जनताले मात्र माध्यमिक तह सम्मको शिक्षा लिएको पाइन्छ । २००९ कै राष्ट्रिय तथ्यांक अनुसार करिब ८० प्रतिशत १५ वर्ष भन्दा माथिका जनता कृषि व्यवसायमा संलग्न छन् (भलक ०६९) । तर अर्थ मन्त्रालयको सन २०११ को आर्थिक सर्भेले राष्ट्रिय उत्पादनको करिब ३४-३५ मात्र कृषि क्षेत्रको योगदान रहेको देखाउछ । राष्ट्रको आर्थिक सामाजिक रुपान्तरणको लागि जनसंख्याको ठुलो हिस्सा ज्ञान र सीपले युक्त हुनु नितान्त आवश्यक छ । कृषिमा संलग्न ८०५ जनसंख्यामा कृषि सम्बन्धी ज्ञान र सीप दिन सकियो भने उत्पादनमा गुणात्मक फडको मारी राष्ट्रिय उत्पादनमा कृषि क्षेत्रको योगदान संलग्न जनसंख्याको अनुपातमा नै बढ्न सक्ने देखिन्छ । यसका अतिरिक्त जनसंख्याको ठुलो हिस्सा औपचारिक शिक्षाको संरचना भित्र आउन सकेको छैन । औपचारिक शिक्षाको संरचना भित्र आउन नसकेको जनसंख्यालाई प्राविधिक तथा व्यावसायिक शिक्षा तालिम दिई जिविकोपार्जन अवसर श्रजना गरी दिनु राज्यको दायित्व हुन आउछ । नेपाल जस्तै अल्पविकसित देशका लागि प्राविधिक तथा व्यावसायिक शिक्षा र तालीमको महत्व र आवश्यकता निम्न अनुसार उल्लेख गर्न सकिन्छ (जर्नल २०१२) ।

- स्वावलम्बी र सीपयुक्त जनशक्तिले व्यक्तिको सुनिश्चित सुनौलो भविष्यको मार्ग तय गर्न सक्छ । उच्च तहको सैद्धान्तिक शैक्षिक योग्यताले मात्र कुनै पनि व्यक्ति रोजगार हुन सक्दैन । बेरोजगार शैक्षिक जनशक्ति राष्ट्रको लागि बोझ हुन्छ भने सीपयुक्त जनशक्ति राष्ट्रको सम्पत्ती हुन्छ ।
- नेपालको राष्ट्रिय अर्थतन्त्रमा रेमिटयान्सको योगदान करिब २५ प्रतिशत रहेको छ । वैदेशिक रोजगारिमा गएका श्रमिकहरुमा करिब ७०५ सीप विहिन ९९लकपर्षीभिम०, २७५ अर्धसीप ९९कभू कपर्षीभिम ० तथा करिब ३५ सीपयुक्त ९९कपर्षीभिम० छन् । वैदेशिक रोजगारिमा सीपयुक्त व्यक्तिले करिब ३ देखि ५ गुणा बढी तलवमान पाउछ । यदि नेपालबाट वैदेशिक श्रममा जाने श्रमिकहरुलाई सीपयुक्त तालिम दिन सकियो भने उनिहरुले आफ्नो देशमा भित्राउने पैसा ५ गुणासम्म बढ्न सक्ने देखिन्छ ।

- आफुले हासिल गरेको सीप र शिक्षा प्रयोग गरी उद्यमशिल नागरिक वनी स्वरोजगार भई अन्य व्यक्तिलाई समेत रोजगार श्रृजना गर्न सक्ने देखिन्छ । उद्योग, व्यापार तथा व्यावसाय सञ्चालन गर्नको लागि उक्त उद्योग व्यवसायसंग सम्बन्धित ज्ञान र सीप अनिवार्य शर्त हुन आउछ । नेपालमा धेरै उद्योग व्यवसाय स्थापना भई सञ्चालनमा नआउनुमा सम्बन्धित ज्ञान र सीपको आभाव नै प्रमुख कारण हो । साना मझौला उद्योग व्यवसायले आफ्नो आर्थिक उन्नती मात्र नभई अरु कयौंको रोजगारी श्रजना गर्ने हुँदा समाजको आर्थिक उन्नतीमा ज्यामितिय असर पर्छ ।
- विभिन्न अध्ययन एवं सर्वेक्षणले देखाएको तथ्यांक अनुसार प्राविधिक तथा व्यावसायिक शिक्षा र तालीम प्राप्त जनशक्तिको रोजगार दर ७०५ भन्दा बढी रहेको देखिन्छ ।
- प्राविधिक तथा व्यावसायिक शिक्षा र तालिमको लागि युवाहरुमा जागरण शुरु भएको छ । शिक्षा र तालीम लिने आंकक्षी युवाहरुको संख्या भन्दा प्राप्त अवसरहरु ज्यादै कमी छन् । यसैले होला अहिले प्राविधिक शिक्षालयहरुको स्थापनाको लागि राजनीति दबाव तथा चासो बढीरहेको छ ।
- नेपालमा करिब वर्षमा चार लाख पचास हजार जनता श्रम बजारमा प्रवेश गर्दछन । सरकारी, गैह्रसरकारी तथा निजी पहलमा जम्मा जम्मी एकलाख भन्दा घटीले प्राविधिक तथा व्यावसायिक शिक्षा र तालीम लिने अवसर पाउछन । श्रम बजारमा प्रवेश गर्ने ठुलो हिस्सा सीप विहिन रहेको छ ।
- देशमा नागरिकहरुमा श्रम प्रति सकारात्मक भावना जागृत हुनु पर्दछ । नेपालमा कोरा शैद्धान्तिक डिग्री लिने श्रम नगर्ने एवं श्रमलाई घृणा गर्ने प्रवृति विकास भइरहेको छ । प्राविधिक तथा व्यावसायिक शिक्षाले श्रमलाई सम्मान गर्न र श्रम प्रति विश्वास गर्न सिकाउछ । कितावमा पढेर बोडमा आलु फलाउन सिकाउने शिक्षकले आफ्नै वारीमा आलु फलाउन नजानेको अवस्था छ ।
- ठुलो संख्यामा युवाहरु न काममा छन न अध्ययनमा यस्तो युवाबाट सामाजिम समस्या र असुरक्षा श्रृजना हुन्छ । विगतको द्वन्दमा अध्ययन गर्न अवसर नपाएका वा नसकेका तथा रोजगारी नपाएका युवाहरुको संलग्नता अधिक थियो । यी बलिया युवाहातहरुलाई उत्पादनशिल काममा लगाउन प्राविधिक शिक्षाको अवसर र पहुचलाई सहज बनाउनु पर्ने देखिन्छ ।

जनसंख्याको प्रोढ तथा अपाङ्गता भएकाहरुको हिस्सा ठुलै छ । यस्तो जनसंख्यालाई उमेर मैत्री तथा अपाङ्गता मैत्री व्यावसायिक तालिम दिई उत्पादनशिल कार्यमा संलग्न गराउन सके देशको समष्टिगत आर्थिक विकासमा ठुलो योगदान पुग्ने देखिन्छ ।

शिक्षा डिग्रीका लागि मात्र नभई कामको संसार ९धयचमि या धयचप० का लागि हुनु पर्छ । विद्यार्थीहरुको मस्तिष्कमा ज्ञान र हातमा सीप हुनु पर्छ । कोरा शैद्धान्तिक डिग्रीले मात्र २१ औं सताब्दीको आवश्यकतालाई पुरा गर्न सक्दैन । श्रम बजार गतिशिल छ, प्राविधिको विकाश र उपयोगमा द्रुततर परिवर्तन भइरहेको छ । राष्ट्रिय तथा अन्तराष्ट्रिय स्तरमा रोजगारीका अवसरहरु विकाश र विस्तार भइरहेको सन्दर्भमा प्राविधिक तथा व्यावसायिक शिक्षा र तालिमका अवसरहरुलाई प्रशस्त गर्दै प्राविधिक शिक्षाको विस्तारलाई विकाशको एजेण्डाको रुपमा बहसमा ल्याउनु पर्ने खाँचो देखिन्छ ।

सन्दर्भ समाग्री:

- प्राविधिक तथा व्यावसायिक शिक्षा र तालीम एक ऋलक (२०६९) सानोठिमी, भक्तपुर ।
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