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A Milestone for the Enhancement of TVET Sector

This is a matter of pride for us to publish the 13th issue of **Technical and Vocational Education and Training (TVET) Development Journal** as a continuous series from last three years. The articles covered in this issue have been categorized into four major areas: 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. Rajendra Karki, 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

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Empowering the Youths with Skills

- Prof. Suresh Raj Sharma, Ph.D.¹

For making a good start in addressing the millennium development goal dovetailing of economy development and human resource development appear to be the first pre-requisite. The agriculture, industrial and tourism sector unfortunately have not been showing encouraging growth in the recent decades. Lack of modernization in terms of use of efficient machines, fully skilled workforce, reliable transport system and adequate security need for the trades and production are probably the main constraints. Lack of sea access (cheapest mode of transport), higher costs of vehicles and their spare parts and the cost of fuel are the other constraints determining the competitive price and delivery of goods on time. Right now our main competitors have more advantages on these matters than ours.

Underdevelopment, underuse and underpay of the workers naturally hamper the per capita output. Our workforce indeed both qualitatively and quantitatively are less equipped to stand in competitive race.

For the training of skilled workers, partnership with the business group is very much desired. It could be in the form of 'enterprise based training', 'training with almost 25-50% with on the job experience' or 'in plant training' or 'engaging some instructors from the industries.' Quality delivery is of greater importance for the employers. The above matter is in fact related to the quality of manpower. But some other matters are equally important. For agriculture, extensive use of mechanized system for better yields, use of improved seeds or breeds, careful use of chemicals not damaging the character of soil, water and air are some important considerations. In our context, these things are given least care. For animal based production, animal feed is important. The water, the pasture land combined with animal feed would have to be carefully balanced. For organic farming, animal dung, even earthworm, lower plants are of significant importance but our farmers are not careful about these things. Again, the technical back up for soil test before the use of pesticide, insecticide, fertilizers on time and on right doses are too important, and our present day farmers are not taught properly for these features.

Animal husbandry helps for the production of milk, meat, leather goods, wool and sometimes even for wild life or national parks conservation. Availability of veterinary doctors and technicians in the neighborhoods and at lower costs should be the things well taken care of before managing the farms. Obtaining the good rates of returns from the animal products are usually 3-4 times gainful than agronomy or horticulture products.

Then comes the question of delivery of the goods to the market on right time with the full assurance of the quality of products. Here the middle man sometimes could misguide or rob the producers. Another feature could be the suitable storage system, and suitable system of converting the perishable product into less perishable products like cheese, butter, condensed or powdered milk, chocolate or 'khuwa' for sweets, fruit products like jam, jellies, dried fruits, wines and other forms of canned or packed foods with the mention of expiry dates can help the agriculture products in fetching better prices.

Here again, continuous quality controlling is needed. Customers' concerns for health hazards must always be attended by the genuine businessman. If properly done, each house can be an industry in a way. The growth of post-harvest technology is still in underdeveloped phase in Nepal. Use of chemicals other than salt, sugar and natural dyes or fragrance and any other synthetic chemicals need to be fully discouraged.

Therefore, for higher productivity, timely delivery, the quality thoroughly checked, stored in uncontaminated utensils or storage system, competitive price, etc need for a significant number of trained professionals and

¹ Author is the Ex-Vice-Chancellor of Kathmandu University. This is the author's thought provocative article.

skilled workers, and economizing the transport system and maximizing management system are the features very important for good business.

The value of agriculture can be extended to cash crops like coffee, tea, spices, fiber goods like cotton, wool, silk, paper, jute; oil and fat products, medicinal, ornamental and aromatic products along with forest products such as bamboo, timber, natural dyes, pigments and so on.

The value of horticulture and agronomy products cannot be underscored. They have already been explored but are in need of strong backup from the modern technologies.

Agriculture business can thus provide jobs for millions of employment seeking people in Nepal. The Nepalese youth think that other areas of employments are more lucrative than agriculture. Australia, New Zealand, France, Denmark, Israel, India, Vietnam and China, have entered into the agricultural business with great successes. This is something our agriculture sector should bear in mind.

Industrial growth using non living objects like minerals, metals to high density synthetic pipes, glass, paints and ceramic products are desired, if possible for exports, if not even for import substitutions.

These days, Nepal is seen even importing bricks, tiles, and plywood, furniture from abroad. Timely technology transfer, application oriented research, due emphasis to art and design, handicrafts production with attractive designs could also be easily taken up by Nepalese businessmen. Though, in high tech businesses, it will be very hard to compete with Asian giants like China, India, Korea, Japan etc. Even IT based and biotech based industries are becoming businesses with cut-throat competition. The manpower's need for smaller businesses to medium scale businesses including those in energy sector development appear a highly potential area for young skilled workers to sell themselves well. Tourism business as such will prove to be a good market to sell such smaller business products.

Other sectors which have a big demand of the skilled workers and technicians or engineers are road construction, dam constructions, tunnel constructions or ropeways, railways, electrical power devices, production of turbines and poles can also absorb millions of youths.

Our excessive dependence of foreign aids or loans or dependence on remittances needs to be kept at bay for some decades now.

Nepal now needs good quality technologists trained by university, technical colleges and polytechnics. If such people are needed in few hundred thousands the needs of supervisors/technicians would be almost five times of that, and the number of skilled workers even five times to the number of technicians. The production of skilled workers can be taken up by CTEVT, the labor department and the industries themselves.

Great needs, great opportunities for jobs and great prospects for training and research are present in Nepal now.

Though skill needs assessment, quality assurance system or accreditation system, timely production of high quality instructors and managers and licensing system managers, are the things the national bodies like council for technical education and vocational training should mostly shoulder the responsibility of.

The attracting of the interest of business sector to start assisting the process right from manpower training to quality controlling to providing attractive employments must be started without any further delay.

Devising the system to accommodate the less affording youths to find the entry to good quality trainings also needs to be explored seriously.

We should now clearly understand that the needs of such people are in large numbers. If the CTEVT system alone cannot produce the people in large numbers, the trade department with their stronger connection with

industries or production sectors, millions of tradesmen could be trained. Here again, the need for partnership has to be realized.

The efforts for partnership should even be extended to local governments, non government organizations and construction companies, contractors, consultancies etc.

It can be noticed that the areas which have already engaged the newly educated people of both the sexes are:

- Health
- Education
- Salesmanship
- Media

The developments of these areas have helped in creating jobs in good numbers. These jobs are mostly in private sectors, though are located in urban areas are also seen useful for self employments.

All the above areas have created a bulk of jobs for the youth with just school leaving certificates, higher secondary education, to bachelor or master level qualifications in general subjects too.

Expansion of health services has occurred though more extensively in urban pockets; in the form of private clinics and private hospital. They too need a significant number of technicians.

In education, the big quantitative expansion that occurred both in public and private sectors has created big number jobs for teaching children of pre primary to higher education. The growths in supermarkets, transport sector, and other mercantile also have created jobs in good numbers. These jobs though, generally require language proficiency, accounting proficiency, computer skills and in some cases, technical skills of 2 to 3 years. The demands appear visible now in many organized sectors. Though accurate need assessments both in quantitative and qualitative terms are not made; suitable career advancement schemes and quality monitoring schemes of such workers are also not so much in place. These things are supposed to be made by the government but are seen not found seriously carried out by them.

The growth in the media sector occurred quite well in the recent decades. The areas like print, broadcast, advertisement and in internet services have made remarkable progress. Here again, reliable quality regulation system does not seem to be in place.

Need for system development approach

Job providers have not quite cared about the skill upgradation, better pay schemes and career advancement schemes nor have job seekers and job holders are informed well about the professional ethics to help in making the companies they work to prosper first to be able to pay them well. Logically speaking the unions intending to help the employees should also be helping the employers. A steady supply of trained manpower, their optimum use, desirable quality consciousness among the employees is until this time less cared and less organized. Probably this matter could have been streamlined by the trade department. They too appear to be working with short cited vision but if not carefully handled the situation could become worst in the coming days. That neither helps the job providers nor the job seekers in real sense. To a great extent such job seekers or job holders are exploited by political parties and less well organized business sectors. Eventually, both the groups will be in disadvantage. The mutual trust between the employer and employee can only help the business to prosper but things are in opposite gears. This asks for a very well knit built-in system between trade training or skill developing agencies, employing agencies and quality regulating bodies which unfortunately has not emerged as organized sector yet in Nepal. The international labor organization

(ILO) had shown interest in the start off phase but not quite followed up well in subsequent years or up to consolidation phase.

In conclusion, I would like to mention that without making business in good shape, employment prospects don't improve, and without making human resource development system put into right gears, the businesses cannot make healthy growth too. Therefore, the important task is now to create a system, run that system well and eventually put that system into competitive gears. Failure to do so, or delay in doing so or be lost in quantitative growth only would continue finding the education institutions or business ventures short sighted and short lived successes only. The plights of non existence of high profile education or skill training system even in past thirty to fifty years except some family owned businesses are some worrying features.

TVET Policy, 2012: Ambitious or Achievable?

- Dr. Gopal Khanal¹

Abstract

This paper is about the review of the existing Technical and Vocational Education and Training Policy 2012 devised by Government of Nepal to reform and enhance overall TVET sub-sector. This document has perfectly envisioned the future provisions of TVET, however translation of these provisions in to practice is more important but challenging.

Five broader headings such as expansion, access and equity, integration, relevance and sustainable financing of TVET are prioritized through which most of the problems of TVET can be solved. Although, in some cases, targets are set rather ambitiously or without paying proper attention on the ground reality, this policy may be the milestone if sufficient attention will be paid for implementation.

Background

Indigenous Art and crafts have been an identity of Nepal since the long past which was culminated from the Licchabi period. At that time, Aranico together with his other ten (artist) friends were invited to visit China where he gained name and fame and became a celebrity. Such arts and crafts were further enhanced in the Malla and earlier Shah Dynasty which can still be observed in the historic palaces and temples. During that period, vocational training were learned and taught in apprentice model and such skills were regarded as traditional skills.

Present Status of TVET Institutions

Presently, large number of institutions and organizations are involved in TVET subsectors. Among them, some are directly running under government agencies, some are getting continuous support from donor agencies to run the programs while some few have made their program sustainable by the training fee. Vocational training and skill development sector is getting sufficient priority from government in these days. The Three Year Plan 2010/11-2012/13 has perceived skill and and training as an effective measure to reduce unemployment and alleviate poverty from the country (NPC, 2010). Presently, Government of Nepal has approved Technical and Vocational Education and Training Policy, 2069. According to the policy document, government has aimed to provide equitable access to vocational training of three months duration in free of cost alongside life skill training with reasonable costs (MoE, 2013). Although the policy document has aimed to conduct TVET programs in coordinated way to maximize the benefits from available resources, TVET sub-sector is always witnessing uncoordinated and haphazard way of operation.

In addition to the regular programs run by government agencies and private sector institutions, large number of projects had also been implemented for certain interval of time. The following few pages are devoted to discuss the institutions and their activities which are part and parcel of overall TEVT sub-sector of the country.

Vocational Training under Governmental Organizations

There are some governmental organizations under three different ministries, which have been carrying out TEVT programs since long time. Council for Technical Education and Vocational Training (CTEVT) is the organization established under the CTEVT act 2045, which caters both vocational training and academic courses. Vocational and Skills Development Training Center (VS DTC) is another governmental organization involved in conducting merely vocational training programmers up to six months in its fourteen training centers throughout the country. Department of Cottage and Small Industry (DCSI) together with Cottage and

¹ Author is the Vice-Chairman at CTEVT.

Small Industry Development Board (CSIDB) under the Ministry of Industry also cater short term vocational training programs in almost all districts (CTEVT, 2010).

Vocational Training under Non-governmental Organizations

In addition to governmental organizations, several international, national and local Non Governmental Organizations are also involving to deliver vocational training programs throughout the country. Among them, Employment Fund supported by SDC/HELVETAS Nepal, Alliance Nepal supported by UNDP, Education for Income Generation (EIG) supported by USAID/ Win rock International, Support of Measures to Strengthen the Peace Process (STPP) under GIZ, ILAM under Federation of Nepal Chamber of Commerce and Industries (FNCCI) and Jobs for Peace Project for Youth Employment supported by ILO-FAO are the major organizations (CTEVT, 2012).

Review of the Policy

Presently, Technical and Vocational Education and Training Policy, 2012 is effective in Nepal, which is the modification of Technical and Vocational Skill Development Policy, 2064. This policy document has given sufficient room for enhancement of TVET subsector in Nepal.

This document identified five key policy sectors such as expansion, inclusion and excess, integration, relevance and sustainable financing which are actually the needs of this sector. The document has set certain strategies to achieve these objectives.

Expansion of TVET Programs:

The policy has identified expansion of TVET programs as an instrument to increase the access of all interested groups of the society. To achieve this, different measures are suggested such as public investment, private investment and PPP (Public Private Partnership) model. In the last decade, significant improvements have been achieved in case of private investments. As a result, large numbers of affiliated schools have been opened up. Presently, there is also a rising trend of public investment for establishing polytechnic institutes. Expansion of TVET is therefore, not an issue but the issue is to make the distribution symmetrical and limit the cost within affordable range to the marginalized groups.

Inclusion and Access

The second objective of the policy is the inclusion of socially underprivileged, regionally backward and economically poor classes of society in TEVT programs, but it is the foremost challenge of the day. Presently, there is asymmetric distribution of technical education provider (TEP) both in terms of regions, trades and type of institutes. Out of the total enrollment (13,178), constituent schools have covered only 9.6% whereas large portion of capacity is covered by affiliated schools. If it is to analyze the distribution of such programs region wise almost 44% of institutes are in central development region where as only 6% of institutes are in Far-western Development Region (CTEVT, 2012). Attempts should therefore be concentrated to make this distribution symmetrical. Naturally, the cost of TEVT programs is higher than the general education. On one hand, the institutions and programs which are being run under the private investment are sufficient in number but such programs are unaffordable for deprived communities because of their high investment cost. On the other hand, constituent schools are offering TVET programs in affordable cost but these institutions are in limited numbers.

To increase the access of TVET programs to the deprived communities is the prime objective of TVET. Proper attention should therefore be paid to increase the scholarships and reservation quota in affiliated schools and running the present polytechnic institutions in full capacity.

Integration and Relevance

The third and fourth objectives are about the integration and relevancy of the training programs which are the real concerns and challenges. While talking about integration, CTEVT has to gallop a long distance. The present structure of CTEVT should be made compatible to effectively run academic programs. Developing bridge course to make the existing programs meeting the requirements of universities, preparing career guidelines, forming faculty board, subject committees and make them function properly are some activities which are to be initiated immediately. But, all of these activities are either completely absent or functioning poorly.

The training program will be relevant if it responds the demand of the labour market properly. Efficient and effective labour market information system must be operated for channeling information. This policy has paid sufficient attention on establishing Labour Market Information System (LMIS) but this type of activity is almost absent in CTEVT, which was established in Department of Labour is also not functioning properly.

Sustainable Financing

The last objective of the policy is about the funding. Obviously the funding is the primary requirement of any program or project or policy, therefore it is a welcome effort to include this issue in policy. On one hand, the market cost of the TVET program are not affordable for the poor, disadvantaged and marginalized group of the societies. On the other hand, people who can afford such cost are less interested in such programs. This is the main reason for not achieving popularity of TVET programs in desired level. To make TVET programs further instrumental for poverty reduction and employment creation, government should bear the cost of those people who can't afford such cost. To achieve this objective, CTEVT should be provided sufficient resources. Presently, CTEVT is receiving less than 1.5 percent of educational budget which should be increased up to 3% within two years to make the program of CTEVT beneficial to the needy groups (CTEVT, 2012,b).

Major Challenges

Training must be relevant to job market so that the desired output from policy can be achieved but it is further challenging under the resource available at present. Vocational training courses under the donor funding projects are also questionable where resource is not the constraint. It is therefore a challenging task to assure quality of vocational training programs in future.

For the equitable access, massive expansion of the TEVT has been accepted as an appropriate means with strategies such as flexibility, deregulation, autonomy, and decentralization. Balancing between expansion and quality of TVET is therefore the matter to be paid enough attention.

It is inarguable fact that the children who either remained completely out of school or compelled to leave without completing secondary education are the target group for vocational training programs. The policy has given sufficient emphasis to streamline these groups to VET programs. However translation of this provision in to practice is not always easy. Again the problem is the unaffordable cost and unequal distribution of training center. The cost of training is positively correlated to the distance between home and institution. It has mentioned earlier that the operational cost of TEVT is always high which becomes further higher to those individuals who have to travel a distance to institution.

Another important provision of the policy is providing subsistence allowance to the children from deprived communities. Although, these provisions are crucial for the inclusion of marginalized communities, effective implementation of these types of policies is always in doubt in the countries like Nepal due to resource constraints. The policy has adopted further two strategies which can be considered as an instrumental to enhance the quality of training, such strategies are setting out occupational standards for entry level and conducting preparatory courses.

The business community will be benefited largely by getting competent and confident workers as a result national productivity will be increased. Presently, on one hand, large numbers of people both trained and untrained are compelled to remain unemployed. On the other hand, every sectors of the national economy were suffering from scarcities of skilled workforces to accelerate the pace of economic and social development (Belbase, 2002). Such a situation of structural unemployment was the major challenge for the country. If quality training can be offered to such groups both problems will be solved at once.

Finally, Implementation of the policy requires massive investment from government side; however the trend of government investment in this sector is not quite encouraging. Education sector always receives largest share in national budget allocation however, CTEVT had hardly received more than one and half percent share of this allocation. Expansion of TEVT programs up to district level and provision of free of cost training up to three months will only be possible if government gives due importance to this sub-sector.

Conclusion

TEVT is essential not only for individual citizen but also for the economic development of the nation. Increasing total factor productivity is the major component of the development strategies of the country which can be achieved by the investment in education and training (Human Capital). Large numbers of children are still out of the reach of school where as even greater numbers drop the school without completing school education. This particular group of people should be brought under the domain of TEVT to increase the productivity of the nation.

Technical Education and Vocational Training Policy, 2012 was a prominent step of the government to unify the activities carried out by different organizations. The depletion of TEVT quality is the major challenge of the present time, however the attention paid to this issue is less than sufficient. The goals set by policy seem slightly ambitious but not unachievable. To sum up, current policy is ample to wake the country from hibernation, if it will be honestly undertaken by the government and perfectly implemented by concerned agencies including CTEVT.

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Vocational Skill Development and Policy Learning

- Poorna Kanta Adhikary, Ph.D.¹

The technical and vocational education and training (TVET) providing certain specialized or technical knowledge to practice a trade or profession is a transition to youth to the world of work. This has been in practice since long time in various forms in all societies in relation to their own economic structure. In the context of globalization, as the economic structures change fast, countries find themselves facing big challenges in developing their own TVET system. A review of the role of vocational skills development in international development cooperation focusing on the Dual Education System and the National Vocational Qualification Framework (NVQF) and their adoption/adaption around the world indicated that policy learning through multidimensional cooperation is needed more than policy transfer (Zurich, 2012).

Dual Education System

The Dual Educational System of vocational education is being practiced generally for a long time in Switzerland, which also has 9 years of compulsory general basic school education. It is based upon long experience of apprenticeship contract, which was formerly regulated by private system and school. Depending upon the trade and student's aptitude and capability, the school allows basic education graduates of age 16-21 years to undergo 1 to 2 days of school and 3 to 4 days of work at an industry for 2 to 4 years of vocational training. Entrance of the youth to the courses is based upon prior contract with an employer. More than two thirds of 16-21 year-olds goes for vocational training having a choice of about 300 recognised apprenticeship categories. Apprentices who pass the final exam at the end of their basic training are awarded a federal technical school leaving certificate diploma which enables them to study at a specialised university of applied sciences as well, which makes vocational education not a dead end path². This system with simultaneous training and work is based upon a well established formal school education and a well organized small and medium enterprise (SME) economy and enjoys a very high reputation in the Swiss society, being renowned for long-lasting economic success and social peace.

The public-private partnership cost-sharing mechanism assures payment by: trade associations with contract with the youth to work in a related industry for the workshops and training of trainers, the government for the tuition in the public vocational school building, and the students or the company sending them to the training for books, stationeries and living expenses. It requires a dependable partnership among the government, public school system, trade associations and enterprises, which need to guarantee relevance of curricula and certification as well as career guidance and labor market insertion. Although the Federal Office for Professional Education and Technology (OPET) is in charge of strategically managing and developing the system, the cantonal authority is made responsible for supervising the validity of apprenticeship contracts, marketing, advising and supervising firms that train apprentices. In this way, the Dual Education System provides vocational training with a combination of a part in school and part at work, assures the employers of availability of skilled workers, and reduces dependency on the state spending in vocational education. In a very highly organized society like that of Switzerland and Germany this has become a socially accepted solution.

However, there are big challenges in adapting this Dual Education System in post-armed conflict societies like that of Nepal which is dominated by informal economy, big rural-urban divide, corrupt state apparatus (TI,

¹ Author is nationally and internationally known as an independent professional for his work as educationist, development thinker and peace builder and has taught in the universities in Nepal, USA, Chili and Iran.

² Swiss Federal Chancellery "Vocational Education and Training" www.ch.ch

2012) and generally dysfunctional institutions, unstable political system, inadequate public education system characterized by very high drop-out, pushed-out and left-out youth at various levels who generally come from extremely underprivileged and marginalized communities. There are big gaps among basic education, vocational skill development and labor market needs, which need to be addressed differently. It has also been experienced in South Africa that during the highly organized apartheid period the Dual Educational System was found to be functional, however during the less organized post-apartheid society it is not. Attitudes of employers, trade unions, government institutions, as well as social, political, cultural factors are difficult to overcome in transitional societies, which all affect in adopting/adapting this model. The Vocational Skill Development System like the model implemented in Switzerland cannot be exported easily like one does globally selling watches or cars. In developing policy in Technical and Vocational Education and Training (TVET), the learning process has to be multi-directional and multi-dimensional. The approach should be adapted in policy learning rather than policy transfer, which otherwise, could smell like colonialism and neocolonialism (Zurich, 2012).

National Vocational Qualification Framework (NVQF)

National Vocational Qualification Framework (NVQF) or National Qualification Framework (NQF) was initiated in the United Kingdom (UK) from the idea that all qualifications could (and should) be expressed in terms of outcomes without prescribing any specific learning pathway or programs (Jessup, 1991). It was assumed that employers themselves would be in the best position to identify training needs and define qualifications in terms of workplace performance outcomes. This provided a mechanism for transferring the control of vocational education from training providers to employers. In the context of the emerging neo-liberal economic policies of the 1980s and early 1990s emphasizing the role of private sector in economic development, NQF was developed in the context of the needs of youth training schemes for unqualified school-leavers who otherwise would have entered unskilled manual jobs. For this reason, NQF became associated with low-level qualifications with limited currency in the labor market. It was employer-led, and over-dependent on consultants employed by the lead bodies to develop the occupational standards. The trade unions, though broadly supportive of NQFs than employers, were playing only marginal role in NQF development in UK. The high level of unemployment of youth and the anti-union political climate of the time gave them very little leverage on policy development (Young, 2009). By 2012 a total of 142 countries around the world have either adapted or are in the process of adapting the NQF and there were 446 members participating in the Platform (Deij, 2012). In October 2011 the 'Qualification Platform,' was launched as a "virtual workshop" and network to respond to global trend for qualifications systems reforms and bring together people working on qualifications and qualification frameworks (QFs) into the same "agora" to exchange information and ideas.

In the global trend of NQF development different north and south countries have approached it from their own necessities and have made several levels to suit their own context. The drivers have changed over time as the first generation developed the NQF from national perceptions, mainly determined by internal drivers, and using experimental approaches. In this generation NQF was initiated in United Kingdom and was extended to Australia and New Zealand. Learning from the experience of the first generation in terms of design and processes, the second generation drivers in Asia-Pacific context communicated with NQFs on a bilateral basis with limited influence from external drivers but good integration with labor market. During the third generation, although the internal drivers remained important, the external drivers made significant impact in terms of technical design of the frameworks and qualification arrangements and the use of informal and non-formal adult education to facilitate the learning pathways. The modern qualifications for lifelong learning are defined by stakeholders based upon learning outcomes and alternative pathways used for different purposes, including job entry, changing jobs, further learning and career change. They are applicable to all types of learners using both the horizontal and vertical mobility supported by various institutions and stakeholders.

Partial recognition (unitization or modular approach) is made with a key principle to facilitate validation of non-formal and informal learning (Deij, 2012).

Austria and Germany have set good examples in Europe and Hong Kong has made its own NQF with 7 levels of qualification (Singh, 2012). Many other countries including Bangladesh and Sri Lanka in South Asia are making their own efforts to build their own NVQF. As NVQF is linked with learning outcomes, there is no “quick fix” in its development. It is a time consuming rigorous work often taking years going beyond a project life time. Unless local partners internalize the concept and committed for it, just foreign support does not work. For this reason there is a need for an intensive south-south dialogue and cooperation and not only north-south ones.

Potential for NVQF Development in Nepal

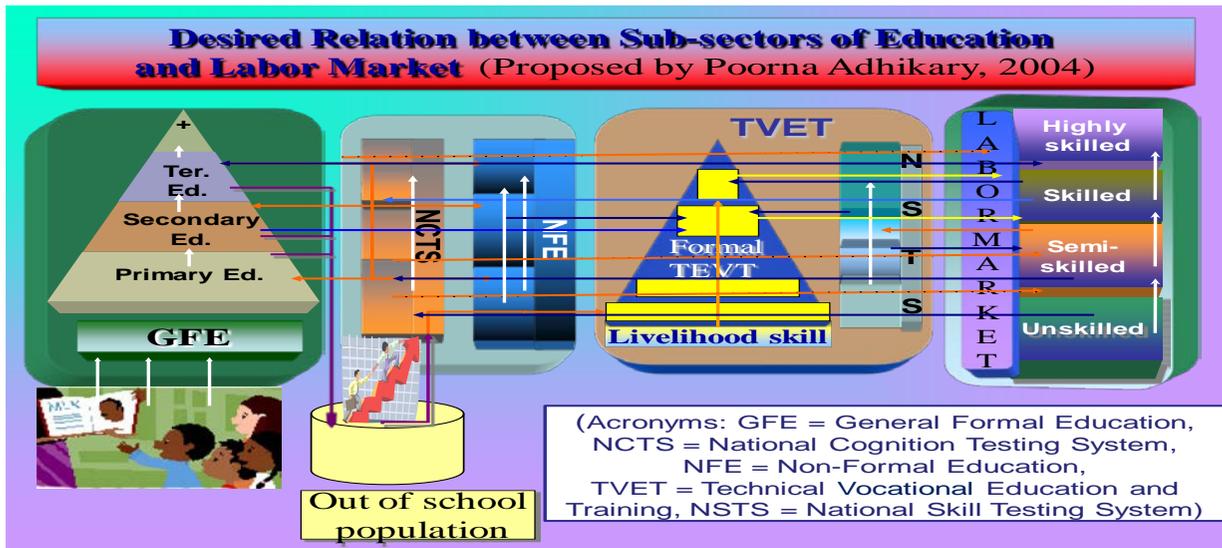
In Nepal, Council for Technical Education and Vocational Training (CTEVT) is the national agency to develop NVQF. Diploma and Technical School Leaving Certificate (TSLC) courses provided by CTEVT’s training institutions as well as those affiliated with it are very much in this line. Regarding quality management of these courses, CTEVT administers examination or test based on norm-referenced assessment (Karki, 2012). There is no provision as yet for CTEVT institutions to provide short term courses, except for skill testing by NSTB. The limitation of this system has been that the training institutions have not been as dynamic as the job market which has caused the course curricula often being not as responsive to market reality as it should be. This has also partly contributed for both CTEVT and affiliated institutions tempting to go for higher academic orientation exacerbating the already inverse triangular model of vocational/technical education, quantitatively producing highly educated human resources at the top and less so at the lower and mid-mid level for support base.

In the context of prolonged political instability and unhealthy labor relations causing conflict between employers and trade unions as well as absence of very well established small and medium enterprises in the country the dual system is very difficult to be implemented in the present context of Nepal. The prevailing condition however, allows adaption of NVQF as CTEVT has made certain attempt in this direction by introduction of skill testing system as early as in 1983 and establishing National Skill Testing Board (NSTB) in 1985. NSTB has already made and administered 251 occupational tests at various levels (CTEVT, 2012). The National TVET Policy 2012 has also proposed transformation of NSTB to fully autonomous National Skill Testing Authority (NSTA) and adaptation of NVQF (MOE, 2012). Even with all these developments and country’s willingness to adapt NVQF, CTEVT is not moving as fast as it should be to go firmly in it mainly due to prevailing political instability and bureaucratic bottlenecks.

Relevance of LSDF in NVQF Development

From rural reconstruction, economic peace building and human rights perspectives, and by **adopting the model¹ as mentioned below**, ICPD members in collaboration with Swiss Nepal Society (SNS) established Lamjung Skill Development Foundation (LSDF) (www.lsdfnepal.org) in 2007 (Adhikary, 2012).

¹The model tries to fill the gap between general formal school education and the labor market with suitable TVET system which allows out-of-school youth to enter into the employable skill education, recognition of skill acquired at different level as well integration of informal learning and non-formal education as bridge courses for improvement of cognition and its recognition which can facilitate youth and workers for their career development through both horizontal and vertical mobility. This model supports the centralized testing systems for national recognition and decentralized management of training institutions to meet the needs of the local youth as well as local, national and international labor market requirements.



LSDF provides three types of modular skill training courses with 100% employability.

- Regular two year market based skill training course (30% theory and 70% practicum) with a combination of Campus based theory and practical courses as well as on-the job-training qualifying for the National Skill Testing Board (NSTB) Level 2 tests¹.
- Short-term mobile courses of duration ranging 1-6 six months, especially three months (390 hours) long market based skill training course (20% theory and 80% practicum) qualifying for the NSTB Level 1 tests; implemented jointly with Enterprise Development Company (EDC) (www.edcnepal.com) and funding from Employment Fund and other partners including GIZ.
- Community based livelihood oriented training and support for socio-economic programs for rural reconstruction with financial support from SNS.

All these courses being modular provide possibilities for learners to life-long learning opportunities with both horizontal and vertical mobility. NSTB skill testing approach provides recognition to Non-formal and informal learning as well which is also in line with the idea professed by UNESCO Institute of Lifelong Learning (Singh, 2009). In fact, LSDF is the only institution in the country which has been providing both NSTB Level 1 and Level 2 courses and is totally committed to work in the development of NVQF. For its long term courses, LSDF provides cognition testing as a part of entrance examination and non-formal education as a bridge course for those willing students if found slightly deficient in the required cognition level in mathematics and languages. It is now planning to modularize its Level 2 courses so that students can also

¹In a given occupation, National Skill Testing Board (NSTB) has five levels of tests: Elementary, Level-1, Level-2, Level-3, and Level-4. Level-4 is given equivalency to undergraduate level of technical education (e.g. Bachelor of Engineering). Although these levels have received recognition by GON's Public Service Commission to qualify to apply for the appropriate level of government employment, there is no evidence as yet in recognizing them formally by private sector employers either at home or abroad. GON is said to have been initiating to introduce the skill testing for Nepalese youth going for employment abroad.

obtain part qualification on modular basis. This could facilitate youth coming from very underprivileged and marginalized communities, who need to work for survival of their family, but committed to upgrade themselves through a cycle of work and study scheme. Since there is a high drop-out rate even in basic primary education such a scheme would be highly relevant to the out-of-school youth coming from such a background. LSDF is also planning to introduce LSDF Level 3 course in the near future and in due time is willing to go for higher level as well. With LSDF's efforts to place its graduates for employment and self-employment and communication with various stakeholders and ability to integrate informal and non-formal education systems, it has already the possibility to work on the third generation of NQF or NVQF development in Nepal and is willing to collaborate with CTEVT.

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Strategic Directions for CTEVT for Skilling Nepal

- Ram Hari Lamichhane, Ph.D.¹

Abstract

Nepal is situated between China and India. It got easy access to international community after democracy of 1951. There are about 2.6 million people in Nepal. Out of them about 50 percent are female and 33 percent are youths. The literacy rate is about 56% and majority of the youths are unskilled. A formal TVET program was introduced in 1980 through establishment of technical schools. There are about 400 technical schools running in Nepal and produced about 30,000 graduates annually.

Council for Technical Education and Vocational Training (CTEVT) is an umbrella organization for TVET in Nepal. It has its plan, but there is lack of concrete TVET strategic plan for Nepal. Vocational training, technical school leaving certificate, diploma, skills testing, and instructors training programs are the major programs of TVET in Nepal. There are different TVET projects run by donor agencies too. Government of Nepal has devised new TVET and skills training policy in 2012. It has five key areas: expansion, access and equity, quality, integration and sustainable financing.

During the development and implementation of TVET strategic plan, the issues of coordination, quality of training, standard of training, access and equity, technology based training; financing mechanism and accreditation need to be addressed. Technical school system, mobile training programs, on the job training (OJT), public private partnership in TVET programs and private sectors' motivation in TVET are the major lessons learnt. There are many challenges to implement TVET programs in Nepal. The major challenges are coping with technology, quality of training to address local and global need, sustainable financing and coordination between stakeholders.

To address all these issues and challenges and fulfill the need of acquiring skills of youth, Nepal has to develop TVET strategic plan.

Background

Nepal is situated in between China and India, Nepal has spatial coverage of 147,141 Sq. Km on the globe. The country is full of hills and mountains comprising only 17% plain in the Terai. Administratively, Nepal is divided into five Development Regions and 75 administrative Districts. The districts are further divided into smaller administrative units called Village Development Committees (VDC) and Municipalities. Municipalities are the urban or urbanizing areas with relatively higher population density and with better public facilities in comparison to VDCs. Currently there are 3,915 VDCs and 58 Municipalities in the country.

Nepal was opened to the rest of the world only after advent of democracy in 1951. Planned development started only in 1956 when first periodic plan was implemented. Since then ten periodic plans have been implemented and yet the country stands at the lowest position in Human Development Index among SAARC countries.

According to the census 2011, population of Nepal is 26,620,809 with annual growth rate of 1.40%. The preliminary result reveals that the population of male and female in Nepal is 12,927,431 and 13,693,378 respectively. Accordingly, the result shows that the sex ratio of Nepal has decreased from 99.8 in 2001 to 94.41 in 2011 which supports the scenario revealed in the proportion of absentee population (more male are leaving the country than female). The majority of the population falls under adolescent and young groups (CBS, 2011).

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Nepal Labor Force Survey (2008) suggests that 63.2% Nepalese aged five years and above is literate whereas adult aged 15 and above that are literate is 55.6%. These figures differ by sex; literacy rates of male and female are 74.7% and 53.1% respectively. The Flash-I Report 2009/10 of Department of Education revealed that total number of students at primary lower secondary and basic level is 4,900,663; 1,604,422; and 6,505,085 respectively with Net Enrolment Ratio (NER) at primary, lower secondary and secondary levels are 93.7%, 63.2% and 23.9% respectively. The indicators are encouraging compared to the statistics that of 1995/96, 2003/04 and 2008/09.

Education Sector reports in 2004 suggests that only 39% of the total enrolled in grade one complete it, 34% drop out of the system before even completing the grade five of primary school. This is much encouraging from 1995, when 50% of the children did not complete the primary school. Roughly 85% of the original enrollees did not complete grade 10, 94% did not pass the regular School Leaving Certificate Examination (SLC). However the rate of completion in SLC has improved tremendously in last few years, still only a minority of the age cohort is enrolled in the high school, and even smaller minority only 10 to 15% of grade 1 enrolment completes it with SLC after grade 10 (MOE ,2009).

Considering the fact that about 400,000 youths come into the labour market every year without proper education, Nepal has to give alternative education as a form of technical and vocational education and training (TVET). There is technical education and vocational training programs running under different ministries and institutions, but those programs and organizations do not have concrete coordination and plan. Therefore, the strategic plan for TVET in Nepal is must. This paper highlights the current plan and policy, programs, institutions, challenges, adopted strategies, monitoring and evaluation system, best practices and lessons learned from TVET.

Current TVET Plan and Policy

As an umbrella organization of TVET, Council for Technical Education and Vocational Training (CTEVT) has developed its vision, mission, goals and key responsibilities as follows.

Vision: No Nepali should be unemployed due to lack of access to TEVT program.

Mission: At CTEVT, skilled workforce preparation is our key responsibility.

Goals:

In order to achieve and attain the mission and vision, CTEVT has set the following goals:

- Develop policies for managing TEVT sub-sector ensuring social inclusion, access, sustainability, integrity and relevancy of the TEVT programs.
- Coordinate and facilitate the TEVT sub sectors and stakeholders
- Maintain quality of TEVT programs and services.
- Prepare competent workforce for TEVT sub-sector.
- Promote entrepreneurship skills and basis of employment on the TEVT graduates.
- Broaden the access and equity in TEVT activities.
- Encourage participation of business and industry in TEVT activities.
- Coordinate to manage counseling and placement services.

Major Responsibilities

CTEVT mainly has the following responsibilities:

- Provide advice to the Government of Nepal regarding TEVT policy and programs.
- Determine scope and standards of TEVT programs.
- Arrange for and conduct TEVT Programs from basic level to higher education.
- Liaison and maintain coordination with national and international TEVT agencies for quality education and training.
- Grant recognition and provide accreditation services to programs and institutes run by government, non-government, and private sector.
- Coordinate and maintain the standard of training by providing curriculum and learning materials.
- Conduct monitoring and supervision of TEVT programs and activities of government and non-government institutions.
- Make necessary arrangements for the operation of polytechnics, short-term vocational training, apprenticeship trainings and mobile training programs.
- Establish and operate all kinds and level of skilled development training programs to produce skilled human resources through technical schools, mobile training and other methods of technical and vocational training programs as recommended by the council.
- Carry out research activities in the field of TEVT including training needs assessments/ job market analysis and follow up studies.
- Conduct technical instructors and management training programs to improve quality of CEVT programs of institutions.
- Classify the skills/occupations, develop skill standards, administer skill tests and provide certificates.
- Explore, obtain and mobilize national and international assistance needed for the development of TEVT sector
- Establish institutional linkage with national and international agencies/universities for recognition of the TEVT programs
- Enter into agreements or contract with national and international organizations and agencies regarding TEVT Programs.

Nepal's TVET Policy 2012

TVET Policy 2012 has following three key objectives.

1. Ensure access and equity to those who are interested to participate in TVET programs through massive expansion of the programs.
2. Provide market based quality TVET programs and recognize the prior learning.
3. Coordinate TVET providers and stakeholders for effective and efficient use of resources.

In regards to achieve the above mentioned objectives, following are the key policies.

1. Massive expansion of TVET programs

2. Inclusion and access in TVET programs
3. Firm integration of TVET programs and pathways
4. Quality and relevancy of TVET programs
5. Sustainable financing in TVET

Major Programs and Activities for Developing a Strategic Plan for TVET System

Following are the major programs and activities that contributed for developing a strategic plan for TVET in Nepal.

1. Periodic plan prepared by National Planning Commission (NPC): The national periodic plan has been given high priority to TVET and set target for the each plan period.
2. Government has brought national TVET Policy 2012: It has clearly stated its objectives, policy areas, strategies, working policies and activities.
3. Based on the periodic plan and policy document, CTEVT has developed its strategic plan.
4. The key programs regarding TVET in Nepal under the CTEVT are mentioned in table below.

TEVT Program	2000		2012	
	Public inst.	Private Inst.	Public Inst.	Private Inst./ Partnership
TSLC	9	140	12	135/2
TECS TSLC (Annex):	15	-	74	
Diploma/ Certificate	4	50	11	175/4

About 400 training providers are offering vocational skills and livelihood training

Source: *Profile of Technical Education Providers in Nepal (2012)*.

Key Challenges in developing a national TVET Strategy to meet local and global challenges

There are many challenges in building TVET strategy to meet local and global challenges. The first important challenge is relevancy of the programs. Technical and vocational training programs in Nepal are initiated under the premise that the problem of growing unemployment and under employment could be reduced through appropriate skill development. Skill training program is considered a means of employment promotion and augmenting earning potential of trained graduates. Individuals, society and the government are seeking viable ways to promote employment and earning potential of the Nepali workforce. However, Technical and vocational training programs in Nepal are poorly linked with the labor market demands and are not satisfactorily fulfilling the employment and earning needs of the individual and economic development needs of the Country. Similarly, every day, about 600 youths are flying to abroad for job and most of them are unskilled workers. Some of them have gone as skilled workers, but they landed as a labour due to lack of

appropriate skills. Therefore, our training system is not sufficient to address demand of foreign employment (Lamichhane, 2006).

The second challenge is quality of the programs specially to address ICT and global technology. In Nepal, our teaching and learning environment has not improved to address present technology and skills required by the global market. We are still teaching on 15 years old curricula and 30 years old equipment. Our instructional systems are not based on ICT and new technology. In addition, we are unable to train our instructors to cope with new technology to address curricular requirement. Therefore, TVET graduates from Nepal cannot compete in global market.

The third challenge is access and equity in the TVET system. The existing TVET system has not given enough opportunities to poor and disadvantaged group. Due to the low level of education, geographical distance of TVET institutes, lack of information, and poverty majority of the youths are out of TVET system. Majority of the graduates are from middle class level and they have high expectations. Therefore, people with high expectations and higher economic status hesitate to do blue collar jobs. Those who want to do blue collar jobs and hard work; they don't have access to TVET programs.

The fourth major challenge is sustainable financing for TVET programs. TVET programs are costly than general education, but allocation of budget is negligible on TVET. According to the annual budget of government (MoF, 2010), the allocation for TEVT program is very low. In 2010/11, the budget allocation for TEVT program is 2.36 percent of education budget (MoE budget is NRs. 5,782.7 million and TEVT budget is 136.1 million including Skills for Employment Project). This is considered as very low budget for the TEVT considering its importance to empower unemployed youth which contributes to increase income of the individual and generate additional revenue for the nation. For example, an ordinary labor is getting about \$150 per month as a wages in the Middle East. If the people with skills training go there, they earn more than that. According to the foreign employment agencies and returned workers, person with 3 months skills training will get double, 6- 12 months training will get triple, and 2 years training will get four times more remuneration than ordinary labor (Lamichhane, 2011).

Major strategies adopted and paradigm shifts in the current TVET strategic plan

According to the TVET policy 2007 and 2012, the strategies for key policies are as follows.

Key Policy Areas	Strategies
Massive EXPANSION of TVET Programs	<ul style="list-style-type: none"> • deregulation, autonomy, decentralization • free start-up support to emerging providers • outcome quality assurance (in line with NVQs) • performance comparison, transparency and quality marks as elements of customer protection
INCLUSION of and ACCESS for all citizens who need TVET Programs	<ul style="list-style-type: none"> • stipends (for tuition fees and subsistence allowance) especially for disadvantaged groups of people • recognition of prior learning / open assessment • entry level occupational standards • preparatory & support courses to promote mainstreaming

firm INTEGRATION of various TVET modes and pathways	<ul style="list-style-type: none"> • Vocational Qualifications Framework as a bracket for formal, non-formal and informal training and learning • bridging courses into general education • promotion of typical occupational career ladders • and career guidance for the workforce as elements of life-long learning
enhanced RELEVANCE of courses and competencies	<ul style="list-style-type: none"> • licensed trainers with industrial exposure • needs identified curricula based upon occupational standards • hands-on training (on-the-job & projects) • independent assessment and certification
sustained FUNDING sources and mechanisms	<ul style="list-style-type: none"> • massive increase in public funds • fees for all training measures beyond 3 months • concerted donor assistance • TEVT development funds on district level • explore contributions from former stipend recipients

The major paradigm shift of present TVET plan is supply driven to demand and market led programs. The present plan has given more focus towards global demand and ICT based programs.

Monitoring and Evaluation Mechanisms

Monitoring and evaluation is the dashboard of the TVET. It provides status, success, failure and major recommendations for the improvement of programs. Basically, there are two levels of M & E, institutional and students/trainees.

Institutional level: We conduct institutional monitoring twice in a year. During this monitoring, CTEVT monitors infrastructure, human resources, teaching and learning resources and environment, feedback from students, teaching methodologies, and management aspects of the institutions. There are separate monitoring tools for each program.

Students Level: To evaluate students' performance, there are three types of evaluation internal, external, and evaluation by on the job training providers (enterprises). Internal evaluation is done by institution, external by CTEVT.

However, we need to improve our monitoring and evaluation system to respond graduates with employability skills.

Major Achievement and Best Practices

The major achievements of TVET are as follows.

1. As a first milestone in TVET, Technical Schools established in 1980.
2. After CTEVT Act (1989) first break through in TVET as an alternative system for career development in education and training.
3. Composition of in house classes and industry based practical classes in TVET programs.

4. Transfer of basic and technician level program from TU to CTEVT was initiated and CTEVT took over [CMA, ANM, HA, JTA, JTJ] many programs from TU.
5. Liberal policy to bring liberal promotion of private sector in TEVT resulted in significant increase in private TVET institutions from three prior to 1991 to 110 in 2000 and now over 400. This is happened due to high demand of skilled workforce in the country and abroad too.
6. Development of polytechnic institutions, expansion of technical diploma programs, initiation of annex programs (annexing technical education in general schools),
7. Implementing more vocational training and community development programs for disadvantaged population, development of trade schools in Public Private Partnership (PPP) Model program in partnership with FNCCI, significant increase.
8. Uniform and coordinated system of TVET Curricula Development applying DACUM process in CBT Model applied in the country.
9. Trusted and recognized system of Skill Testing and Certification System in Nepal from NSTB.
10. Established TITI to develop TVET instructors, managers and other professionals.
11. Output based financing system introduced in different vocational skills training programs.
12. Skill training graduates from merely from 15000 in 2000 to over 80000 in 2010.
13. From about 150 TVET institutions in 2000 to over 400 in 2010.
14. TVET Programs and courses from about 45 in 2000 to over 225 in 2010.
15. Trained Instructors from 100s in 2000 to 1000s in 2010.
16. Skill testing and certification from few 100 per year in 2000 to over 25000 per year in 2010

Best Practices

Following can be considered as good practices in Nepal's TVET system.

Technical School System: The technical school system of Nepal is considered as good system to deliver TVET programs to youth. It is very popular specially for out of school youth and youth from disadvantaged group. All public schools are residential and students get complete package knowledge, skills and social skills during the program. There are 17 public and around 400 private technical schools in Nepal. It is more popular in rural areas and trend of popularity has been increasing in urban areas too.

OJT in TVET Programs: On the job training program is incorporated in all TVET programs. There are five months to 1 year OJT in long-term program and about 20% time as an OJT in short-term program. It contributes to get more practical skills and industrial exposure. Similarly, OJT links to get employment and enhanced confidence level to establish own enterprises.

Mobile Vocational Training Programs: Nepal has been implementing mobile vocational training programs in rural areas. It assures access and equity of disadvantaged group in TVET. Considering the poverty situation, participants can get both training and work opportunity at a time. Therefore, they don't lose the opportunity cost.

Public Private Partnership (PPP) model in TVET: There are three polytechnic institutes running under PPP model. It has increased responsibility of local authority and shared resources. Private and local authority takes the ownership of the institution. This program is still running as pilot projects. It can be replicated after final evaluation of the projects. There are some issues and need to address.

In overall TVET program implementation level, public private partnership is very strong in different activities such as curriculum development, practical classes, on the job training, school management committee, investment in TVET and promotional activities.

Simple and concrete TVET Policy: Government of Nepal has brought simple TVET policy with five key areas expansion, inclusion and access, quality, integration and sustainable funding.

Enterprise Based Vocational Skills Training: There are some projects which are implementing enterprise based vocational skills training. The result showed that this approaches has contributed to establish micro enterprises and generate self employment. Under this approach, trainees get training at enterprise premises and get opportunity to do more practical work at real workplace.

Lessons Learned & Future Challenges

Major lessons learnt and future challenges are as follows.

Based on three decades experiences, Nepal is unable to coordinate TVET stakeholders specially for program implementation, resource mobilization and TVET financing as one door approach. This task is challengeable as well because the secretariat of TVET Fund should be acceptable to all ministries and stakeholders.

- Institutional based training provides high quality training; however, those training programs which do not require heavy equipment, mobile training ensures access and equity. Therefore, mobile training programs should promote in rural areas. There are challenges to implement mobile trainings due to cost and lack of proper lab/workshop environment for skills training program.
- OJT component and industrial practice of TVET program enhance the skills and increase the employability of the graduates. However, these programs are difficult to manage due to high financial expectations from enterprises/institutions and lack of government policy to implement such programs.
- The graduates from TVET programs have higher opportunity to get employment than graduates from general education, but cost of the TVET is much higher than general education. Therefore, there are challenges of sustainable financing in TVET in Nepal due to its poor economic situation.
- Private sectors are motivated to invest in TVET sectors specially in urban areas. There are challenges to develop a system to attract private sector to invest in rural areas.
- Skilled workforce can earn more than four times than unskilled workforce. It has been proved from the experiences of Middle East as well as in domestic market. Similarly, there is lack of skilled workforce in global market. Therefore, there are lot of opportunities for skilled workforce and youth from Nepal can go anywhere in the world. Despite global opportunity, our workforces are not competent enough to fulfill the demand of global economy. Therefore, there is challenge to produce skilled workforce for global market.

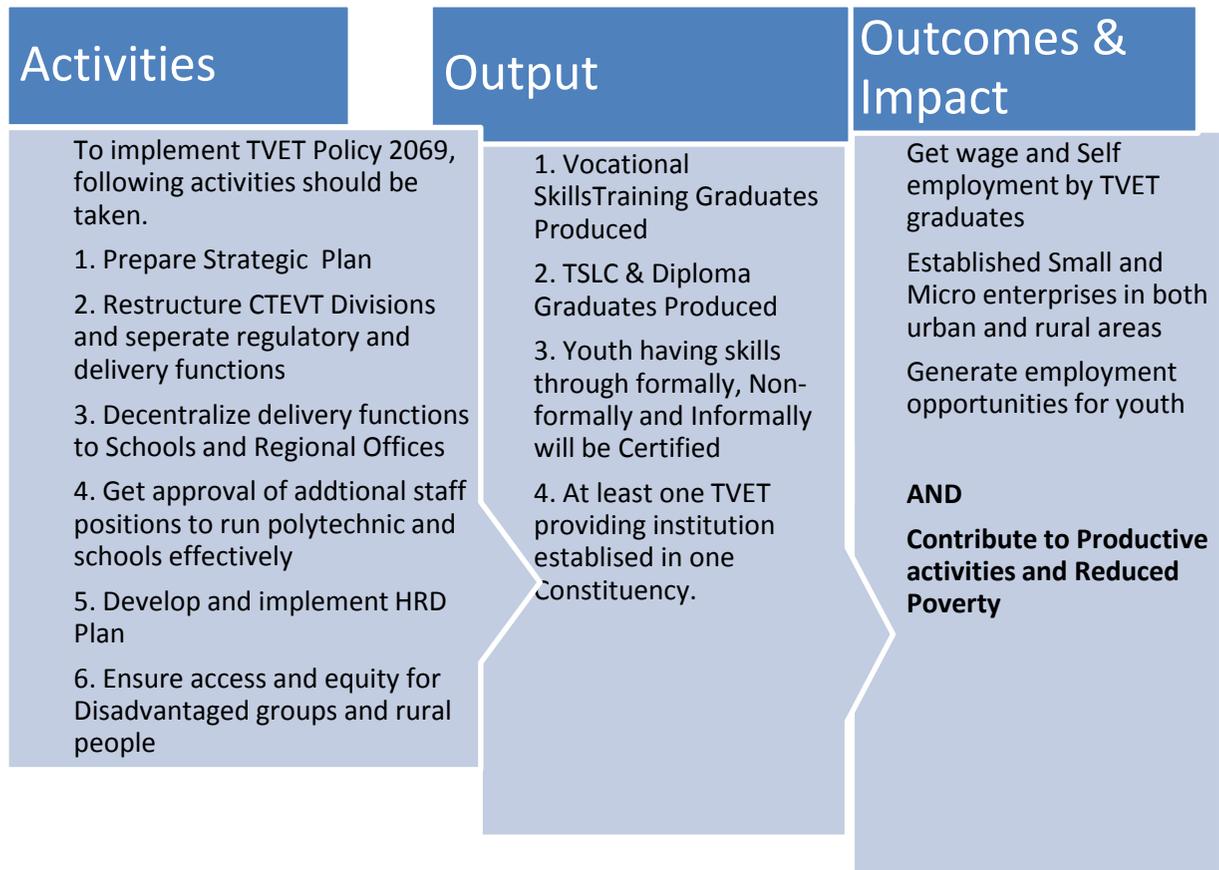
Conclusions

From the very beginning, Nepal is practicing TVET programs without having concrete strategic plan. Nepal has experienced different forms of TVET programs and projects. Before 1990, it was very negligible. People hesitate to join TVET programs. After 1990, the popularity of TVET programs has increased. The increasing trend of foreign employment has influenced positively to TVET programs. Youths prefer to go for foreign employment after getting certain skills.

Institutional set up for TVET programs also strengthening day by day. CTEVT as an umbrella organization of TVET has contributed a lot to promote TVET programs. However, it is unable to lead as a coordinator to other ministries and stakeholders who are running TVET programs. To address this issue, a national TVET Policy 2012 issued and national TVET fund is needed to mobilize resources from one door. To address the essence of TVET policy, there is not concrete TVET strategic plan of Nepal.

Quality and competitive TVET programs are essential to address global need. Therefore, Nepal has to focus to develop TVET system and programs which can address global need and cope with global technology. The present curricula are prepared to address need of domestic market. Therefore, it should be developed to fulfill the demand of global market and we can produce workforce to contribute global economy. For this, there is a need of concrete national TVET strategic plan for Nepal. The proposed strategic framework of CTEVT for skilling Nepal is as follows.

**Strategic Framework to Enhance CTEVT's Activities Towards
Youth Empowerment for Productive Work through Skilling Nepal**



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TEVT Policies in Developing Countries

- Dr. Ramswarup Sinha¹.

Abstract

VET is not only important in providing employment opportunities but also helps in enhancing the productivity of the people. Various terms have been used to describe elements of the field of VET. Due to mechanization of processes, jobs became complex and more specialized, which resulted in a demand for skilled workers at time of industrial revolution. During the post-World War II period many international agencies such as the International Labour Organization (ILO) and UNESCO, played major roles in the development of vocational education. In recent years, creation of a skilled labor force has been a challenge in many countries. Whether to vocationalized or not, has remained a debate in the literature and the relative benefits differ from one country to another. In the Asian countries, experiences of the outcomes of VET are mixed. Japan, Korea and Singapore are the best examples of the VET system being well established. In these three countries, the VET system has contributed significantly in the process of economic development. The system of vocational and technical education in South Asia is thus characterized by low enrolment, high drop-outs, poor-quality of teachers, and inequitable access for women and rural populations, limited private sector involvement. Indonesia, Malaysia, Philippines, Thailand and Sri Lanka have 'fairly developed' VET systems. Whereas, Bangladesh, China, India, Myanmar, Nepal and Pakistan have 'patchy' VET systems. In most of the South Asian regions, the system has not been successful. However, governments in these countries have initiated various steps towards building a sound VET system.

Introduction

Vocational education and training (VET) focuses on specific trades and imparts the practical skills which allow individuals to engage in a specific occupational activity. VET is not only important in providing employment opportunities to individuals but also helps in enhancing the productivity of firms: "Vocational education and training are indispensable instruments for improving labor mobility, adaptability and productivity. Various terms have been used to describe elements of the field of VET, Its contributing to enhancing firms' competitiveness and redressing labor market imbalances. VET comprises all skill transfers, formal and informal, which are required in the improvement of productive activities of a society (Carnoy, 1994). Overtime, these include apprenticeship training, vocational education, industrial arts, technical education.

After the mid-twentieth century, independent nations started expanding post-primary education and many vocational training programs were introduced at the secondary level Technical/Vocational Education (TVE), Occupational Education (OE), Technical and Vocational Education and Training (TVET), and Career and Technical Education (CTE). Many of these terms are commonly used in specific geographical areas. For example, in Europe, the term VET is in common usage, while in the United States the current term is CTE. Benavot (1983) describes some perspectives on the rise of vocational education in the world during the early part of the twentieth century, based on a review of literature from sociology and history of education.

During the post-World War II period, many international agencies, such as the International Labor Organization (ILO) and UNESCO, played major roles in the development of vocational education. It has been opined that after the Second Industrial Revolution at least three 'ideal models' of the vocational system emerged. One is a market-led system in which a labor market characterized by substantial mobility provides much of the vocational training. Another is a school model where most of the VET takes place in schools.

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And third is a dual model with the presence of an apprenticeship system (Nilsson, 2010). These models continue to distinguish today's national systems.

In recent years, creation of a skilled labor force has been a challenge in many countries, where there is a growing demand for a skilled labor force which has remained unfulfilled. To meet the requirement for a skilled labor force, more emphasis has been given to the VET programs. This issue has been at the centre of the policy agenda of many developing nations, particularly in the South Asian countries. Governments in these countries have initiated various steps towards building a sound VET system.

Vocationalized or not to vocationalized

Whether to vocationalize or not, has remained a debate in the literature and the relative benefits differ from one country to another. General or academic education is more flexible because it allows a person to change their job easily whereas largely vocational education is suitable for a particular type of work. Another related issue is the extent to which the education system should be vocationalized. This is important for at least two reasons: firstly, how the required skills will be provided, if not through vocational education, and secondly, given the substantial amount of subsidy allotted to VET programs in many countries, whether the returns on this spending are optimal. Another macro-element that influences this decision is the availability of job opportunities in an economy (Tilak, 2002).

VET programs in some Asian countries

In the Asian countries, experiences of the outcomes of VET are mixed. The policies undertaken by the governments have played a major role in these countries. Japan, Korea and Singapore are the best examples of the VET system being well established. In these three countries, the VET system has contributed significantly in the process of economic development (ADB, 2004).

Vocational and technical education is a passport to better employment opportunities. This is the experience of Japan the East Asian industrializing tigers where unemployment rates have remained consistently low, both because their populations possessed employable technical skills and because of the high economic growth rates that these skilled populations engineered. Indonesia, Malaysia, Philippines, Thailand and Sri Lanka have 'fairly developed' VET systems, whereas Bangladesh, China, India, Myanmar, Nepal and Pakistan have 'patchy' VET systems. In most of the South Asian regions, the system has not been successful.

The system of vocational and technical education in South Asia is thus characterized by low enrolment, high drop-outs, poor-quality of teachers, inequitable access for women and rural populations, limited private sector involvement, and very inadequate budgetary allocations. In other words, technical training in South Asia is neither supporting a high economic growth rate, nor expanding global markets, nor increasing employment opportunities. The whole system requires fundamental review and restructuring (Haq & Haq, 1998).

Afghanistan

According to the Afghanistan Human Development Report (2007) "Afghanistan is ranked 174 out of 178 countries. The youth literacy rate (15-24) of the country is 39 per cent and for females it is only 29 per cent. The rates of unemployment and under-employment are in the range of 25 to 30 per cent, and 70 per cent of the unemployed population have no or very few skills." In 2001, there were 38 TVET schools with 550 instructors and 1,510 male students. In 2008, 51 vocational schools were active in 22 provinces. Enrolment in technical and vocational education had increased from about 9,000 in 2006 to 16,000 in 2008 with a 16 per cent share of female students. The TVET system in Afghanistan is particularly important to rebuild the country since the conflict in the past decades has destroyed the country's training infrastructure. There is an absence of a well-educated and trained labor force and for this reason the growing demand for skilled labor is being met largely by neighboring countries.

Bangladesh

The level of education in Bangladesh has remained low. The literacy rate was 56.5 per cent in 2009; however, the country has made remarkable progress towards increasing both primary and secondary school enrolment. This progress has been attained despite a high poverty level in the country. A large section of the population continues to live on subsistence farming in rural villages. A survey report by the Bangladesh Bureau of Statistics shows that the labor force in the country has increased from 49.5 million in 2006 to 53.7 million in 2009. The unemployed population rose from 2.1 million to 2.7 million from 2006 to 2009 (BBS, 2009).

The Directorate of Technical Education was established in 1960 for the development of technical and vocational education. Later, in 1969, the Bangladesh Technical Education Board (BTEB) came into existence for organizing, supervising, regulating, controlling and developing technical and vocational education. There was a total (public and private) of 3,116 technical and vocational education institutions with 20,703 teachers and 453,375 students (23.62% female enrolment) in 2008.

There is a scarcity of skilled labor; people with technical or vocational qualifications are in short supply. One of the main problems is lack of linkages between employers and the job market. The training institutes are not able to produce skills required to fulfill the market demand. Also, the quality of graduates is not good. In Bangladesh, 80 per cent of employed population is associated with the informal sector. Though the unemployment rate of the country is low (5%), the main problem has been the high underemployment rate which is more than 28 per cent (BBS 2009). Underemployment rates of females are higher than those of males both in rural and urban areas. Given these facts, paid too little attention is to the training programs needed in the informal sector.

India

VET programs in India have gained much greater attention in the past few years. The programs are in the main policy agenda of the government. During the Eleventh Five Year Plan (2007-12), a major 'Skill Development Mission' with an outlay of Rs. 228 billion was launched (Government of India, 2008, p. 91). VET programs are aimed at creating employment opportunities and imparting suitable skills for self employment, particularly in the rural and unorganized sectors. There are 17 ministries/departments which administer VET programs; the Ministry of Human Resource Development and the Ministry of Labor and Employment (MoLE) are the major ones. The programs are offered at secondary and higher secondary levels. Some programs are also offered at pre-secondary level. Vocational education is offered at school level in grades 11 and 12 in the formal schooling cycle. Vocational training includes institution-based training programs which fall outside the formal schooling cycle, and is mainly provided through public Industrial Training Institutes (ITIs), private Industrial Training Centers (ITCs) and polytechnics (both public and private).

The Directorate General of Employment and Training (under the MoLE) initiated the Craftsmen Training Scheme (CTS) in 1950 for providing skills in various vocational trades to meet the requirement for skilled manpower in the country and initially 50 ITIs were established. The oil boom in West-Asia during the 1980s increased the demand for skilled manpower in those regions resulting in the establishment of many new private training institutes, particularly in the southern part of the country. In 2011-12, there are about 9000 ITIs/ ITCs having a capacity of more than 1.2 million students under the MoLE. There are 1244 polytechnics with a capacity of more than 295,000 students under the Ministry of HRD. National Institute of Open Schooling is also conducting some training programs.

According to the employment and unemployment survey of 2004-05 conducted by the national sample survey organization (Government of India), in the age group age 15-29 years, about 2 per cent of the population are reported to have received formal vocational training and another 8 per cent are reported to

have received non-formal vocational training (Government of India, 2006). At present, the capacity in the VET programs is 3.1 million students per year. The government has set a target of up-skilling 500 million people by 2022. However, the VET programs have also not been very successful in India.

Pakistan

The vocational and technical education stream in Pakistan is quite small. There are about 315,000 students enrolled across 1,522 technical and vocational education and training (TVET) institutes. Enrolment in the vocational and technical training institutions was planned to be raised to one million by 2010; a four-fold increase over 2005. Vocational institutes offer courses that vary from three months to two years in length, after grade 8. Vocational education is provided through polytechnic, vocational training centers, apprenticeship schemes, and various training and vocational institutions.

TEVT in Pakistan is structured on a bi-layered pattern, at Federal level there is a National Vocational & Technical Training Commission (NAVTTTC) while at the provincial level there are Technical Education & Vocational Training Authorities (TEVTAs). The programs are administered by a number of federal, provincial and private agencies and by the provincial labor departments.

Skill development has been among the most neglected areas in Pakistan. The country has not been able to improve vocational and job skills (Kemal, 2005). There are five main challenges in vocational education in the country. The first is the shortage of teachers: 30-40 per cent of teaching posts are lying vacant and teachers do not have enough industrial experience. The next is course curriculum: most text books are imported and in the English language, the curriculum followed in the institutes is out-dated and the examination system is mainly theory oriented. The teaching and learning materials are of not good quality, and drop-out rates from the institutes are very high. Finally, there is a lack of linkages between schools and industry. Recently, the National Vocational and Technical Education Commission (NAVTEC) of Pakistan developed a seminal policy document **Skilling Pakistan: National Skills Strategy 2009-2013 (NSS)**

Nepal

Nepal has opted developing two distinct streams of educational development, particularly at the school level and post-secondary level; general education, and technical and vocational training. General education covers early childhood development program to 10th grade which is now extended to 12th grade under recently implemented school sector reform plan (SSRP). Council for technical education and vocational training (CTEVT) is responsible for vocational training for secondary and post secondary students- those who appeared in the test examination of SLC and those who passes the SLC examination. However, CTEVT curriculum is still to be linked to the lower grades below 10 and higher technical education runs by universities (CTEVT, 2010). Now, it is imparted with three modalities of education through four polytechnic institutes, 18 technical institutes and two vocational training centers. Similarly, in the private sector to some 141 institutions in Technical School Leaving Certificate (TSLC) are running under CTEVT. 177 institutes in intermediate and diploma and 50 institutes in short-term vocational training are conducting all over the country (THT, 2011). The Ministry of Education (MoE) has expanded Annex program in order to provide technical education and training at 73 secondary schools. One vocational education subject has now been also incorporated in the school curriculum at secondary level. Several government ministries and departments are involving in either supporting or providing skills training as: Department of Labour, The non-formal Education Center (NFEC), Community Learning Centres (CLC), Department of Cottage and Small Industries and Enhanced Vocational Education and Training (EVENT) project etc.

But some critical issues and challenges are also as the hindrances of TVET as: co-ordination and collaboration, Sustainability of the training system, training job irrelevance, under-funding, low quality and poor access to education/training, weak management, systematic problems and non-functioning local agencies (DDC and VDC) etc.

Until 1995-1996, migration to India accounted for around 85 percent of total out- migration from Nepal. Currently, the government policy allows Nepalese citizens to apply for official permission for employment in 107 countries (Adhikari and Grung, 2009). Around 631 manpower companies are working for travel process; around 700 youths leave for overseas every day. The trends of migration indicates that most of the poor and illiterate youths often select India while, literate and educated with little better economic background select other countries. So that, VET system with broad vision, dedicated policy, long term planning, development, efficient governance, effective implementation, regular monitoring, timely feedback, fair evaluation and immediate correction is the need of the hour.

Korea

VET has played an important role in Korea's economic development by producing a skilled labor force. Vocational education is provided under the formal education system (under the Ministry of Education and Human Resources Development) at the secondary level by vocational high schools and at the post-secondary level mainly by junior colleges. Vocational training is carried out as non-formal training and comes under the Ministry of Labor. Vocational high schools offer three year programs and fall into the following major categories: agriculture, technology-industry, commerce, fishery and marine transportation, and comprehensive vocational. Junior colleges mainly provide two year programs that lead to a diploma or associate degree. In 2007, there were 702 vocational high schools which accounted for slightly less than one third of the total high school enrolment and 148 junior colleges (Chae & Chung, 2009).

In the past, Korea's VET has contributed substantially to economic and social developments but the country is facing profound changes with the arrival of the knowledge based economy and global competition. Mismatch between demand and supply, low participation rates of adult workers in education, linkage between school and industry. Rigidity and linkages of VET system are some major issues in the current VET system. An earlier study by Tzannatos and Johnes (1997) had also noted some of these problems. The study mentioned that the curriculum does not match well with the requirements of the economy and is not flexible across regions with differing needs. There has been a shortage of skilled technical workers within the manufacturing sector. The quality of vocational education is also not high.

A study by Chae and Chung (2009) finds that the status of VET system in the country is deteriorating. Higher education is gaining much importance and general education is becoming more attractive for students and their parents. Only 20 per cent of the vocational high school graduates enter the labor market directly, whereas 70 percent continue with higher education. Their findings indicate that the current vocational high schools are not associated with better labor market outcomes in terms of employment rate and wage levels. Still, the role of public vocational training cannot be neglected in order to supplement any

market failure in the supply of labor. The study finds that the VET institutes are important in supplying technical labor to small and medium enterprises.

Singapore

In the economic and educational successes of Singapore, its education and training system has played a vital role. Singapore (and Korea) gave considerable attention to upgrading workers on the job. For example, they introduced training levies to induce enterprise interest in worker training. Singapore's system of Vocational Technical Education provides a comprehensive overview on role of vocational education in economic development of Singapore (ADB,2004). (VTE) is a 'world-class model' today (Seng, 2008, p. 129). In 1964, the government established the first secondary vocational schools, initially with an enrolment of 4910 students. Those were the students who did not pass the primary leaving examinations to enter into academic secondary schools. During the 1970s, several ITCs and vocational institutes were opened.

In order to attract the multi-national companies (MNCs) and developing a strong manufacturing sector to solve the unemployment problem, it was important for the government to ensure that the requisite skills were

in place. The government followed the systematic policies and recommendations to upgrade education at various levels. For example, “as a way of tackling the ‘drop-out problem’ and the difficulties encountered by those students who were not ‘academically inclined’, it was decided that the less ‘academically-able’ students would now have a vocational route within the education system.” The government has undertaken various reforms from time to time. An interesting innovation was the introduction of a scheme in 1993 similar to voucher system to further subsidize education and training (Tzannatos & Johnes, 1997). According to this scheme, the Ministry of Education makes a regular payment into an EduSave account for each child aged between 6 to 16 years. Parents may use the resources provided by this account to buy whatever additional education they want for their child.

Technical and polytechnic education in the country is not just as a terminal, industry-ready exit qualification but it is also seen as a viable alternative to a junior college education for progression to the university. For instance, many students and their parents opt to enroll in a polytechnic because they prefer a practice-oriented education to an academic one at a junior college. The government maintains the separation between polytechnics and universities (higher education) in order to keep their distinctive focus. Employer demand for high and semi-technical skills, and their feedback to the government is that the polytechnics are best placed to provide these skills. Education through polytechnic has been the ‘backbone’ of Singapore’s industrialization. These institutes have a very clear mission: to train and produce technologists and middle level professionals to support the economic, social and technological development of the country. The employment rate of the graduates has been consistently high and was at 90 per cent in 2005. Returns to vocational/technical education are also slightly higher than those with secondary formal education (Sakellariou, 2003).

The experience of Singapore has shown how the Institute of Technical Education (ITE), which is recognized as a world-class institution focusing on VTE, has been successfully transformed into a world-class post-secondary educational institution (Seng, 2008, pp. 132-133).

Conclusions

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 is 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. In most of the developed countries in the Asian region, like Japan, signature VET system has played a major role in their economic development. However in the South Asian region, specifically in developing countries like Afghanistan, Bangladesh, India, Pakistan and Nepal the VET system has not been very successful. Though, governments in these countries have paid much more attention to this sector in the past few years. The VET system is facing several challenges; quality of institutions and lack of linkages between VET providers and industries are two major problems. What is more surprising is that the VET system in the South Asian countries has not improved in the last decades despite the widespread recognition of the system. The vocational and technical education programs in South Asia are often inadequate, irrelevant, and qualitatively poor. There is perhaps no other field in education that requires from South Asian policy-makers more fundamental rethinking, sweeping reforms, and extensive change.

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Technical Vocational Education and Training (TVET) Development and Social Inclusion in Nepal

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Abstract

Social inclusion has become a key feature of discussions in the education policy and practices around the world and a challenging agenda in the Technical and Vocational Education and Training (TVET). When TVET contributes to human resources development, it also contributes to social inclusion as it underpins the fundamental values of society such as equity, justice, nondiscrimination, participation and social responsibility. This paper highlights the emergence of social inclusion agenda in Nepal, overall national education priorities and the development of TVET in relation to social inclusion. Analyzing the history of TVET development in Nepal, the paper argues that TVET is one of the several national priorities that acknowledge the major dimensions of social inclusion such as access and equity which were always in priority in the TVET sector since its development.

Introduction

Education in general is perceived to impart skills, knowledge, autonomy and freedom to marginalized and disadvantaged people (Sen, 2001); it includes general education as well as TVET. TVET has been considered as crucial in the modern world for the livelihood of an individual as well as it has an instrumental role to reduce unemployment rate in the country (UNESCO, 2004). In many developing countries, the importance of the TVET has been perceived with three main roles: i) TVET provides education and learning opportunities to everyone, ii) TVET contributes in economic development through skilled human resources and iii) TVET facilitates to overcome social exclusion resulted due to societal inequality. In addition, although the main goal of the TVET is to produce capable human resources with increased employability and socio-economic potentials, it has been also acknowledged for its contribution in poverty alleviation, greater equity and justice (Smith, 2006). TVET thus contributes to escape from poverty and marginalization by promoting social inclusion.

Considering its importance, social inclusion has become a challenging agenda in the TVET sector in Nepal. It has been understood that TVET not only contributes to human resources development and training but also emphasizes the fundamental values of society – equity, justice, gender equality, nondiscrimination, social responsibility, and participation (Usman & Pascal, 2010). These concerns are reflected not only recently but from the early period of TVET development. Since the history, the initial concept of the TVET was to provide livelihood skills to those youth who are poor, from difficult geographical territories, and who did not finish their school and have no access to formal education. Despite all these efforts, equitable access and inclusion in the education and training opportunity remains to be a question yet to be answered.

This paper is not intended to provide an answer to this query however it attempts to highlight the emergence of social inclusion agenda in Nepal and the TVET development in relation to social inclusion agenda.

Emergence of Social Inclusion Agenda in Nepal

Nepal is a diverse yet hierarchical society (Bista, 1991). Among the hundreds of caste and ethnic communities, many are in deprived situation because of systemic inequalities and exclusion they have been facing for generations. It has been argued that Indigenous people, Women, Madhesi, Dalits and other religious minorities are normally excluded from the mainstream national political life and deprived of the

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socio-economic opportunities (Gurung, 2010). When spatial diversity and state ideology contributed to significant level of social inequality in Nepal, the caste discrimination nurtured by the state has been the foundation of social exclusion (Gurung, 2007, p.15).

Social inclusion has been taken as the complementary approach to bring system-level change to remove inequities in access to assets, capabilities and opportunity (Bennet, 2002). Nepal has considered social inclusion agenda as important to eliminate all forms of discrimination and exclusion based on caste, ethnicity, culture, religion, language, geographical origin and gender (NPC, 2008). Since mid-1990's social inclusion efforts turned out to be the political agenda in Nepal and have been mainstreamed into developmental policies. After the people's movement of 2006, social inclusion agenda has been strongly put forwarded to build a just and equitable society eliminating the disparities against the gender, caste, class, and regional. It is further legitimized and provisioned in the Interim Constitution 2007 (NPC, 2008).

Social inclusion agenda is put forwarded by the government of Nepal in every aspect of the development initiatives, indicating its immediate need for the overall development of the country. The Tenth Five Year Plan of Nepal aimed to address gender and ethnic/caste-related disparities and facilitate social inclusion by mainstreaming such efforts instead of simply relying on targeted programs (NPC, 2008). Also there is a tendency to address social exclusion issues through policy decisions which indicates that there is a growing understanding at system level about social inclusion and activities to address the issues related to exclusion (Acharya, 2007). Realizing the need of influencing even at system level, social inclusion has become central in the three year plan approach paper, three year interim plan and even in the constitution writing process.

The three year plan approach paper (2010/11- 2012/13) has realized the ineffectiveness of the past efforts and come up with the plan to build an equitable society in Nepal by eliminating the regional, class-based, caste-based and other social discriminations (NPC, 2010). Similarly, the three year interim plan (2007/08-2009/10) has also highlighted the gap of prevailing discrimination in various regions, classes, castes and communities. The paper has highlighted the need of inclusion when it stated inclusion as:

to fulfill the physical, emotional and basic needs of all the people, groups or castes. It has to be achieved by respecting their dignity and their own culture and also reducing the disparities between excluded and advantaged groups and by reducing the gap in the existing opportunities and the access. In addition to this, it is to help to build a just society by ensuring rightful sharing of power and resources for their active participation as a citizen (NPC, 2007, p. 77).

Similarly, the interim constitution of Nepal (2007) has stressed the equal right to public services as it stated that the fundamental rights of all citizens shall be equal before the law. It has highlighted the rights to equality, rights to justice, rights to employment, rights of women, and discriminated groups in its first, second and third amendments (UNDP, 2008).

Apart from these national plans, social inclusion agenda has been used in several disciplines. Among the seven goals under the Education for All (EFA), National Plan of Action (2001 -2015), three of them are prepared from the social inclusion perspectives. In addition, seven thematic strategies and plan of action have also been developed, among which, two thematic strategies were formulated in line with ensuring the social inclusion in education. These were formulated as: i) ensuring social equity and gender parity and ii) ensuring the right of indigenous people and linguistics minorities to basic and primary education through mother tongue (MOE, 2003, pp. 46-58).

Evolution of TVET and Social Inclusion Priorities

The access and equity are an integral part of social justice, inclusions and human rights. The principles of access and equity are encompassed within a hierarchy of models and philosophies ranging from social and moral philosophy, economics, social and public policy, and politics (Ziyauddin, 2009). Further, access and equity has been taken as: promoting fairness in the distribution of resources; recognising and promoting

people's rights and improve the accountability of decision makers; ensure that people have fairer access to the economic resources and services; giving people better opportunities for genuine participation and consultation about decisions affecting their lives (Considin, Watson and Hall, 2005). Moreover, the achievement of equity means to ensure participation of disadvantaged groups in the TVET as guided by equity policies that is based on an understanding of group differences and their causes.

When the government of Nepal is committed to eliminate inequality to ensure social inclusion and just state (NPC, 2007, p.78), the TVET sector in Nepal has recognized the need of inclusion since the early period of the TVET development. Since the history, the TVET was targeted to those youth who are poor, from difficult geographical territories, and who did not finish their school and have no access to formal education. Although history of the TVET could be traced back to 1937 (Thapa, 1977 as cited in Sharma, 1999), the real efforts to develop this sector was initiated only after the initiation of democracy in 1951. Further, the planned development of the TVET sector began only in 1971 (Gajurel, 2010).

While analyzing the modern-time period of TVET development, there are four distinct periods, each of which were significant milestones from the perspective of social inclusion. The early phase (before 1951) was basically focused on mere expansion of the TVET services which would produce skilled human resources to address the demand of growing number of industries opened in the country during that time. The phase during 1951-1971 was focused on continuing the expansion of efforts. The period of 1971-1991 was focused on the planned development of the TVET services that led the establishment of the Council for Technical Education and Vocational Training (CTEVT) in 1981 for the coordination and ensuring the quality of TVET services offered in the country. The later phase is 1991 to date which is focused on policy development that would also ensure the increasing access and equity as well as maintaining quality and relevance of the services.

The Early Period (before 1951): expansion of TVET services

Before 1951, due to the existing caste structure, people were meant to take their occupation as per their castes. As there was no formal training centers, youth would learn necessary skills to perform such occupational work through their seniors while working with them (Parajuli, 2002, p. 7). In addition, during the Rana regime (1846-1950), then rulers were not keen on expanding educational opportunities to the people. However, the technical and vocational education was formally initiated in the country by establishing the first technical school and cottage industry center in 1937 in Kathmandu. Such efforts were continued by establishing few other technical training centers such as "Nepal Arts School" (MOE, 2009a), forest training center and veterinary training center (Sharma, 2006).

Following this effort, several schools and training centers were opened, all targeting to expand the services to the public. One of such efforts was the opening of vocational skill training with the first training cum production in spinning and hosiery in central jail, targeting to inmates. Others were namely: leather processing and shoe making production center at Balaju, Kathmandu in 1929; the Cottage Industry Promotion Office in 1939; and similar centers in Dhankuta and in Palpa in 1942 and 1944. Such expansion efforts were continued with the establishment of "Charkha Pracharak Phant" in 1943, which opened 35 training centers in 35 locations, targeting to train the students from villages (Sharma, 1999).

Further, in 1947, with the influence from Gandhian philosophy, the vocational education program was reinstated as a part of the basic education system and emphasized self-reliance, enabling people to become economically independent. The greater emphasis was given on the practice of vocational skill, expecting schools to offer basic craft together with other general subjects (MOE, 2009). Basic education system further attempted to emphasize rural vocational training by initiating the schools in rural areas outside Kathmandu Valley (Belbase, 1981). The expansion efforts were remarkable that within ten years period, there exist thirteen basic schools in 1954. However, there emerged to be no concerted policy or practices addressing equity in basic education (MOE, 2009).

Although it was not intentional, this period was a significant turning point as it expanded the TVET opportunities to the general public who were continuously kept away from obtaining general education by Rana rulers.

The period between 1951-1971: Continuous Efforts to Increase Access

1951-1971 can be traced as another period of the TVET development which was focused on providing TVET opportunities to the wider segment of population. With the establishment of Nepal National Education Planning Commission (NNEPC), also known as National Education Commission (NEC) on April 1954, need of vocational education in schools was reemphasized; that initiated the concept of Multi-purpose school (Wood, 1959). The major purposes of these schools were to provide practical and technical orientated courses in the school. In response to the recommendation of NNEPC, the Ministry of Education established a secondary level Multipurpose School in Pokhara in 1961 (MOE, 2009), which offered several vocational courses.

However, equity consideration was not distinct in Multi Purpose Education system (MOE, 2009). Although National Planning Commission (NPC) sanctioned introduction of the multipurpose system step-by-step to all the districts of Nepal, by 1970, there were only twenty nine multipurpose schools with one hundred thirty one vocational teachers serving to about four thousands students (Aryal, 1970 as cited in MOE, 2009). These limited numbers of multipurpose school also point out the limited access to these schools for children from various parts of country. Further, these schools later encountered several problems such as irrelevant curricula, low employment outcomes and poor social image of vocational education (Belbase, 1981).

The period of 1971-1990: The TVET Initiatives along with the national agenda of social inclusion

As the access and equity are key dimensions of the social inclusion, this period was not only significant for the TVET development but also for the alignment of these TVET initiatives in line with the access and equity agenda of the country. When the Government introduced a National Education System Plan (NESP) with strong political commitment and legal backup in 1970's (MOE, 2009), one of the priorities of NESP was the promotion of vocational education to make it accessible to majority of youths. Equity and regional balance was one of the commitments of NESP which was visible with the scholarship provision to help economically and geographically deprived but talented students to obtain technical education (UNESCO, 1995).

However, the program was discontinued due to several problems highlighted by the mid-term evaluation of the NESP (MOE, 2009) leading to disintegration of the TVET from the general education system in 1980 and initiating of a new approach of Technical School System in the country. The new approach to Technical School System continued the efforts of access and equity which were envisioned in the past without the formal plan of the TVET development. Such initiatives were made noticeable when National Education Committee prepared a Work Plan (1979) introduced a technical school program in some of the remote rural areas like Jumla, Jiri, and Dhankuta (Khati, 2003). Further, since the achieving equitable outcome was one of the nationally agreed goals of the TVET system, these technical schools were expected to address the learning needs of youths having no opportunity to complete secondary education, women, and people residing in remote areas. In addition, such technical schools were established in Butwal, Balaju, Pokhara, Jiri, Jumla, Lahan, Dang, Dhankuta, and Dipayal/Doti with the purpose of increasing access (MOE, 2009).

Although, NESP was silently withdrawn, in 1982 a national level Technical and Vocational Education Committee (TEVC) and the Directorate of Technical and Vocational Education (DTVE) under the MOE were established for the purpose of formulating policies, and implementing and managing the technical school system (Gajurel, 2010). This DTVE was later replaced by the CTEVT by an act of the Nepali Parliament in 1988 (CTEVT, 2008). Since its establishment, CTEVT has received a mandate for developing national policies, coordinating TVET, ensuring quality, and developing, expanding and strengthening country's TVET.

1991 to the present: policy advancement with expansion, relevance and quality of services

The major focus of the period of 1991 till date has been to expand the services to wider population as well as to increase the quality and relevance of the TVET. The planned development initiative of the earlier period was continued by establishing more technical schools and vocational training centers.

Further, the comprehensive report prepared by NEC added energy for the development of the TVET in Nepal. This led to gradual policy changes which were basically focused on expansion of services, improving relevancy of training programs that was reflected through the changes in curricula and establishment different types of training centers such as diploma training centers, Vocational Training and Community Development (VTCD) and annex schools. The annex schools were initiated in the general school premises with the purpose of imparting skills, knowledge, and attitudes to school dropouts and non-college bound youths including economically poor population that was unable to pursue further education.

The implication of policy changes also initiated the public private partnership leading to open private training centers (Sharma, 2010) that would expand the opportunities of the TVET services to more people. This period is also marked by supports from several international agencies particularly to enhance the institutional capacity of the TVET system by adding up four new technical schools and one technical instructor training institute (MOE, 2009).

Apart from CTEVT, there are other major vocational training providers at government level such as the Department of Cottage and Small Industries (DCSI) and the Department of Labor and Employment Promotion (DOLEP) who provides training to approximately 16,000 and 7,500 youth per year respectively (CTEVT, 2008; MOE, 2009; NPC, 2007). Accordingly, GON together with several other international partners have employed several norms such as quota, scholarships etc. (ADB, 2006) for encouraging the participation of women, and discriminated group and offer trainings to the people from whole nations by reaching to their door steps. Accordingly, Tribhuvan University and Kathmandu University also offer programs in tertiary level education in the area of health, agriculture, engineering, and forestry at intermediate level and above.

It is estimated that every year more than 100,000 youth are trained with the Government, non- government and private training providers (CTEVT, 2011). All these initiatives have significantly contributed in the expansion of the TVET services in Nepal. Although, massive expansion of the TVET services especially short term vocational training in the recent decade has been instrumental in improving the socio economic status of the people in Nepal, social inclusion in the TVET in Nepal still can be questioned as there are huge numbers of youth who are still deprived of the TVET opportunities and are displaced in search of better job in abroad. Moreover, the TVET sector in Nepal performs poorly in terms of access to training; particularly the poor and disadvantaged lack access to skills training because of high competition and less affordability, limiting their earning capacity (Sharma, 2010).

In connection to this, the recent TVET policy -2012 has made "inclusion of" and "access for" as one of the key policy areas, advocating for the massive expansion of the TVET; removing existing inequalities and including all those who are deprived of productive employment opportunity. Although these policy guidelines are available, it is to be noted that mere policies to improve VET provision will not engage young people or ensure their social inclusion unless there are sufficient, decent, adequately-paid jobs for them (Colley, Hoskins, Parvera, & Boetzelen, 2005).

Conclusion

With rapid transformation of societies in social, political, economic and education spheres, it is true that the TVET is of paramount importance for the social as well as economic emancipation of socially excluded groups. Several efforts from government and non government sectors have vigorously placed its efforts to expand the TVET opportunities to the youth from the different segment of the society so well that they would be able to enter into labor market with full potentials to ensure their livelihood and better life. Yet access to

obtaining such opportunities is often limited resulting for many youths to be in the state of social exclusion and in poverty as they are disadvantaged due to social, ethnic, political and geographical factors. Mere policy and practices may not be enough to address the social inclusion issues. Such policies and practices must also address the systemic and structural causes of social exclusion.

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Connecting TEVT with Local Economic Trends

- Prof. Tanka Nath Sharma, Ph.D¹

Abstract

Relevant and responsive skill development through Technical Education and Vocational Training (TEVT) system enhances productivity, creativity and better income of people at work for better living standard. However it is only the necessary condition, the sufficient condition is to connect TVET with the local, national and the global economy to create employment opportunities or avenues to utilize their skills.

The economic growth of Nepal remained stagnant with an average 4% increment of last decade. Almost all of the macroeconomic or other social economic indicators of Nepal from GDP per capita to Gini-coefficient, HDI to MPI do not reveal encouraging situation. Experience from past suggests that human resource development is to be linked with economic development and labor market needs in order to increase absorption capacity of trained and skilled human resources for productive employment and earning.

There have been some notable initiatives in Nepal in institutionalizing TEVT with connecting with local economy and making it instrumental for poverty reduction as well as overall economic prosperity. TEVT policy was initiated in 2007 and revised in 2012. This TEVT policy is part of process of reforming the education and training system for Nepal where more emphasis is laid upon creation of entry level skills and competencies available to all, enhancement of employment potentials and earning capacities of under privileged, disadvantaged and marginalized groups in society, integration of various modes of learning and so on.

Although various projects and programs are being offered through various agencies covering a broader spectrum of employment-based education and training to support local economy, it is not free from challenges. These challenges are also common to other developing countries which are inadequate public fund, lack of competent trainers, inadequate ICT infrastructure, inadequate system capacity in terms of planning among others.

It is essential to understand the mechanisms for facilitating smooth connections of TEVT with the emerging economy to make its programs relevant to the local needs. Local skill training schemes should be connected with the local employment considerations and need to be integrated into development strategies in general and poverty reduction strategies in particular.

Introduction

Economic growth and development is all about raising productivity, wages, and profits in the right proportion to maximize savings and investment (ADB, 2004). From the ground of having more unskilled labor in developing countries like Nepal, the policies vest the challenges to increase their productivity in connection with the local economy and integrate with opportunities brought by local economic trends and rapid economic changes around the globe. Education and training systems need to respond to the sweeping changes brought about by globalization, rapidly changing technologies and the knowledge economy. Responsive education and training system can have far reaching implications for developing countries like Nepal in terms of sustainable growth, competitiveness, job creation and poverty reduction. Such education and training system is the current need of Nepal to promote local economy integrated with the global economy.

Relevant and responsive skill development through Technical Education and Vocational Training (TEVT) system enhances both people's capability to work, increase their income and opens up opportunities for creativity and satisfaction at work. The future prosperity of the country in general and community in particular

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depends on the number of person in employment and their productivity at work. A research evidences and literatures are available to support the connections between education, skills, productivity and economic growth (ILO, 2010). Available information in these literatures support that combination of good quality education with training relevant to the labor market (a) empowers people to develop their full potential to grab employment and social opportunities, (b) enhances productivity of both workers and enterprises leading to future innovation and development, (c) encourages both domestic and foreign investment which contributes to the job growth, lowering unemployment and under employment, (d) leads to higher wages, expands labor market opportunities, and reduces social inequalities when education and training is made widely accessible .

In response to growing unemployment, under employment and poverty, development policies in Nepal are directed to poverty reduction and improve local economy. In this response, productive employment for poverty reduction is one of the core elements of the recent development policies and current three year interim plan (Sharma, 2010).

Socio-Economic Context

Nepal has a population of 26.6 million, with annual average growth rate of 1.40 (NPC 2011). Nepal's Human Development Index is 0.463 with a rank of 157 out of 187 countries (UNDP, 2013). In terms of Human Development Index, Nepal is one of the ten nations making the swiftest development gains over the years (UNDP, 2010). Despite significant progress made in health and education, Nepal still remains one of the poorest countries with poor economic development (ADB, 2010) with a wide gap in the education sector between villages and the cities.

The economic growth of Nepal remained stagnant with an average 4% increment of last decade. Almost all of the macroeconomic or other social economic indicators of Nepal from GDP per capita to Gini-coefficient, HDI to MPI do not explore encouraging situation. Experience from past suggests that human resource development is to be linked with economic development and labor market needs in order to increase absorption capacity of trained, skilled human resources into productive employment and earning.

Absolute poverty level of Nepal is decreased substantially (41.2% in 1995/96 to 25.2% in2010/11) in last one and half decades which indicates positive trend towards poverty alleviation. Similarly, as per Gini-coefficient inequality is also gradually declining. Unlike, as per the HDI value, Nepal is still lagging behind in the position of 157 out of 187 with HDI value 458 (UNDP, 2010).

There has been slow growth in the manufacturing employment in Nepal where household and cottage industries accounted for half of total manufacturing employment, but produced just 12 per cent of manufacturing value-added. Small scale establishments (10-49 workers) accounted for about 12 per cent of employment and produced 16 per cent of value addition. Medium scale establishments (50-199 workers) employed 19 per cent of the total employment and produced 32 per cent of value addition. Large-scale establishments (above 200 workers) accounted for the remaining 19 per cent of total manufacturing employment, but produced 40 per cent of value addition. (Rimal, 2008)

Education and skill levels of labor force are essential predictors of labor productivity and economic development. Moreover, their relevance to the needs of the labor market is also important to facilitate employment and economic productivity (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. Despite significant improvement in access to education for which Nepal is rewarded, there is noticeable regional, caste and ethnicity based, and gender based disparities in access to education leading to economic disparities as well.

The trend of labor mobility to the international job market is increasing every year due to the very limited opportunities available for them in the national labor market. However, constantly increasing number of labor

force for the foreign employment has contributed to sustain the national economy from the remittance of migrant workers. For example in 2009, about US\$ 2.9 billion was contributed by migrant workers' remittance to the national domestic product (GDP), which constituted 24% of the total.

Local Economic Trends and TEVT connections possibilities

Due to slower growth worker remittances, problems in real estate market and on-going political uncertainties, current economic trends in Nepal is in decline (ADB, 2012). Nepal's economic prospects depend on how the political situation evolves. Current economic trends in Nepal are outlined by ADB in 2012 claimed that the completion of the peace process and political settlement would allow local economy flourish if the political leaders refocus on the measures required to promote private participation in development, boost business confidence, and improve labor relations. Some of the prominent sectors that have influenced or have potential to influence on the local economy is discussed in the following sections.

Agriculture

Nepal has diverse agro-ecological zones and has remained the major livelihood activities of Nepalese national economy. The most recent Labour Force Survey figures show that 74 percent of the population is employed in agriculture, and the sector contributes 36 percent of Nepal's GDP (World Bank, 2012, NPC, 2011). The substantial and traditional agricultural system practiced in Nepal since very long has shown little growth with slight visible impact on the national economy (Sambriddhi, 2012). Since the government's endorsement of Nepal Agriculture Perspective Plan (APP) of 20 years (1995-2014), various contexts, policies and institutional provisions have changed (Samriddhi, 2011). Many recent policies of Nepal including Agricultural Prospective Plan (1995-2014), targeting to transform subsistence agriculture into a commercialized and competitive system have not proved so far due to decline annual per capita food availability in Nepal (SRLC, 2012). Nepal's rural economy with greater number of people dependent on agriculture for their livelihoods demands modernization and commercialization of the sector (MoAC, 2010) for which linking it to the local economy through technical education and vocational training is the utmost requirements in the present situation.

Tourism

Nepal owns tremendous potentials and possibilities to explore its natural places pleasing thousands of visitors every year all over the world. Tourism is thus playing significant role in contributing to the 4 percent of total GDP (WTTC, 2012). The tourism industry is a major source of earning foreign currency and generating revenue (Thapa, 2012). There are several paths in promoting tourism which benefits to every individual, community and the country if it is well connected with the local culture, practices and resources. It has generated good amount of revenue to the country and creates job opportunities at the local level. In 2011 Travel and Tourism directly supported 412,500 jobs and is expected to rise in 562,000 jobs by 2022 (WTTC, 2012). Further in order to exploit the tourism sector to its fullest in the Nepalese economy, the local tourism should be significantly enhanced. Evidences have shown that tourism can contribute to the economic growth and development of a country if it is properly planned and managed (Paudyal, 2012).

Construction

The growing urban areas in Nepal have served its people not only through the availability of the facilities but also via extended employment opportunities in construction sector. There is increasing trend of population due to its natural growth as well as flexible mobility and migration. The barren or productive land has now multi storey tall buildings and tarred smooth roads over them. This seems to be never ending process. Not only in the urban areas but also in the rural areas construction sector is also highly emerging sector which require many skilled and unskilled people making their living. At the same time these mounting builds are equally threat to earthquakes. Thus better skills and appropriate technology is demanded. Skill advancement

programs connected to the construction sector may lead to more income better employment prospects and local economic development potentials.

Micro enterprises development

Nepal's policy for the last two decades has focused extensively on poverty reduction for accelerating its economic growth at the local levels. It aimed at creating an environment conducive for free enterprise with some social protection measures (NPC, 2011) and as a result the investment from the private sector in entrepreneurship has got pace. Sabharwal (2013) in context of India has mentioned that the poor functioning of the 3Es e.g. education, employment and employability for the poverty reduction measures has led to addition of fourth E of entrepreneurship for effective and desired employment outcomes. On the background that the share of agricultural GDP and industrial sector has decreased, the promotion and expansion of micro enterprises is drawn attention nationwide.

Foreign Employment and Remittance

Data from the Ministry of Foreign Employment indicate that in the recent years, more than 200,000 Nepais have left every year for work overseas (excluding India), with the vast majority of migrants being male (96 per cent in 2008/09) (ILO, 2010) . Besides these there are a heavy number of undocumented migrants leaving the county each year for work overseas.

It has been realized that remittances constitute a significant source of GDP in Nepal. Nepal is noted as one of the top three in least developed countries for remittance recipients (UNCTAD, 2012). However the officially recorded remittances have slowed down sharply as compared to 20 percent of GDP in Fiscal year 2010 to 12 percent in FY 2011 (World Bank, 2011). When the value of remittances are accelerating globally, the decreased percent of the remittance flow could be due to the informal channels that migrants chose on the basis of cost, reliability, accessibility and trust (World Bank, 2011).

The remittance in Nepal though contribute to GDP considerably, has not been connected with local productive work. According to Bhatta (2012), out of the total income of remittance receiving households, 31 percent income comes from remittance which are mostly spent on daily consumption (79 percent) followed by repayment of loan (7 percent). This shows that the income received from remittance is mostly spent on consumption and very rarely in capital formation. In this context, the technical education and vocational training can play a significant role to enhance the local economy further through imparting knowledge on the optimum utilization of the remittances flow in the local productive activities. Thus the investment made of remittances could in fact boost up the local economy due to its nature to run it in small enterprises of local demands. Nepalese youths entering into the international job markets in heavy number every year if educated through TEVT will help to link their income in enhancing the local economy and would contribute to the "brain gain" for sustainable development in the country in substitute to the predominant "brain drain".

Hydro Power Projects

Nepal with more than 6 thousands rivers and rivulets has the potential to generate adequate electricity in the country and even provide access to other countries as well. To the unfortunate, Nepalese have frequent power cut offs affecting the productive sector of the Nepalese economy heavily. The hydropower projects also bring additional employment opportunities in the locality. Besides the electricity generated, people's association with various enterprises even in rural areas is very conducive to boost the local economy. Such projects will also produce substantial non-power benefits such as irrigation, flood control etc. in downstream reaches due to inherent flow regulation (JVS, 2004).

Green Economy

Green economy is an emerging trend that will have implications over the local economy and employment. TEVT should encourage the formulation and implementation of mechanisms that are conducive to the

government's policy, commitments of the private sector and concerns of the civil society in green enterprises (NPC, 2011). A green economy emphasizes the green growth-based developmental agenda which receives priority by the local economic activities. Nepal has greater opportunities in green economy due to its available natural resources which is largely unused.

Foreign Direct Investment

Nepal has been receiving some foreign direct investment (FDI), which may contribute to boost up the local economy, but the amount has been insignificant when compared with that received by other developing countries, including South Asian one. However, the amount of foreign direct investment has been gradually increasing in recent years. The Foreign direct investment in Nepal was reported to be US \$87,799,640.00 in 2010 whereas it was \$38,176, 180.00 in 2009 (The World Bank, 2011).

There is high potential of growth in FDI that contribute to the local economy. Policy environment that is FDI friendly would attract more investment in the Nepalese economy. Briefly speaking, economic benefits of FDI include contribution to physical capital formation, contribution to human capital development, transfer of technology and know-how, expansion of market and expansion of trade. The major business and industrial areas in which the FDI is made are manufacturing, service industries, and tourism industries. FDI currently is concentrated in manufacturing products for export to India such as vegetable oil, soap, toothpaste, Ayurvedic products and overseas exports such as readymade garments. FDI is also made in hotels and restaurant business. Recently, there has been significant FDI in hydropower, taking advantage of economic liberalization in this sector and continues to be potential area in which FDI continues to grow.

Local economy can flourish if it is integrated with the global economy. As Nepal integrates into the global economy, attracting foreign direct investment is also essential. Every economist will tell you that domestic capital alone is not sufficient for a country like Nepal For Nepal's economy to grow like it should, the country must attract private capital and that is possible only if we sufficient number of appropriately trained skilled human resources. TEVT should be connected with the business and industrial areas in which there is a high potentials to boot up the local economy.

नेपालका युवाले काम पाइँन भनेर भौँतारिनुपरेको छ । शिक्षा क्षेत्रले कामलाग्दो शिक्षा र गरिखाने सीप दिएको भए उनीहरूले भौँतारिनु पर्दैनथ्यो । हामीले शिक्षाका लागि प्रतिवर्ष ७०-७५ अर्ब रुपियाँ खर्च गरेका छौँ, तैपनि जनताका छोराछोरीलाई चाहिने गतिलो स्तरको शिक्षा दिएका छौँ भनेर नाक ठड्याउन नसक्ने शिक्षा हामीले नै चलाउँदै आएका होइन् र ?
डा. सुरेशराज शर्मा

TEVT connection with local economy

Skills have become the global currency of the 21st century (OECD, 2012). Because of rapid technological and economic changes it is not enough merely to provide general education but should be provided with work-related skills and abilities along with strong cognitive foundation (King 2007). Thus proper investment in equipping people with necessary and competent skills is crucial. However skills do not automatically turn into jobs and increase people's productivity. Linked with adequate employment opportunities and local economy, technical education and vocational training (TEVT) can assist people increase their skills, raise their productivity and increase their personal incomes leading to overall raised living standards and stronger, competitive economies (King, 2007).

There is no doubt that investing in human capital will generate returns (on investment) in several socio-economic fronts: higher overall economic growth, increased productivity at the workplace, and expanded economic opportunities for the disadvantaged. Human capital development connected with national development strategies have proven to be effective in responding to poor economic growth and high unemployment and under-employment. The national development efforts are directed to respond to chronic poverty and unemployment as well as hunger, caste-based inequalities and geographical segregation.

Development of capacity of people to earn through the expansion of provision of demand-led skill development opportunities for all is one of the essential development measures and connectivity to raise local economy.

Experience from the past suggests that human resource development is to be linked with economic development and labor market needs in order to increase absorption capacity of trained, skilled human resources into productive employment and earning. TEVT could become beneficial for both individual and society if it is linked with Country's socio-economic prosperity (Sharma, 2005). Socio-economic prosperity of any country depends on the availability of natural resource but also in ability to develop and efficiently utilize human resources needed for the development process. Appropriately trained human resources responding to the emerging local economy and integrated to the global opportunities can speed up the development process be it economical or industrial. Skills and competence acquired through appropriate training would be meaningful for both individual and society. Individual is benefited from employment and earning and the nation will be benefited through the increase in productivity and income (King, 2007). TEVT could focus its education and training programs developing cognitive abilities, occupational skills and soft skills useful to the world of education or work.

Focus on local enterprise development, modernization and commercialization of agriculture, development of skilled workforce needed for the local economy, and bridging the skill gaps in the local community along with the competencies marketable in the national and international labor market should be TEVT strategies of skilled human resource development in Nepal. The promotion of informal economic sector, application of green economy, creation and expansion of micro enterprises based on the available raw materials in local market and markets of the products and services relevant to the skill learned and corresponding enterprises are some of the factors to consider while connecting TEVT with the local economy. Imparting skills in people through TEVT can thus only operate effectively and demonstrate the intended results accelerating the local and nation's economic growth if it is well connected with the emerging local economic activities. Existing employment situation and economic growth pattern also suggest the school curricula should include the strong entrepreneurship skills component to facilitate school graduates to start small enterprises and engage in self-employment (ADB, 2011). If the technical education and vocational training is properly linked with the local economy, then those who had no access to school could also make their living better through micro-enterprises.

The globalized trend here does not work to its best unless and until the local economy is connected with opportunities created by globalization. Nepal, where four fifth of the population reside in rural areas, demands that every citizen acquire the skills to boost up the local economy. The balance between local and global can be attained by relating TEVT with the local economies and integrating it with the national and global market opportunities.

It has been thus realized that new measures in technical education and vocation training are required to substantially increase the number of people who acquire sound technological knowledgebase that is well connected with local economy and skills that lead to individual better incomes and productivity and consequently enhance the local economy. Lack of relevant skills in people has contributed to the growing unemployment rates of the country which has further facilitated social unrest in the society. The young bloods of our country have more involvement in such anti-social activities which could have been utilized them in more creative and productive work. The most promising solution to this social unrest is investing effectively in skills development connected with productivity throughout the life cycle; from early childhood, through compulsory education, and throughout a working life (OECD, 2012).

Current Initiative in Nepal with respect to TEVT Connection with local economy

There have been some notable initiatives in Nepal in institutionalizing TEVT with connection to the local driven economy which ultimately serves the core theme of development policies for poverty reduction. To

make TEVT instrumental for poverty reduction and skill development for economic prosperity a new TEVT policy was initiated in 2007 and revised in 2012. This TEVT policy is part of process of reforming the education and training system for Nepal, where more emphasis is laid upon (a) creation of entry level skills and competencies available to all (b) enhancement of employment potentials and earning capacities of under privileged, disadvantaged and marginalized groups in society, (c) integration of various modes of learning pathways for the development of human resources from basic level to advanced levels to meet technological and business requirements (d) responsiveness and competitiveness of the workforce in globalised and liberalized economies and labor markets (e) strengthening lifelong learning and continuing education opportunities for adult workers with more pathways to occupational careers and enhanced general education achievements, and (f) and ensuring sustainable financing to promote and maintain skill development initiatives. Within this policy framework, Government of Nepal has initiated several programs and projects to facilitate employment at the local level connected with the local economy. Some of the notable skill development initiatives connected with the local economy are as follows:

Skills for Employment Project (SEP): Government of Nepal with the loan assistance of Asian Development Bank (ADB) has implemented *Skills for Employment Project (SEP)* under Ministry of Education and Sports (MOES). Implementing agency of this project is Council for Technical Education and Vocational Training (CTEVT) in cooperation with Department of Cottage and Small Industries (DCSI), Cottage and Small Industries Development Board (CSIDB) and Department of Labor and Employment Promotion (DOLEP) with the goal of promoting poverty reduction stability by increasing engagement in wage and international employment, and self-employment. The total budget of the project was US \$ 25 million. Main objectives of the project are to: (1) increase access in Market Oriented Skill Training (MOST) particularly of women, Dalits and the disadvantaged groups ;(2) strengthen the capacity of key agencies to enhance their relevance and short-term training quality, (3) to enhance access of disadvantaged groups to the TEVT system, and (4) to develop and articulate the new TEVT policy.

The project delivered two types of trainings, (i) Community based training and (i) Center based training. All the training programs were free of cost and stipends were provided to the low income or wage lost trainees. According to the SfE project document, the Project targets the poor and will have approximately 60% of the trainee beneficiaries representing women, *Dalits*, or disadvantaged groups, while ensuring that about 50% are women and about 25% are *Dalit*. Inclusion of indigenous groups is confirmed in the (ADB, 2004).

A recent tracer study of the Market Oriented Skill Training (MOST) programs of the project, in general, were effective to achieve the expected objective of increasing individual's income and promoting local economy (METCON, 2012). A second phase of the project has already been designed and is about implement shortly.

Expansion of ANNEX Programs and Government Supported TEVT Institutions: The vocationally oriented Annex Program started in 2002 by CTEVT in collaboration with Department of Education offering a technical education program work bound, out of school and disadvantaged youths within the premises of general secondary schools sharing part of the physical facilities and human resources and the management. The Annex program will be continued under the SSRP. Its operation in the schools is based on local initiatives by the school and community and the cost sharing mechanism between the government and the local community. CTEVT have been successful to open such schools in more than 70 districts.

Integration of TEVT Soft Skills in schools: Piloting of TEVT soft skills in 100 schools has been planned to be consolidated with reviewing and developing curriculum, teacher training, class room delivery processes and competency based assessment system. As the technical education and vocational training component of SSRP aims at providing work oriented soft-skills to secondary school students, the expansion and consolidation of Technical Education and Vocational Training (TEVT) programs require a significant level of resource mobilization for technical capacity building; infrastructural development; and teacher preparation

including equipment support. More clarity with concrete plans and adequate preparation for successful implementation of this scheme is needed.

A separate TEVT Stream Secondary Schools: CTEVT has planned to pilot general and technical streams in community schools.

EVENT Program: The Ministry of Education (MOE) with the support of the World Bank has initiated Enhanced Vocational Education and Training (EVENT) Project. The Project Development Objective is to *expand the supply of skilled and employable labor by increasing access to quality training programs, and by strengthening the technical and vocational education and training system in Nepal.* The project consists of the following four components: (1) Strengthening TEVT Regulatory Activities and Capacity Building; (2) Strengthening Technical Education; (3) Support for Short-Term Training and Recognition of Prior Learning; and (4) Project Management and Monitoring and Evaluation. The ultimate outcome of the project is to make TEVT services accessible to poor and disadvantaged youths residing Mid-Western and Far Western Region.

Community Learning Centers: Community learning centers are developed to provide non-formal education (literacy and post-literacy classes supplemented with skill training supporting the participants in income generating activities. Priority is given to Poor, Women, Dalit, and people from the disadvantage communities.

Poverty Alleviation Fund: Poverty Alleviation Fund (PAF) for the purpose of initiating and implementing various sectoral as well as targeted poverty reduction programs that will be implemented via a coordinated and integrated approach. PAF is an institutional initiative to create an autonomous Poverty Alleviation Fund (PAF), with substantial participation from the private sector. The PAF is further expected to work closely with local communities and government, the central government, the I/NGOs and CBOs as well as the private sector. PAF has adopted a demand-led community based approach to alleviate poverty and it encourages poor communities to take initiatives to improve their livelihoods. The work culture of the PAF is to working with poor population very closely as possible. However, the impacts of PAF performance on poverty alleviation have not yet been evaluated as per its objectives.

Youth Self-Employment Program: This Fund was established in fiscal year 2008/09 with the objective conducting self-employment and vocational training programs for unemployed youths by providing them collateral free periodic loans at concessional interest rate through banks and financial institutions for the implementation of self-employment programs and vocational training, with the optimum utilization of productive labor to bring change in the traditional production system and for speedy growth of the country. The primary objectives of the youth self-employment program is to provide Rs. 200 thousand per person at the maximum as collateral free loan in an easy manner so that economically deprived group, women, Dalits, ethnic and conflict affected people, unemployed youths and people having traditional skills will have opportunity to get engaged in agricultural, vocational and service oriented activities thereby making their lifestyle much easier through their increased income.

Micro Enterprise Development Program (MEDP): The development of micro enterprises plays an important role in the creation of employment opportunities in rural areas, poverty alleviation and inclusive development. The main objective of MEDP is to develop industriousness in backward and poor target groups and create meaningful self-employment. The Ministry of Industry since 1998 has been conducting this program with the assistance of donor agencies.

MEDP has been implementing programs such as, micro industries establishment and social mobilization of micro industrialists for creating more job opportunities by upgrading the existing micro industries, development of industriousness and technical skills, development of inter-relationships amongst micro-entrepreneurs, their micro-enterprises and micro-finance institutions, development of proper technology and access to market, support and service for upgrading micro-industries for their sustainability, capacity building of the concerned parties and consolidation of monitoring and evaluation system, etc. MEDP has been

implementing its programs mainly by targeting women, indigenous groups, *Janjati, Dalit, Madhesi* and backward classes.

Rural Employment Promotion Programs of Ministry of Agriculture: The rather comprehensive 20-year Agriculture Perspective Plan (APP), which has been under implementation since 1997, and which is quite comprehensive in nature, is the principal program vehicle of this broad-based growth strategy. Programs under the APP are expected to address the bulk of rural underemployment and unemployment by increasing cropping intensity, augmenting the area under irrigation, increasing livestock heads and their quality, crop diversification, enhanced commercialization of agricultural products and expansion of agro-based industries. The utilization of labor-intensive technologies in infrastructure projects and cottage and small scale industries, including in the private sector is expected to expand non-agricultural employment opportunities.

Employment Fund, Nepal (DFID/SDC): *“Funded by DFID and SDC Helvetas Nepal’s employment fund provides skill training to economically poor and socially discriminated out-of-school youth. Private Service providers help identify the market potential as well as train participants. The payment to the service providers is based on the type of category trained and linked to outcomes: the service provider does not get any payment for those trainees who do not achieve employment.”* The main objectives of the project is to provide skill training to poor and socially discriminated out-of-school youth (18 to 35 years) and ensure their gainful employment; to promote decent work; address the employment needs of youth in order to mitigate social and political instability; address the particular needs of conflict-affected youth, widows, and the disabled, youth as beneficiaries. The project has targeted to train fourteen thousand five hundred young people (18 to 35 years), 57% female, receive vocational training and support, credit linkage and life skills.

Apart from the above programs CTEVT, Department of Labor, Department of Cottage and Small Industries and Cottage and Small Industry Development Board offer TEVT connected with the local labor market. Annual outputs of these programs were recorded about 99,000 people per year (CTEVT, 2012). Many government and non-governmental organizations also provide skill training to unemployed youths and adults targeting to the local employment.

Some observed Challenges

Although various projects and programs are being offered through various agencies covering a broader spectrum of employment-based education and training to support local economy, connecting TEVT with the local economy poses several challenges.

In order to promote local economy and employment, TEVT should be connected with potential marketable products and services that are on demands and it should made available to wider segment of the population. However, wider access to market oriented TEVT is restrained by barriers such as education level, geographical location of institutions, number of institutions providing TEVT, income level, caste and ethnicity, social and cultural practices have restricted the participation majority of the youth population who are in need of such education and training. Majority of the out of school youths who are pushed out from the formal school education should have access to TEVT programs and the challenge is that how our national policy respond to the skill development needs of these youths who can contribute to the local economic growth.

Key issues:

1. The labor market situation of young people is influenced by demographic factors, in particular cohort size and labor demand in the economy. However, patterns of youth integration into work are heavily influenced by institutional factors which can mitigate or aggravate obstacles of transition.
2. The transition from school to work is structured in different ways across countries and world Training, but also active labor market policies as well as regulatory policies such as minimum wages and employment protection are highly relevant institutional factors.
3. Regulatory policies influence the availability of flexible entry jobs, but a strong divide between flexible parts of the labor market and permanent jobs or between informal and formal work creates additional barriers to mobility.

Source: World Education Report, 2013 P.5

Despite significant progress made since the 1990s, inequality and social exclusion are still present in Nepal. Based on the key socio-economic and human development indicators by caste / ethnic group, it has been observed that there exist significant differences between groups. Although the state has provisioned legal protection against discrimination, caste discrimination has not disappeared altogether (Askvik et al., 2011), and there are a number of groups who are still experiencing exclusion based on a range of socio-economic and political parameters (World Bank and DFID, 2006).

In Nepal transitioning from centrally planned economies to more market- driven ones, the employment challenges are equally daunting as they involve a complete shift to a demand-driven system that emphasizes product quality and productivity. New ways need to be found to foster innovation and flexibility and to build a small business sector. The challenge is how TVET systems can change and develop to better serve the changing environments in which they operate, and to serve the changing demands from learners (King, 2007) and economic development partners of the community.

Many developing nations encounter multiple problems in developing effective TEVT provisions connecting with the promotion of local economy ensuring high levels of participation. Nepal is not an exception. The reasons for inability for developing effective TEVT in these countries as cited by UNESCO (2006) were: (a) inadequate public fund to develop TEVT institutions with sufficient infrastructures, (b) inability of develop competent trainers needed TEVT delivery, (c) problems of communication and coordination particularly in remote areas, (d) inadequate ICT infrastructure, (d) inadequate system capacity in terms of planning, designing relevant curricula, standard setting, assessment, research and development, and inadequate financing for regular operation and maintenance.

Similarly, low levels of literacy which impedes the participation in TEVT, inability of potential participants to pay cost of TEVT, absence of guiding and counseling services and inadequate involvement of labor market partners in TEVT development were some of the barriers to access on the demand side.

The biggest challenge ahead is financing TEVT in a context of massive expansion of basic entry level skill training provision connecting with the local economy has been realized. How to finance dramatic increase in programs and services making basic entry level accessible to all is a serious question in terms of financing and sustainability of skill for employment. Questions have often been raised on the efficiency and sustainability of the present TEVT system. The current system has been, in general, inappropriate as well as insufficient to support programs to match the skill training requirements of vast number of out-of-school youth including the disadvantaged groups. There is too much of dependency on government fund, which on the one hand is insufficient and on the other inflexible causing uneven distribution of resources. The main issues under this area are the modalities of TEVT financing and partnership in TEVT development and implementation.

The challenge ahead is to seek a viable options for financing TEVT so that the system government capability of funding and affordability of people to pay for the training. More challenging job related to financing is how to train and develop earning capability of specifically targeted hard core groups who require free skill training, stipend to support opportunity cost along with post-training support.

The private sector, which could be the main beneficiary of a TEVT system, is not yet sufficiently oriented enough to support financing the TEVT system. Local bodies and NGOs, which have their own fund for human resource development, are not adequately connected as yet in TEVT financing. Another, important issue which exists is the oversight of the role of informal sector in skill development and utilization. This sector that could be highly potential in reducing the unemployment at the local level remains neglected in terms of training support and their involvement.

Moreover, public TEVT institutions/providers operating under various ministries and skill development programs supported by international agencies are operating on their own way without being coordinated

through appropriate national agency. This has caused variation in training programs, inefficient use of available resources, and duplication of training efforts. Non-governmental providers offering skill development programs to promote local employment and productivity of the workforce are also disconnected and are operating in isolation. Combined efforts of various organizations both government and non-government to promote local employment and productivity is missing as a result resources are not efficiently utilized and duplication of efforts are visible.

In addition quality improvement is another major concern. Development of human resources competent enough to design, deliver and manage TEVT effectively is another area that the government needs to be serious about. Without well educated and trained managers, professionals and trainers specially prepared for TEVT system and incentives to attract and retain them, the new reform schemes in TEVT and skill development cannot be implemented. Therefore, schemes and resources for the availability and retention of such human resources should be ensured.

Way Forward: Facilitating TEVT connections with the local economy

It is essential to understand the mechanisms for facilitating smooth connections of TEVT with the emerging economy to make its programs relevant to the local needs. Local skill training schemes should be connected with the local employment considerations and need to be integrated into development strategies in general and poverty reduction strategies in particular. Some of the strategies for facilitating the connections between local economy and TEVT is suggested as follows:

Local Need assessment

Periodic local need assessment is necessary to understand the local economy, to identify occupations having employment potential, identify potential enterprises that can be developed locally, skill gaps to promote the local economy and potential services and products that are on demands in the local market. The needs assessment should be based on a clear understanding of the role TEVT is to play in the local economy and educational system, and policy decisions on what are the driving forces for making program decisions. Decisions may be based on meeting student demand, meeting short-term employer needs, or meeting longer-term economic goals.

Using this and other information, decision makers can make informed choices about what training programs should be expanded or changed to meet the expected future demand so that TEVT offered is relevant to the local needs.

TEVT in informal Sector

Due to the sizeable and persistent share of the informal sector employment in many developing countries an important question concerns the role of informal vocational learning (ILO 2012). The informal types of vocational training are considered to improve the chance of being promoted inside informal businesses from unskilled to skilled worker and earn a higher wage. Training is essential to become a master craftsman and set up or take over a business in these fields after some years of activity. So TEVT in collaboration with the local enterprises should promote skill training in the informal sector.

Upgrading vocational training in the informal sector

Providing better training for the informal sector is a core issue for many developing countries (ILO 2012). In countries where traditional or informal apprenticeships are dominant, but mainly confined to traditional crafts, these apprenticeships should be articulated better with the education and training system and the formal sector. They should also be opened up to new technologies and occupational change. This, of course, requires some recognition of informal employment as part of the economic and social reality in many countries.

Establish Relationship between Training and the Labor Market

It is well accepted fact that that most modes of pre-employment training yield good returns when a labor market is expanding and training is closely linked with the available jobs. For every training program a need assessment of the local community should be conducted and training should be designed according to the needs of the labor market. Simple needs analysis techniques that focus appropriate labor market signals enables the training institutions to analyze employment outcomes and available sources of skill development.

Experience from other countries suggest that are successful in linking skills development to gains in productivity, employment and development have targeted three major objectives: (1) matching skills with current demands of skills, (2) helping workers and enterprises adjust to change and (3) building and sustaining competencies for future labor market needs (ILO, 2010).

Focus on Self-employment and Enterprise Development

Considering existing national context, it is difficult to generate new jobs. It is also difficult to motivate young generations and provide them with opportunities for productive work. In a situation where opportunities for gainful employment are so few, self-employment and small enterprise development is a viable option for offering young people productive and satisfying work. In a harsh economic situation such as Nepal is facing, self-employment and employment in small enterprises can be major sources of work for its growing number of young people. Therefore, Trade Schools emphasize enterprise skills and post-training business advisement and support to training completers.

In a context where corporate businesses and industries are not growing, enterprise development can be a powerful means of job creation and promotion of local economy. Enterprise Development Programs are dedicated to unlocking the enormous potential of enterprises to create decent, long-lasting jobs. Decent work can only exist in competitive, productive, and economically viable firms. The role of TEVT would be to bridge the skill gaps because skill gaps can retard the enterprise growth and obstruct the workers' employability. Structural change in the economy and increased competition among enterprises reduce the number of available jobs with low skill requirements. Therefore TEVT should focus on training for developing enterprises so that decent employment can be created at the local levels for unemployed youths, increase income and productivity and strengthen local economy.

Provide career guidance and employment support services

The Vocational guidance and post training support services are very vital activities for TEVT programs since they are committed to provide highest possible employment rates and emphasize work-based learning in the local communities. For both of the activities strong vocational guidance and post-training support service is required. Therefore, TEVT providers with the help of local business community should provide this service through the following functions:

- providing job information, helping people interpret information and make choices
- helping people find out what they want and need and work out various ways of meeting their wants and needs
- helping people's ability to choose opportunities appropriate to their personal, educational and vocational development
- providing learning experiences to help people gain the skills needed to make decisions and transitions
- supporting people in dealing with educational institutions or employment agencies, in a way that encourages them to do it by themselves another time

- Networking and collaborate with potential employers and make arrangement to place graduates for on-the-job training or in the paid employment.
- Arrange for providing enterprise development support services collaborating with the relevant agencies.

Governing and managing TEVT linking with the local economy

Connecting TEVT with the emerging local economy is not possible from governing and managing from the centre. TEVT programs for employment and local economic development can be best governed and managed at the local level. An empowered governing board led by the district government and represented by the key providers, employers and labor market partners should be constituted to effectively run TEVT programs to support local economy and to promote local employment. This committee will coordinate and collaborates all the skill development programs and partners at the district levels stimulate resource generation, promote enterprise development connects the local products and services with the national and international markets hence promoting local economy. A local skill development fund should be created under management of the Board to finance TEVT programs connected to the local economy.

Conclusion

Technical and Vocational Education and Training (TVET) is for the improved productivity for both individual and country since responsive education and training system can have far reaching implications in terms of sustainable growth, competitiveness, job creation and poverty reduction. Moreover, it is even more instrumental for a country like Nepal where overall economic performance is not desirable for past several years due to political and macroeconomic instability, labour disputes, and poor management in industrial sector among others. TVET system could deliver the intended results if and only if it is well connected with the emerging local economic activities which are integrated first with national then global economy.

Some initiatives have already been taken towards connecting TVET with local economy to make it instrumental for poverty reduction and skill development for economic prosperity. A good TVET policy has already been formulated and devised. Numbers of TVET providers are catering TVET programs throughout the country; however this sector is not free from challenges. To overcome these challenges faced by TVET subsectors, it is imperative to understand the mechanism for facilitating smooth connections for TVET with the emerging economy to make its programs relevant to the local needs. Moreover, certain floor conditions are required to achieve the desired results from TVET programs, such as regular needs assessment, linking training with labour market, upgrading vocational training in the informal sector, focusing self-employment and enterprise development, providing employment support services and decentralization of governance and management.

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Migrating Workforce: A Conventional Rhetoric Tag of "Brain Drain" OR Globalized Knowledge of The "Brain Gain"

- Lokendra Prasad Poudyal, Ph.D.¹

Introduction

The migration of youths for the educational and working purposes IN Nepal has increased over the years. In 2009/10, around 28,000 students took permission to go abroad for higher education from the MoE despite the availability of offer of similar course in the country. Likewise, the unemployed or underemployed youths migrating for jobs reached 554,441 in 2012 alone. At least one in every four households (25.42%) has been migrated. The highest proportion of migrants (44.8%) was from the age group of 15 to 24 years. Such migration trend has increasingly influenced gap in the structure of "middle age group" population available in the country.

Among the migrant workers, only 2% went abroad by acquiring skills, while 26% others flew semi-skilled. In the case of remaining 72%, they just migrated being unskilled. This situation has made Nepal, a country known for the export of bulk of unskilled labour earning small amount (as compared to the skilled workers). This is largely a reflection of the push factor of migration as the absorption capacity of the Nepalese economy has remained slow over the past few years.

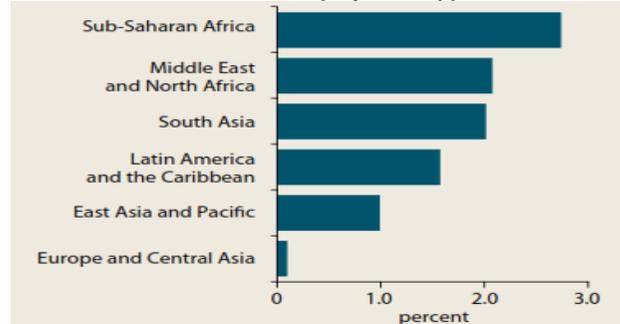
Nepal's labour productivity, as defined by the GDP per worker, has been observed lowest in South Asia. Between 1990 and 2005, its labour productivity has improved by 23% as opposed to the improvement of 60% and 50% recorded for India and Bangladesh, respectively. The factors responsible for such poor growth are: inadequate infrastructure, workers lacking the skills development training, poor institutional capacity to deliver support services, instable economy of the country, market inefficiency and the adoption of less advanced technologies.

Poverty level and economic progress

The share of population living on less than US\$ 1.25 a day fell from 52% in 1981 to 22 percent in 2008 in Asia (WB, 2011a). Such reduction was influenced by the new jobs created in the country's economy. However, the pace of creation of such jobs is declining because of the limited opportunities for progress. Though all countries have attempted to cope with the employment opportunities with the speed of population growth, the level of progress in balancing the two is not so encouraging. Some countries are better in creating new jobs. while the others are not equally successful. Studies reveal that such job creation capacity in South Asia is below 2% in average. It is even closer or lower to the annual population growth rate.

Nepal being a developing country, the coexistence of traditional and modern modes of production is natural. Such dual existence

Chart 1: Annual Increase in Employment Opportunities



Source: World Bank (2013), World Development Report, USA

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creates variation in the nature of work available for the job seekers ranging from subsistence agriculture to the technology-driven services. Such working opportunities mostly belong to the informal sector. They are also often less productive. Almost half of them represent self-employment category (WB, 2013).

Gross Domestic Product (GDP) and employment opportunities

The relationship between the growth of Gross Domestic Product (GDP) and employment opportunities is often positive. Studies reveal that around 1% growth in the Gross Domestic Product (GDP) can reduce around 0.3% unemployment ((WB, 2013). However, this magnitude may or may not be generalized due to global interdependency of the labour market (where employment generation is also influenced by external market forces than domestic alone). But it is true that the creation of new job is not possible without increasing the demand of new skills required for or resulted from economic growth. The growth of future employment opportunities depends on how far the country can achieve economic growth.

According to ILO, the unemployment condition can become more acute in South Asia as the labour force in the region is growing by 2.1% per year against the limited number of new employment openings. The projection reveals that the number of job opportunities against the rate of current economic growth would saturate by 2015 in South Asia. It can hit number of workers very hard in the informal sector ((WB, 2013).

Nepal has introduced policies for increasing employment with diversification of economic opportunities. It adopts labour intensive approach for rural development to provide access of poor to work. Priority has been assigned for developing technical skills of people living in the backward areas. However, the rate of unemployment or underemployment neither suddenly explodes nor totally vanishes. The number of persons entering into the labour market and going abroad for work keeps changing every year. When a new job is more productive than the other, changes can take place in the less productive job due to the influence of market force.

Micro enterprise as a source of employment

The employment share of micro-enterprise is often greater in the developing countries. Most of these employment opportunities offer subsistence level support. For an enterprise to grow better, the investment climate should be developed for commercialization of the production process. Such process contributes to open room for transfer of the entrepreneurial skills (Banerjee et al, 2011).

Skilling an entrepreneur alone will not be enough unless the enterprise it surrounded by the facilities of access to basic infrastructure, financial resources and managerial competence. It requires the enterprise to become innovative, transformative and replicative (Baumol, 2010).

Private sector as the job creators

Experience elsewhere indicates that the private sectors are increasingly contributing to the job creation process. Around nine out of ten jobs are created by the private sector.¹For example, in China, the number of private sector employment opportunities for the workers was 2.3 million in 1981, while the state-owned enterprises had employed 80 million workers. Within the next two decades, the employment opportunities created by its private sector accounted for 74.7 million workers surpassing the state-owned enterprise created jobs of 74.6 million workers (Kanamori et al, 2004).

The creation and retention of jobs largely depends on the macroeconomic stability, enabling business environment, human capital of the workforce, resource endowment and management capacity of related institutions. The country should promote its sectors of development with support of these elements.

¹For example, almost 90% of the jobs created in Brazil, 95% in the Philippines and Turkey between were attributed to the private sector between 1995 and 2005.

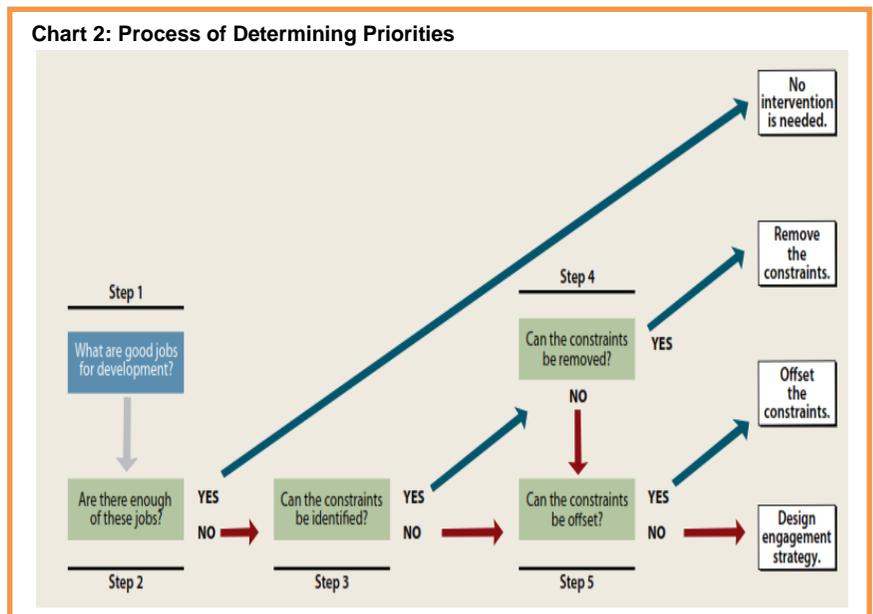
Skills desirable for economic growth and employment

The accumulation of human capital (i.e. making people productive with acquisition of skills) is important for the economic growth process. It also involves adoption of improved technology, which is dependent on the combination of efficient utilization of capital as well as skills. These elements together help the enterprise in surviving market competition and efficient utilization of capital per unit of labour. The economic growth process can remain stable only when the proportion of working people relative to the total population is significant. In view of these, the relation between the skills acquired by the workforce and economic growth should be made symbiotic. Without the workers acquiring the quality skills, they cannot contribute to the production process and without ensuring the productivity of the enterprise they cannot offer gainful employment opportunity to the workers. Therefore, it should be realized that the benefit in job stems only from the skills that can be utilized by the enterprises productively.

Over the years, globalization has gradually made the production system more competitive. To survive such competition, the enterprises need adoption of improved technologies. When the adoption of new technologies takes place, it demands structural transformation in the nature of skills provided by the workforce. It adds challenge in updating and upgrading their skills. Such need has increased over the years, as the enterprises have started moving from their traditional production process to a knowledge-intensive modern manufacturing system. As this kind of move creates new tasks based on the application of improved technologies, it is bound to reduce the importance of middle-skilled jobs in the labour market.

The adoption of advanced technologies in the enterprise also creates new scope for splintering the value chains in the production tasks at different locations. It helps the industries to take advantage of skilled workers available elsewhere. The industries can outsource some components of the production tasks from one location to another. This has become a common trend in the developed countries. They transfer the components of their production tasks to the developing countries. In 1990, the proportion of utilization of the developing country workers by the developed countries was around 11% in the manufacturing and service sectors. However, it increased to 21% in 2008 (WB, 2011b). Such change cannot take place without developing required skills by the service providing countries.

It is also that the skills required by the present day industries are multi-dimensional. Therefore, the workforce also needs to match their skill quality with a combination of technical, cognitive and business competence. In order to match these requirements, with the requirement of the industries, developing skills suitable to the production target is necessary. If there is any inadequacy or mismatch of skills against the task to be accomplished, the productivity of the enterprise cannot remain cost effective for the competitive markets. Despite such situation need, many industries still fail to maintain such requirement. For example, nearly 40% industries surveyed in the Middle East and North Africa revealed that limited and



policies are incomplete. Since the country cannot rely on the mercy of 'accidental' process, it has to adopt planned efforts for 'natural' growth. To make this happen, it should capture the trend of prevailing market behavior. It should explore whether the skills prepared is relevant to the production process of the enterprise, as the skills suitable to the need of a domestic enterprise may or may not be necessarily suitable for the enterprise abroad (Jansen et.al.,2011). To maintain compliance, efforts should be made to link the patterns of growth (indicated by the local market situation) with tailor made skills development process.

The pattern of growth also depends on competitive atmosphere the enterprises encounter in the market. It involves reallocation of resources from inefficient to the productive activities (WB, 2011c). It also requires regulatory reforms at times. Mexico benefited from such in the investments made for the industries (Bruhn, 2008), as they contributed to avoid uncertainties and delays in obtaining permits or licenses. If the reforms attempted are inappropriate, the regulations can raise the cost of doing business. Therefore, the reforms attempted should be based on ground realities.

"Flying Geese" Syndrome and the "Brain Drain" Tag Applied to the Workforce

The migrant workers represent around 2.5% to 3% of the global workforce. They contribute to new investments, innovations and expertise back home upon their return. The net effect of their migration is reflected on the long lasting skills acquired by them besides the occasional remittances sent to their family members (Gupta et. al., 2009). The remittance contributes to reduce the share of people living below the poverty line. However, the benefit of the utilization of their newly acquired skills upon their return has been unaccounted. It is partly because the countries have not looked enough at migration as an opportunity for "brain gain". They have been living with stereotype thinking of "brain drain" rhetoric. The level of "brain drain" can be tagged only when there is a loss of working population despite the employment opportunities available in the country itself. However, the current employment opportunities in Nepal do not reflect the country's ability to generate adequately employable jobs.

The economic growth of Nepal has remained almost stagnant over the past few years. The country is receiving remittance of around 22% of the GDP from the migrated workers. Most of these workers return with new competencies creating potential for the country to utilize their skills for productive purpose. It can be considered a "brain gain" phenomenon for the country than "brain drain". One should not forget that the underutilization of skills held by a person hinders productivity (Ozden, et. al 2006). Such situation might be a case of "brain waste". Therefore, a country should seek to benefit from application of "brain gain" of the returnees in the suitable enterprises than simply continuing with the "brain waste" without creating scope for utilization of their learning (Devreyer, et. al. 2010).

The "flying geese" syndrome among the workforce is increasingly over the years. In Asia, the employment of such workers in the manufacturing sector has increased by 30% between 1990 and 2008. Such increase is attributed to the comparative advantage of global value chains. Japan and Korea are good examples among the countries taking benefit of such migrants. In the process of their respective economic transformation, they have benefited the workers by offering employment opportunities, while the enterprises have gained profit from the global value chains (Lin, 2011).

Prospect of Utilizing "Brain Gain"

Two factors represent the need for employment creation in the country: (a) non-availability of job for the labour market workforce in the domestic market, and (b) utilization of imported skills of the returnees who worked abroad. Some skills acquired by the workforce contribute more than the others in improving productivity. It depends on the type of skills acquired by the candidate. To strengthen such capacity, the country needs to improve delivery capacity of the service providing organizations too.

As Mr. Amartya Sen, a Nobel laureate and Professor of Economics and Philosophy at the Harvard University wrote "*the underperformance of a country can be traced to a failure to learn from other economies which*

achieved rapid growth by enhancing human capacity as its goal". It contributes to enhance labour productivity through contemporary knowledge management. The countries like Japan, Singapore and Malaysia are example of such success. They attempted collaboration with market phenomenon (Sen, et. al, undated).

For a country's economic growth process to become successful, it needs to generate better returns to investment in the human lives. For this, the country should create advantage of "brain gain" from the returnees. As Nepal is not creating so many domestic jobs yet, it cannot stop job seeking migrants just as a cause of "brain drain". Unless the country can retain them with working opportunities, the country has no other choice except to allow such "brain drain". The challenge for the country therefore is not to stop "brain drain" but to enhance investment from remittance and also to make use of "brain gain" emerged from the returnees.

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Rhetoric of Developing Technical and Vocational Education and Training (TVET) in Nepal: Analysis of the Financing of the Sub-Sector

- Prof Mahesh Nath Parajuli, Ph.D.¹

If we look at the first development plan (1956-61) of the country, we can find ample emphasis on TVET (Government of Nepal, 1956). The plan document wrote, "Strong emphasis will be given to the training of technical and other personnel in accordance with estimated requirements for each year of the Five Year Plan" (p. 30). The plan envisaged rapid expansion of junior level of technical training centers in many subject areas within the country itself because the plan saw the lack of technical human resource in the country as one of the main drawbacks for national development (p. 41). Accordingly, the plan allocated the budget required for conducting training activities in the country within the plan period. It further postulates:

... an average of at least 5 per cent of each departmental budget over the five-year period will be spent for training, and that the percentage during the first two years will be much higher. Thus total expenditures for training will not be less than Rs. 1.66 carods (16.6 million) and the outlay required during the first year may be in the vicinity of Rs. 80 lakhs (8 millions). (p. 41)

The plan envisaged the training needs of 9083 lower grade (diploma) and 1293 upper grade (degree) technicians categorized by different sectors and sub-sectors within the plan period. Most of the lower grade technicians were to be trained within the country.

Nearly six decades have passed since the first development plan and since then the government has been giving high priority to TVET realizing that it is one of the essential prerequisites for development. However, despite government's consistent policy priority as stated in policy documents, this paper aims to show that during the past 60 years, the government did not give necessary support to this TVET sub-sector. The government neither spent necessary financial resources to develop this sub-sector nor worked toward instituting and strengthening an efficient TVET system in the country. With this argument, it can be claimed that all policy and programmatic claims made by the government were more a rhetoric and less a committed effort. The paper begins with a brief description of the TVET context in Nepal which includes a discussion of different TVET actors as well as the available TVET services in Nepal. The paper then moves to discuss its main focus - analyzing financing TVET in Nepal and its shortcomings and challenges. The paper ends by drawing conclusions and some implications.

The TVET Context

Nepal is a country of high socio-economic diversity. As per the census reports of 2011 there are 26.5 million people of 126 different caste/ethnic groups speaking 123 different languages (Central Bureau of Statistics [CBS], 2012). The country has been failing to utilize this diversity as a resource in national development. Instead, such diversity has been resulted in differential access to services and opportunities further resulting in disparities and inequality in terms of area, caste/ethnicity, and gender. Income disparity has been reported to be quite high in this country of low annual per capita income of US\$ 642 and with stagnated economic growth that has been ranging between 3 and 5 per cent in recent years (Ministry of Finance [MOF], 2012). Latest Nepal Living Standards Survey (2010/11) has reported a Gini Coefficient, an indicator of income inequality that ranges between 0.0 for a situation of equality and 1.0 for a situation of inequality at extremes, of 0.33 for national level (CBS, 2011).

According to Nepal Labor Force Survey of 2008, about 80 per cent of the total population is economically active and of this population, nearly 98 per cent is employed (CBS, 2009). Despite such high employment

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rate, the underutilized labor population rate was also found as high as 30 per cent. The same survey also reported that of the total population aged 5-24 years about one-third is engaged in economic activity. Another worrying reality is that about 3 million Nepali youths have gone outside the country (MOF, 2011) and most of them are unskilled laborers showing both the situation of lack of gainful employment in the country as well as lack of access to skills. That is, Nepal has become an exporter of unskilled laborers and many of them are earning very little because they lack appropriate skills. In recent years, foreign remittance earning has become an important source of income both in national economy and in family economy. This is of course a positive aspect but probably we have yet to weigh such earning in consideration of the work environment many of foreign migrant workers are involved in and the social and economic cost these foreign migrant workers, their families, society and the nation are bearing. Nepali newspapers these days are full of stories of hardship and grief both in foreign land and in homeland indicating that the country has already been paying a high social and economic value of such foreign work migration. As already noted, these are all the outcomes of differential access to skills and opportunities.

Education in Nepal is highly characterized by an overt focus on general stream of education and almost insignificant priority to TVET. This is illustrated by the fact that among total students in secondary and higher secondary levels (grades 9-12), only about two per cent are in TVET and this sub-sector (considering allocations made to all TVET activities under different ministries, offices, boards, etc.) shares about two per cent in total national budget (about 15 per cent of total national education budget). Such insignificant focus on TVET is surprising in the sense that a study of government policy documents shows high government priority to this sub-sector (see, Sharma, 2010).

Next, the paper discusses the TVET service providers and available services in the country. The purpose is to provide a glimpse of progress achieved and shortcomings faced in the sub-sector.

VET Service Providers and Available Services

Obviously, the government is one of the main TVET service providers in the country. The history of the government investment in TVET goes back to pre-1951 dates. The governments then had established some training centers mainly to fulfill the needs of trained people of some manufacturing industries in the country eyeing the growing Indian markets. However, such training centers could not contribute to the development of TVET in the country because of their very small coverage, poor quality, and mainly because those centers were established considering only the immediate needs. The government emphasis on and investment in TVET continued and expanded in post 1951 dates as well. The scheme of the multipurpose schools of 1960s was the first major government investment in TVET under which vocational education was integrated in a few selected general secondary schools. However, such scheme could not be expanded and sustained because the program, courses, skills, management, all were brought from the US and there was little compatibility with the local context.

With the initiation of the National Education System Plan (NESP) in 1971, the government vocationalized the school education in the country (Ministry of Education [MOE], 1971). The NESP which brought the whole education in the country under one central control and management was a massive intervention with far-reaching influences in the education system. It had the slogan of Education for Development and technical and vocational education was considered crucial for the development of the country. Accordingly, all students in the secondary schools in the country were required to study at least one vocational subject. Likewise, some institutes of technical education (e.g., in forestry, engineering, medicines, applied science and technology, veterinary science) were also established to promote higher education in technical fields and were put under the university system. The NESP was wholly financed by the government itself and there was no direct donor support in the implementation of the program. Immediately after some years, the NESP was proved to be ineffective mainly because of management inefficiency. The vocationalization of secondary

education could also not be continued because the program was not well planned and organized, there was lack of human and financial resources and the program had little employability.

With the failure of the NESP, the government adopted the policy of establishing independent technical schools (not integrated with general schools) during 1980s (National Planning Commission [NPC], 1982). The Council for Technical Education and Vocational Training (CTEVT) was established in 1988 as an autonomous and apex TVET body with the responsibility of formulating, coordinating, and expanding TVET related opportunities in the country. At present, CTEVT is offering mainly two levels of TVET services – academic and non-academic. There are two levels of academic courses Diploma (Certificate) in Technical Education and Technical School Leaving Certificate (TSLC). These could also be described as Technical Secondary Education (grades 9-12). Non-academic courses mainly include short term Vocational and Livelihood trainings.

Despite policy priorities, as documented in the Glimpse of TEVT in Nepal (CTEVT, 2012)¹ there are only 21 constituent technical schools and vocational training centers under the CTEVT management offering short term skills training and long term degree oriented courses serving only less than 5,000 students per year. Besides, CTEVT is also running TSLC programs in 73 community secondary high schools. If we include the growth of profit-monger private sector that are often blamed for ignoring the quality aspect, there are less than 400 technical degree offering (TSLC/diploma) centers/institutes in the country serving only about 20,000 students per year. In this, we can add about 400 training centers and programs run by several I/NGOs offering short term vocational and livelihood trainings to approximate one lakh students per year. This is the story of the development achieved in about 60 years in a country where adult illiteracy is 43 per cent (CBS, 2011), where about half of the population aged 15 and over have never attended the school (CBS, 2009), where there is about 40-50 per cent failure rate on an average (more than 280,000 in 2012) in the SLC examinations conducted at the end of grade 10, and where an estimated 400 thousand youths annually enter the labor market. These are the realities against the *priority* to the subsector that we can find in policy documents illustrating the wide gap between the *priority* and actual accomplishments. Considering the so-called focus and inputs the sub-sector received during the past 60 years, such slow growth tells the reality that these commitments are actually not made in reality. It is also a reality that the sub-sector received massive donor inputs, financially and technically, during this period aiming the expansion and consolidation of TVET services in the country.

Being the major TVET service providers, the CTEVT and its parent institute – the Ministry of Education – could be blamed for such slow growth but we have to realize the country context and that there are other actors as well. In Nepal, TVET activities are carried out not only under the Ministry of Education and the CTEVT. From the very beginning, even before 1950s, many other government agencies are also involved in establishing and running TVET services. Different sectoral ministries, offices and boards/funds are running different degree and non-degree programs of varied nature and duration in order to supply the required human resources in their sectors. Some of these agencies also work with the objective of providing work related training to people so that their employability could be enhanced or with the broader objectives of local and national development, reducing poverty and improving the quality life of the people. However, many of these programs are run in an uncoordinated manner and there is even the absence of a complete mapping of who is doing what. In such a situation, aspects like quality and standardization and supervision and monitoring are obvious critical problems. From the perspective of financing, the situation is such that it is very difficult to arrive at how much total public fund is being spent in TVET.

In the course of TVET development in Nepal, the decades of 1980s are important in the sense that active involvement of donors began during this period. Though the first donor support in TVET came in 1960s with

¹ Data on TVET schools/centers and students as given in this paper are obtained mainly from this source.

the US contribution to establish multipurpose schools in different parts of the country (see, Martin, 1969), wider donor participation began in 1980s. Such early donor support was focused mainly on establishing and strengthening technical schools in different parts of the country as well as on capacity strengthening of the CTEVT. United States, United Mission to Nepal (UMN), Switzerland, Germany, Denmark, Asian Development Bank (ADB), etc. are among the first donors in TVET in Nepal. Finland and the World Bank are the new entrants in TVET donors group. Donors support has been instrumental in expanding and strengthening TVET services in Nepal. At the same time, donors have greatly influenced in determining the TVET pathways in this country.

The first private sector involvement in TVET in Nepal came from non-profit NGOs. With the help of these NGOs, three technical schools were established in Kathmandu in 1980s and were accredited by the CTEVT. These schools were established with the government policy of seeking financing from non-government sector in expanding the TVET services in the country. With such policy, profit making private sector was also allowed to establish and run TVET centers and many such centers were established during 1990s and 2000s offering degree courses (TSLC/Diploma) and non-degree vocational and livelihood training programs. As per the recent data, as high as 85 per cent of total Diploma students and 80 per cent of total TSLC students are in private centers illustrating the fact that public investment to this sub-sector has been insignificant and whatever expansion in TVET services has been made possible in this country, public sector investment has very little role.

There also are non-profit I/NGOs providing financial and technical support to other private (for profit) training providers. These non-profit NGOs get their financial support mainly from donor countries. This means donor funding in TVET in Nepal is channeled not only through government sector but also through NGOs and private sector. As there is no mechanism to coordinate all these funding and activities, it has become difficult to arrive at the total size of donor funding in TVET in Nepal. Apart from these TVET focused non-profit I/NGOs, there also are several other I/NGOs which, are though not focused on TVET, run several non-degree technical and vocational training programs of varied nature and duration. The problem is the same with these I/NGO run programs – no integration with the national TVET system, no coordination, no standardization and no supervision and quality monitoring.

One other group of TVET providers that is yet to be realized and integrated in the national TVET system is the informal mode of learning. People have been participating in TVET activities in an informal manner in a number of informal workshops and centers across the country and it is very difficult to say how many are getting skills training in such a way. Many people are getting skills training in an informal manner in organized industries and workshops and this has remained unaccounted. People are also getting vocational training in a traditional manner while working with their elders in their traditional occupations and there is no any system in the country to track such traditional occupational based learning. Though there is no any basis to make any estimation of the contribution of such informal skills learning, the importance of such mode is very high for countries like Nepal which has been spending far less than required in TVET.

It is obvious that financing TVET is the outcome of the available TVET context in the country. As the above discussion has shown, the available TVET context has not been very much promising and this is greatly reflected in actual practice. The paper now moves to discuss this reality.

Financing TVET in Nepal

As technical education is work or production related education, it demands lots of preparation and infrastructure and this makes it a costly project (Kingombe, 2012). It has been estimated that costs for TVET is two to three times higher compared to general education (Bolina, 1996). This is because given the complex nature of the society and human living, demands for skills and competencies required for a better living are quite high, variable and often complex. Growing technological advancement has made the production function more diversified and complex requiring innumerable skills for a better societal functioning

as well as for national production. Demand for quality and relevance in a rapidly changing technological and societal context further contribute to making the TVET a costly project.

While TVET itself has been a costly project, growing budgetary constraints and competition among sectors and sub-sectors for more share of public budget have tightened government contributions to TVET. This reality has given rise to the concern of who should pay for TVET and that the TVET funding should be a shared responsibility of all its beneficiaries. There is also the question on appropriateness of spending public money on TVET as most of the benefit goes to private enterprises through their increased productivity and profitability as well as higher wages and employability for individuals (Warzburg, 1998). This raises the concern that both the employer and employee should be ready to pay for TVET services they receive.

Analysis of literature shows that apart from the national government and donors, several countries have been practicing several alternative strategies for TVET financing (Bolina, 1996; Durango, 2002; Franz, 2005, 2007; Dubois & Balgobin, 2010). These include mainly commercialization of training (making training centre as the production center), raising student fee, and involving private sector. Private sector investment in TVET might come in the form of establishing training centre, sending staff members to training (with financial support), paying training levies or taxes (paying a fixed amount of money as most of the benefit goes to private sector), and coming into the partnership with public, I/NGOs and local bodies. Local bodies and I/NGOs have also been important sources of TVET funding.

In Nepal, TVET financing could be seen coming mainly from informal and formal sources. Informal sources include contributions from individual, households, unorganized firms/NGOs as well as community sources. These are included in the informal system because it is difficult to calculate the amount spent from these sources because there is no such system to record such spending and thus these remain outside the national account system. Formal sources of funding include the support from the government (including donor support) and other organized institutions including local bodies, semi-autonomous agencies, I/NGOs, and private agencies expecting that these could be known and thus could contribute to the national account. However, such system is yet to be developed in Nepal and thus large amount of investment in TVET, even through formal channels, has remained unaccounted.

In the absence of information on TVET related investment of local bodies (VDCs, Municipalities and DDCs), very little can be said on nature, size and sources of such investment. However, as we know most of these bodies wholly rely on central government grants, it can be said that their financial contribution to TVET actually comes from the central government and that such contribution is very small which might have gone to conducting TVET related activities, providing some scholarships, and developing some TVET infrastructures. Some semi-autonomous agencies such as CTEVT, Nepal Tourism and Hotel Management (NATHM), Cottage and Small Industries Development Board (CSIDB), etc. are funding their own resources in TVET related programs. Such institutions, though mainly rely on central government funding to run their activities, also generate resources through student fees, selling their products and services, mobilizing their own assets, etc. and spend such income on TVET activities.

In Nepal, the national government, often supported by international donors, has been the key source for funding TVET. Among government agencies, the Ministry of Education has been the main TVET agency allocating public funds to this sub-sector. All its funding to TVET is channeled through the CTEVT. Different other ministries are also allocating funds and carrying out the TVET activities on their own. In Nepal, all public funds allocated for spending in a given year is reflected in the Red Book, a book published by the Ministry of Finance giving details of allocations for the given year and expenditures in the previous year. In the Red Book, allocations are reflected under different ministries and are categorized under different sub-sectors under that ministry. Accordingly, the government funds for TVET are reflected in the Red Book under the Ministry of Education and under different other ministries that implement TVET related activities.

In order to get the idea of government allocations to TVET, all government allocations to TVET made under different ministries, offices and boards were obtained for five years (2007/08 – 2011/12) from the Red Book. In some cases, budget headings of certain programs were clear to identify that program as TVET activity but that was not so in some other cases. At times, it was difficult to identify a program as a TVET related program. In such a case, White Books (listing of annual programs and their description) published by the national Planning Commission were consulted. Mainly the programs having components of income generation, training and orientation on livelihood were identified as TVET programs. Some staff members in some ministries were also consulted with the consideration that no TVET program should be left out and no non-TVET program should be included while identifying TVET programs and calculating allocations to TVET. In the year 2011/12, a total of 459 programs or budget headings were identified in the Red Book and out of that 34 headings were identified as the TVET headings.

Table 1: Allocation of Public Resources to TVET by Years

(in million)

	2064/65 2007/08	2065/66 2008/09	2066/67 2009/10	2067/68 2010/11	2068/69 2011/12
Gross Domestic Product (GDP)	815,700	988,300	1,193,700	1,369,400	1,558,000
National budget	168,996	209,416	256,480	306,496	384,900
Education budget	28,390	39,086	46,617	57,828	63,919
TVET budget	3,841	5,920	6,477	7,345	9,618
% of TVET budget in GDP	0.471	0.599	0.543	0.536	0.617
% of TVET budget in national budget	2.27	2.83	2.53	2.40	2.50
% of TVET budget in education budget	13.53	15.15	13.89	12.70	15.05

Sources: Economic Surveys and Red Books by Ministry of Finance (MOF, 2004/05, 2005/06, 2006/07, 2007/08, 2008/09, 2009/10, & 2010/11) and White Books (Book of Annual Programs) by National Planning Commission (NPC, 2004/05, 2005/06, 2006/07, 2007/08, 2008/09, 2009/10, & 2010/11).

The review of the Red Book has revealed that TVET in Nepal has seen more than two-fold increase in public budget allocation in the last five years accounting for an annual increase of about 30 per cent (Table 1). This growth obviously needs to be recognized and appraised but the data has also revealed that the sub-sector has received less than 3 per cent of national public budget across the years in the last five years. More critically, there was almost no increase in the TVET share in the national public budget during those years. This reality clearly illustrates that TVET is not yet a priority sector in terms of public budget allocation. However, a slight increase could be observed in TVET fund allocation

In terms of GDP. Though this could be a satisfactory aspect, share of TVET budget in GDP was a mere 0.617 per cent and 15 per cent in education budget in the year 2011/12¹. Nevertheless, it has been noted that the present allocation to TVET is not enough if the government intends to develop TVET as a strong sub-sector in the national educational and economic scenario (World Bank, 2011).

¹ There is one misunderstanding about the TVET budget allocation because of miscalculation of TVET budget. Seeing only the budget under the Ministry of Education as total TVET budget misses out the large volume of budget allocated under other ministries and offices.

The Red Book also gives information on donor funding in government programs. As such, the donor funding to the TVET could also be obtained from the Red Book. However, donor contribution to TVET as depicted in the Red Book is only partial because donors have also been channeling their funds to TVET through I/NGOs which do not come to the government account system. Moreover, the terms and amount of aid delivered remain only the matter between donors and receiving I/NGOs and are often not transparent making it rather difficult to arrive at the total donor funding in TVET.

One other weakness of foreign aid in Nepal is that at times some amounts of aids are kept under the technical assistance. Though such aids are reflected in the government source book, they still remain outside the government reporting system and the accountability also resides towards individual donor rather than the government system. Such funds are also there in TVET and are thus outside the government reporting system further complicating the TVET funding and making it difficult to account for the total fund available to TVET. This sort of situation also contradicts with the principle of aid harmonization as included in the Paris Declaration on Aid Effectiveness made in 2005.

Table 2: Share of Foreign Aid in TVET Programs

	2064/65	2065/66	2066/67	2067/68	2068/69
	2007/08	2008/09	2009/10	2010/11	2011/12
% of foreign aid in TVET budget	65.74	64.66	58.15	51.61	59.72
% of government budget in TVET budget	34.26	35.34	41.85	48.39	40.28
Composition of foreign aid in TVET budget					
% of grants	81.05	82.69	80.01	80.68	60.57
% of loan	18.95	17.31	19.99	19.32	39.43

Source: The Red Book and the Economic Survey of the respective years.

The figures in Table 2 provide the part of the information on donor contribution for TVET as given in the Red Book. Part of because the Red Book provides information only on the support the government receives. The data show that the donor contribution to TVET has been fluctuating over the years, ranging between nearly two-third to nearly half over the last five years. The rise of donor share in 2011/12 is the result of beginning of new projects in TVET (e.g., EVENT). Nevertheless, it is clear that TVET in Nepal is largely a donor funded activity. If we could add the donor support that goes to non-government sector, the proportion of donor contribution to TVET would go further higher. The composition of donor contribution changed drastically in the year 2011/12. While in the previous years, this used to be as high as over 80 per cent, it was only about 60 per cent in 2011/12 – a steep decline. This indicates the beginning of the new trend in the composition of donor support in the years to come – more loans and fewer grants.

As noted above, private financing has also been an important source of funding in TVET which comes mainly in two forms – payment made by individuals/households to participate in the TVET activities and the investment made by private training providers to offer training services. Privately managed training providers are profit-seeking institutes and are run mainly in their own investment. However, in Nepal some providers might also be receiving financial support from different sources that might range from individual sponsors to the donors like I/NGOs, other organized agencies (e.g., industries and business houses and social organizations). Even the public fund might be available to these private training providers. Human resource agencies who work as foreign employment agencies for skilled and unskilled labor force might also be funding the private training providers by paying the training costs of individual participants. All these types of support may cover full or partial supports to individual TVET participants, full or partial supports to run TVET programs, development of infrastructure and facilities, etc. The main purpose of such supports to private

training providers is to support individuals fully or partially and might cover short-term or long term-degree oriented trainings. Such support might directly go to training providers or some scholarship support might also go to individual participants. Again, there is no system of calculating such expenses and thus there is no knowledge on the total contribution made by the private sector in TVET spending.

TVET Financing in Nepal – Rhetoric or Commitment

The discussion thus shows that in terms of TVET centers and TVET participants, public investment has been quite small. Contribution of public sector in terms of number of centers and participants has remained less than one-fourth in total size and it is a pity that the number of TVET participants in this country is tiny – 125 thousand against the giant requirement. This availability of TVET seat is temporary in nature because this includes programs run by projects that are donor funded and loan based. When the project ends, availability of TVET seat plummets. This also shows project dominated characteristics of Nepali TVET. Moreover, this has made investment in TVET inconsistent and fluctuating and raises the critical concern of sustainability of TVET financing. There is also the argument that as the service sector does not pay back the loan in a direct sense, loan money should not dominate the sector.

It is obviously a reality that TVET in Nepal has been progressing amidst lots of challenges and constraints and data have shown that the government investment to this sub-sector has substantially increased in recent years. Despite such increase in investment, the output has been quite unsatisfactory and this helps to arrive at two conclusions – one, the present level of investment has been quite small and two, whatever investment has been made so far has remained inefficient. Thus, it can be argued that despite persistent policy commitments, the government has actually not given priority to the sub-sector in terms of resource allocation and development of an efficient TVET system itself. Inefficiency of TVET system is amply illustrated by the fact that the system has seriously been suffering from the lack of information, particularly, the financial information that is so essential for planning and decision making purpose. There is even lack of some basic information on students, their participation and learning, training centers, instructors, etc. A situation of not having any financial or other projections is a situation of planning hazard where there is a very high chance that the implemented programs fail to achieve the intended objectives. More critically, there are no programs to develop such a system making it clear that the problem will continue for years to come.

One of the explanations of such poor show is that as the major TVET players are from the general education stream, it is often claimed that they actually do not have proper understanding of the problems of TVET and are not much committed to the development of this sector. Actually, lack of commitment at all levels of TVET functioning is one critical problem in TVET in Nepal. A second and related explanation is that TVET in this country has always remained a second class education and no efforts are ever made to make the TVET a preferred learning target. That is, the sector has not been receiving meaningful priority both from the government and from the public.

Despite the establishment of CTEVT as an apex TVET body, absence of a well coordinated and integrated national TVET system is still a critical problem which has resulted in the fragmentation of the TVET services (World Bank, 2011). Moreover, the absence of an integrated national system has seriously hampered aspects like quality, relevance, efficiency, and access and participation as well as bringing the whole system under the umbrella of one qualification framework. One other weakness resulted due to the lack of an integrated system is that what we know about the present state of TVET is not a complete scene. The budget figures in the sub-sector that are generally referred to do not represent the total picture. As there are large numbers of unaccounted TVET activities in the country, it can be claimed that the system is actually contributing much more than what it appears. The intention here is not to suggest bringing everything under one management, but to argue that an integrated TVET system is necessary for assuring the quality, for ensuring an equitable access to and participation in TEVT activities, and for seeing that the available resources are used efficiently and ethically. A TVET vision, a TVET perspective plan, and a framework under

such vision and plan as well as a commitment from all stakeholders are essential for a vibrant TVET in the country. While talking about the TVET vision and perspective plan, one specific requirement is to consider the need for TVET human resource development. Many of the problems of TVET are closely related with the lack of TVET related human resources in the country. Nepali TVET system lacks TVET leaders and managers, TVET planners, TVET researchers, TVET analyst, TVET monitors and evaluators, TVET curriculum and textbook developers, TVET instructors, and so on.

All these problems are illustrated in weak systemic capacity of Nepali TVET and this is true in case of the government, non-government and private sector TVET services. Many other problems are intricately linked with this main problem or to put it the other way round, this problem is the outcome of lack of a visionary perspective and commitment toward such perspective. Problems like limited absorption capacity, problems of quality, efficiency and relevance, weak supervision and monitoring, weak regulative mechanism, etc. are all closely linked to the weak systemic capacity. This shows that TVET in Nepal has largely remained a supply driven activity, or more a project driven one.

Linkage of TVET with other processes has also been weak, mainly in relation to labor market, entrepreneurship and livelihood. This has largely made the TVET a stand-alone activity with less contribution to employability or livelihood. There are of course TVET policies and strategies that give due attention to these aspects, the problem, however, is that policy provisions are often not implemented and even if they are implemented their effectiveness remains doubtful as initially expected. This is because, as already discussed above, there is lack of commitment at all levels of TVET functioning. Fragmentation or lack of integration of TVET services is also responsible for the problem of limited linkage of the TVET services with labor market and entrepreneurship.

TVET in Nepal has also suffered by the weak purchasing capacity of the people. Because of poor economic situations, many of the potential TVET participants have remained unable to participate in TVET. This has resulted in limited demand and thus the slowed growth of the sector. Excepting few incentives and free-ships, public sector TVET in Nepal has adopted the practice of charging fees reducing the accessibility of TVET services for many poor and deprived people. As noted above, TVET in Nepal is not yet a priority stream of education for many families. Their first priority is to send their children into the general stream because of the perceived high status of general education and the benefits it could bring in the future life. This brings in one more concern – the need for considering the position of TVET within the broader educational, social and national development process.

Conclusion

In the past sixty years or so, TVET in this country has greatly suffered from negligence and the sub-sector could never achieve its height. All its potentials and stated policy priority remained insignificant in making the sub-sector a vibrant one. The progress is of course there but the time taken to achieve the present status is in no way justifiable. What could be the explanations for such failure? The government as well as donors could easily be blamed for such a situation. The politicians who were involved in or who influenced the decision making process in one or the other way and the bureaucrats who were supposed to provide a strong management and leadership to the sub-sector could also be blamed. Likewise, poor economic situations, political turmoil in the country, low educational progress, socio-cultural obstacles, etc. could also be blamed and this list could go further. Blaming someone is not the purpose of this paper and this is not the answer we are seeking for. It is however important to understand the reasons behind failure or little progress. For this we need discussion, debate and discourse supported by research, analysis and interpretation.

However, the implication that could be drawn on the basis of the discussion made above is that it is necessary to develop a national priority for TVET. The sub-sector needs to be understood in terms of its position in- and relation to broader political, socio-economic, and educational contexts so that a radical reorganization of the sub-sector could be made possible facilitating it to function with a synergetic

collaboration and outcome effect. Growing technological advancement, fluctuating resource availability, increasing competitive environment, widening opportunities, etc. are very important factors that would largely influence the TVET environment in any country and Nepal is no exception. Naturally, there are challenges which will remain in the future, may be in a more powerful manner. We should prepare ourselves to be able to face and maximize the opportunities available due to rapidly changing contexts and environment. A young group of committed TVET leaders and managers who could be politicians, bureaucrats, experts, general people, etc. need to be brought into the center stage of TVET who could push the government as well as other organizations and motivate the people to change their perspective towards TVET and actively participate in it.

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Employability Skills for the graduates of Technical Training Providers in Nepal

- Rajendra Karki¹

Abstract

New skills are demanded to adapt the rapid changes in technology and workplace environment. The appropriate balance of technical, employable and academic skills for workplace education are challenging in education and training system to mitigate the globalization effects. In Nepal, the government has formulated national policies by emphasizing more to create employment and self employment; however, Nepalese employers have generally suggested that vocational training should be provided by improving courses images and enhancing the quality of training for employability. The Three Year Plan aims to facilitate the coordination and cooperation with the Ministry of Education and Council for Technical Education and Vocational Training (CTEVT) to improve the quality and employability of trainings with much longer duration including technical SLC trainees.

Introduction

Skills development and training is recognized as center for economic development. The rapid changes in technology and workplace environment are being challenges to the workers for participating productively in a global economy (Almeida, R; Behrman, J; Robalino, D; 2012). The expansion of information and communication technologies, as well as the emergence of new technologies and the effects of globalization, has altered production process, which now demands new forms of skills to improve productivity in the workplace and to capitalize on technological innovations. One such challenge is to determine the appropriate balance of technical, employability, and academic skills for workplace education.

Furthermore, the effects of globalization present the education and training system, particularly the vocational education and training (VET) system, with challenges in providing relevant skills to workers to enable them to be flexible and adaptable in the workplace. Ashton and Green (1996:69) assert that modern technologies demand higher skills levels from education and training. The above view is supported by Brown (2001) who argues that "prosperity and social justice depend on the creation of a highly skilled work force". These statements imply that the prosperity of any nation depends on the contributions of the education and training sector towards the economic competitiveness of a country.

The education and training sector are therefore faced with the challenge of responding to the ever-changing skills demands of the economy since many graduates leave the education sector without the required skills to succeed in the workplace (Zinser, 2003). In addressing the skills mismatch, Richardson (2009) highlights the important role the vocational education and training system should play in matching the skills needed by employers against the skills offered by workers. Sharma (2003) noted that TEVT in general and pre-employment training yield good returns when a labor market is expanding and training contents and outcomes are closely linked with the available jobs. In order to connect training with the labor market the relevant economy needs to be examined periodically so that training curricula can be kept updated. This will be beneficial to the trainee/graduate who expects work and gain income and to the employer who expects performance and profit.

Employability Skills: Nepalese Scenario

The government of Nepal has formulated its national policies by emphasizing more to create employment and self-employment opportunities by clearly spelling out its strategy to streamline the vocational trainings as one of the prioritized programs. The Technical and Vocational Education and Training (TVET) have potential

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for developing skilled workers for domestic and international labor markets. It can then help to harness opportunities created by globalization and liberalization of the economies. At present, Nepal is not fully utilizing such opportunities. Viewing this, the Three Year Plan (TYP) has laid emphasis on ensuring relevance of education and training to the demand of jobs in the labor market.

This study seeks to identify which skills other than technical skills are considered important in the workplace and that technical schools and training center graduates should therefore possess when entering the labour market in Nepal.

Employers have usually raised issue about skills mismatch that the skills of the labour force do not match the skills required in the labour market (Quintini, 2011). Nepalese employers have generally noted that finding skilled workers is difficult in the labour market. ILO/Nepal (2006) identified that very few graduates have benefited from vocational training. It has been suggested that vocational training should be provided by improving courses images and enhancing the quality of training.

It is widely held view among policy makers, employers and academicians in Nepal that there is a mismatch between the attributes of graduates from education and training programs and those required by the labour market (NPC, 2010, ILO/Nepal, 2006, Sharma and Kohlheyer, 2008). In this context Sharma and Kohlheyer (2008) argue that

The idea of relevance of TEVT is linked with demand side of socio-economic objectives of the society, employers and individuals. TEVT in general and pre-employment training yield good returns when a labor market is expanding and training contents and outcomes are closely linked with the available jobs. In order to connect training with the labor market the relevant economy needs to be examined periodically so that training curricula can be kept updated. This will be beneficial to the trainee/graduate who expects work and gain income and to the employer who expects performance and profit

The TYP aims to facilitate the coordination and cooperation with the Ministry of Education and CTEVT to improve the quality and employability of trainings with much longer duration, including technical SLC trainees (NPC, 2010). In this regard, Robalino and Almeida (2012) have raised an important question which is how to define and measure the set of skills that determine individuals' employability and labour market outcomes in developing countries. The concept 'employability' is a broad concept that implies a wide range of proficiencies needed by a person to function effectively in a modern world.

Employability plays a crucial role in informing labour market policy in Nepal and beyond. The concept of employability has been deployed to describe the objectives of the economic strategies promoted by important supranational institutions and labour market policies at national, regional and local levels (ILO, UN 2001). Employability, a relatively obscure concept a decade ago, now commands a central place in labour market policies in European countries and beyond. The promotion of employability in the workplace and among young people, the unemployed and other potentially disadvantaged groups in the labour market remains an important goal. During the last two decades, there has been a shift in world economies from traditional occupational towards a more flexible labour market that has contributed to the change in the supply and demand of conditions for employment.

McQuaid and Lindsay (2005) refer to initiative employability as the role of individuals to develop skills knowledge and attitudes that are transferable and enhance and individual's flexibility to move between job roles within the same organization and to find a new job in another organization. To find a job is essential to acquire right skills which accelerate to the workers for better incomes and higher productivity who work in developing world (. Banerji and Fiszbein, 2012).

The Interim Constitution of Nepal (2006) has provided statutory mandate for the expansion of educational services across the country. As a response to the aspirations of the people and in line with the spirit of the

Constitution, the Ministry of Education has emphasized to apply guideline and principles to provide easy access to education and vocational training to the mass populace by establishing education and training as a human right and as a means for bringing positive social changes and empowering people.

The government of Nepal has formulated its national policies by emphasizing more to create employment and self-employment opportunities by clearly spelling out its strategy to streamline the vocational trainings as one of the prioritized programs. In line with the policies and plans, the Three Year Plan (TYP) has emphasized as one of the prime objectives to create decent and ample employment and self-employment opportunities for its citizens within the country.

As appropriately designed and implemented TEVT enhances employment and income earning capacity of the individuals, it subsequently contributes to the reduction of poverty as well. With reduced poverty, prosperity of people can be envisaged, which can ultimately become a measure for maintaining peace and stability in the country.

The TEVT has potential for developing skilled workers for domestic and international labor markets. It can then help to harness opportunities created by globalization and liberalization of the economies. At present, Nepal is not fully utilizing such opportunities. Viewing this, the TYP has laid emphasis on ensuring relevance of education and training to the demand of jobs in the labor market. Regarding relevance of education and training, the Second International Congress on Technical Vocational Education and Training held in South Korea in 1999 fully recognized the importance of reforming the VET sector to develop synergies between the education sectors and industry and "to foster the development of generic competencies, work ethics, technological and entrepreneurial skills" (Hayward & Fernandez, 2004:118; James, 2002:175).

Issues on Employability in Nepal

Nepalese policy documents, employers and experts have agreed that TVET is considered as one of the major vehicle for enhancing socio-economic prosperity of the country (NPC, 2010, MOE, 2009, Sharma, 2010, ILO/Nepal, 2006), however, it is claimed that TVET graduates are facing difficulties to get because education and training they received is not linked to the world of work (Ramse, 1992 and Sinha, 2010). Sharma and Kohlheyer (2008) argued that the course that offered by training providers generally fail to satisfy employers' and self-employment needs; curriculum and quality of training are not relevant to the needs of industry; there exist inadequate linkages between educational institutions and industry. Moreover, training is not focused with occupational areas in demand as well as TEVT providers focus solely on offering training rather than its outcomes (Sharma and Kohlheyer, 2008).

The World Bank (2012) noted that the problems are particularly acute in developing countries. Moreover, the bank has clarified that firstly many workers in these countries have very low levels of education and lack the basic cognitive skills to succeed in the labour market. Secondly, training programs in these countries often provide skills that are not in demand. The programs also under provide the analytical and behavior skills that firms demand and that are critical for enabling innovation and creating high productivity jobs (World Bank, 2012).

On the other hand, the available data also indicates that 46.67 percent of the population aged 15 and over (14.4 million) has never attended school. In addition, 10.75 percent, 13.49 percent and 8.87 percent of this age group has completed below primary, primary and lower secondary education respectively (CBS, 2009). These figures clearly indicate that only 20 percent of the age group falling under this category reaches to attend the secondary level of education. Moreover, the enrollment of school aged children in the formal education system is around 81 percent of which nearly 34 percent of the children use to drop out from the school before completing the level of five grade.

People from the rural areas migrate to the urban centers in search of employment opportunities. It has been estimated that the size of such migrating population is around 400,000 in each year. Majority of the migrants do expect to land a job and employment, whereas they do not possess any technical and non-technical skills.

As a part of the strategy of TYP in achieving the employment and self-employment target that has been spelt, the GoN will facilitate to access the opportunities of vocational and skill development trainings by localizing such trainings within the reach of the local consumers or employers. ILO/Nepal (2010) depicted that improving the quality of jobs in Nepal would depend on higher labour productivity growth, which measured as output as per workers, has stagnated in the past decade. Raising level of productivity would require a coherent strategy to facilitate structural employment shifts. Facilitating structural employment shifts would also require enhancing the skills of the workforce (ILO/Nepal, 2010).

Nepalese education system is hardly tied up with meaningful employment opportunities. As a result, the country meets large number of unemployed graduates in the white collar job sector in one hand and no competence among those who left school before SLC on the other. The youths, who dropped out from the school for various reasons do not have access to acquire skills for employment. This further leads them to remain neglected from the world of work. As these youths miss gainful employment opportunities, they simply lead poverty to prevail. Their needs and aspirations are unmet and their productive potentials are not properly utilized for the prosperity of country.

The labour market is dynamic and its growth could be measured very fast. Unless and until the background of training graduates that have been trained do not match with the employment market needs, they will not be able to obtain meaningful employment. The lack of employable skills do not emerge only from the students' / trainees' insufficient aptitude but also largely from the mismatch of training content and quality. For a training institution, the ultimate success indicator remains on its ability to ensure the graduate's absorption into the labour market. To maintain the demand and supply equilibrium, there is a need to design diversified and recognized occupational standard training courses.

More importantly, number of factors are responsible to ensure employability of TVET graduates which are social, economic, curriculum, training, vocational qualification, certification and management. Although TVET programs have been arranged for almost one hundred thousand youths mainly targeting Disadvantaged Groups (DAGs) because of social and political reasons, there are not necessary that they can prove their efficiency during training and after training. Likewise, economic growth of the nation also plays a vital role for employability of the graduates. Ultimately, skills training needs to improve economic growth at national, household and individual level.

Nepal does not adopt sector based or competency based approach to develop curricula in TVET programs. Regular system of CTEVT develops curricula through DACUM approach relying on concerned subjects. These curricula are delivered to the trainees without preparation or counseling to students in technical colleges and training centers. The technical colleges and centers do not usually support to the students after their graduations for market linkage or employment. Similarly, these courses are generic which are guided by public institutions and these curricula have not been developed on guidance and involvement of both public and private partnership.

Timm (2005) states that collaborative environments characterized by teamwork and leadership are work skills that employees must possess upon entering the workforce. Employees must be able to explore career possibilities from a variety of disciplines and viewpoints. The new wave in business will demand a unique set of skills to successfully compete in this environment. Therefore, traditional teaching methods will not provide experience to develop critical thinkers and decision makers.

Need of employability skills

The recent World Bank labour market study concludes that tackling low labour productivity, high informality and sluggish real wage requires a range of policy interventions that address three distinct types of structural problems: (i) improving human capital; (ii) enhancing labour market regulations, and (iii) cutting the red tape of doing business (World Bank, 2011). This study is concerned with the first issue and with question of why many workers experience significant difficulties to find suitable jobs, even when the economy was doing well, although Nepalese economy has been stagnant over the decade. There is a need to understand which policy and institutional deficiencies may be hindering the process of skills formation and job matching.

Information addressing specific on employability skills education could not be found in Nepal, and it can be assumed that in the absence of such information no studies have been conducted on this topic in the country. The lack of such information hampers the development of employability skills for TVET programs in the country.

Conclusion

Employability skill is recognized as central for economic development in the context of rapid changes in technology and globalization. In this change context, the education and training sector are faced with the challenge of responding to the ever-changing skills demands of economy. The vocational education and training system should play in matching the skills needed by employers against the skills offered by workers. Employers have usually raised issue about skills mismatch that the skills of the labourforce do not match the skills required in the labour market. Most of policy makers, employers and academicians in Nepal that there is a mismatch between the attributes of graduates from education and training programs and those required by the labour market. Employability plays a crucial role in forming labour market policy in Nepal and beyond. The concept of employability has been deployed to describe the objectives of the economic strategies promoted by important supranational institutions and labour market policies at national, regional and local level.

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Is Investing in Vocational Training Profitable?: Analysis of Rate of Return

- **Manoj Sharma Neupane¹**

Abstract

This article is about the analysis of internal rate of return (IRR) of five mostly accessed vocational training programs in Nepal under the framework of human capital theory. The analytical modality adopted for this purpose is the traditional approach of G.S Baker (1964). Most of the data and information required for this analysis were obtained from the post training information of graduates of Skill for Employment Project (SEP) collected for the purpose of employment verification..

The rate of return of vocational training in Nepal is found relatively higher (25%) than other countries. In this regard, amount of investment and period of experience are justified as contributing factors for higher post training income. But, there lacks enough evidence to justify years of schooling beforehand as a contributing factor for increased income after graduation.

On one hand, vocational training is for the improved productivity of individuals since it imparts employable skills, introduces the knowledge of recent technologies and germinates innovative ideas among the workers. On the other hand, if the skill level of nationals increases it generates multiple effects in the economy including employment creation, poverty reduction, increased agricultural productivity, enhancement of industrial development amongst others. Vocational training is therefore regarded as a key sector for investment achieving both micro and macro level benefits.

Introduction

Land, labour, capital and organization are traditionally considered as factors of production in economics. However in modern economics, another factor “human capital” emerged as a prominent factor of production as a synthesis of both capital and labour. In general, the word ‘human capital’ indicates the value addition in labour force by means of certain components such as education, training, experience and skills. So there is input- output relationship between expenditure in such components and the added values.

The principle of division of labour theorized by Adam Smith gives some insights of human capital theory. The article published by Jacob Mincer in 1958 entitled “Investment in Human Capital and Personal Income Distribution” gave the identity for it as a new branch of economics. Moreover, Gary Backer published a book entitled “Human Capital” in 1964 which became a standard reference for many years (Wikipedia....).

There is larger variation of income among individuals even in the small community. Some members of community earn extraordinarily large amount whereas some earn too meager to make their ends meet. Labour economists analyze the causes that are mainly responsible for such large variations of personal income. Among them some are non-economic whereas most of them are economic factors. Human capital theory mainly deals with the nature and causes of such factors in the personal income distribution. The essence of human capital theory is that the variation in income level among individuals is mainly explained by the amount of investment made in human capital.

Vocational training is one of the main components of human capital which enhances the productivity of labour force. The productivity of labour force depends upon the length, type, duration and quality of training, which require higher level of investment. The increased productivity of an individual by means of vocational training can be translated in to higher income which is also called the returns on investment. The percentage by which

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such returns exceed the cost is defined as 'rate of return' which depends upon both amount of investment and level of income.

Vocational Training and Its Contribution in National Economy

Poverty is the major challenge of the Nepal. Every one in four Nepalese are living in absolute poverty (CBS, 2011). The lack of gainful employment is the root cause of poverty. A large majority of economically active population (73.4%) is engaged in subsistence agricultural occupation which is comparatively less productive sector (CBS, 2008). On the one hand, such a large majority of workforce is engaged in less productive sector. The industrial sector which is comparatively higher productive, contribution of it in GDP has been declined by 2.8 percentage point since last decade on the other. Not only the contribution to GDP, the growth rate of industrial sector is also nominal (1.6%) in comparison with the total economic growth rate of 4.6% (MoF, 2012). It is often argued that lack of skilled human resources is one of the various factors responsible for the slow growth of industrial sector.

Obviously, the lack of skilled human resources is the major stumbling block on the development path of the Nepal. On the one hand, it is widely reported that each and every sector of economy from manufacturing industries to service industries, are facing scarcity of skilled workforces. On the other hand, it is also reported that large numbers of additional labour forces are compelled to seek foreign employment without getting any employment opportunities within the country.

After the liberalization of economy in 1985, the foreign employment opportunities for Nepalese started to emerge up. As a result, these unemployed Nepalese youth began to migrate to emerging economics like Malaysia and some gulf countries to seek employment. The number of migrants was only 7,745 in fiscal year 1997/98, which has been rocketed since then and reached to 2,19,965 in 2008/09 (MOLTM, 2010). According to the population Census 2011, the number of population who are presently in foreign employment is 19,21,494 (CBS, 2012).

Foreign employment is not the priority for such migrant workers. Because of various undesirable situations, employment creation within the country cannot address the job requirements of such labour entrants. As a result, large proportion of them is compelled to migrate to seek foreign employment. Lack of proper occupational skills and technical efficiency are not only leading them to dirty, difficult and dangerous jobs (3D) but also adversely affecting the remittance to the country. Employment creation and income generation are the necessary measures to address both poverty and unemployment in a country. Vocational training can play vital role for both of these purpose. Its role is conceived to be further instrumental in developing countries like Nepal for lifting poor out of poverty.

Slow process of industrialization, slow rate of expansion of service sectors, lack of modernization of agriculture sector and lack of productive investments are the major characteristics of Nepalese economy. Presently, the agricultural sector is not in the position to absorb any additional labour force since it has already been overcrowded. Likewise, the service sector is expanding to some extents but this expansion is not enough to absorb even the small fraction of annual increment of labour force (MoF, 2012).

Nepalese economy is also characterized by subsistence agriculture based economy. According to Nepal Labour Force Survey 2008, almost 64% employed population of Nepal is engaged in subsistence agriculture, where as the corresponding figure of market agriculture is only 3.1% (CBS, 2008). Modernization of agriculture is therefore indispensable both to eradicate the poverty and significantly contribute in national economy. Availability of basic and medium level skilled human resources is the necessary condition to achieve this goal. Presently, large numbers of governmental, non-governmental as well as private sector organizations have been involving to cater TEVT programs throughout the country.

Literature Review

Mincer (1958) was probably the first seminal article which introduced the word "human capital" in the literature of labour economics. This article is about the analysis of the factors that influences on the income differences among individuals. Traditionally it was believed that the income differences among individuals were merely attributed to individuals' ability and chance. Unlike the traditional concept, researcher argued that the income difference among individuals is the function of their cost of training (prominent factor of human capital). Moreover, the cost of training is again the function of length, type and quality of training. In this regard, it has been further concluded that annual earnings corresponding to various levels of training differing by the same amount, differs by a multiplicative factor not by an additive constant (Mincer, 1958).

The view of Schultz (1961) was also similar to Mincer, however his analysis covers both micro and macro aspects of human capital. It has been argued that people are an important part of the wealth of nation since the productive capacity of human beings is vastly larger than all other forms of wealth taken together. People invest in themselves and a country invests in their citizens; and these investments are considerably large. Schultz criticized J.S. Mill's statement "People of the country should not be looked as wealth because wealth existed only for the people". In response, it is argued that investing in them, people can enlarge the range of their choices.

Unlike Mincer, Schultz also accounted the cost of migration as an investment in human capital. Young people migrates more than older one since they can expect higher return on their investment in migration because they have more years ahead to earn. Likewise, education was denied to be full investment since some part of cost of education is consumption in the sense that education creates a form of consumer capital which has the attribute of test and quality of consumption of students throughout rest of their lives (Schultz, 1961).

Backer (1962) was the influential article about human capital which is full of theoretical aspect. Although, various components such as on the job training, apprentice training, schooling, knowledge and information were illustrated as human capital, the analysis was concentrated at on-the-job training on the ground that it clearly illustrates and emphasizes to a general theory applying to any kind. Most of the arguments made in the article were similar to that of Mincer (1956) and Schultz (1961), however different situations of investments and its returns made by firm owner and individual was even more clearly distinguished by him.

Unlike Mincer and Schultz, Becker has differentiated training as general and specific. It has been argued that firms don't get any returns on investments in perfect general training in perfectly competitive market. By the same line of reasoning, firms gets maximum returns on investments in perfectly specific training in monopoly situation. It is concluded that the rate of returns to investment in human capital from the firm-owners' side is inversely proportion to the competition level and directly proportional to the specific of training. The opposite is true in case of investment by an individual person (Backer, 1962).

Psacharopoulos (1988) has explained education as an investment good or a major component of human capital. Statements or theories of various economist form Adam Smith to Denison were referred in justification. It was argued that there is a complex link between education and economic development. Education not only adds monetary value in individual but also internal efficiency in them.

This article has explained education or schooling as a main component of human capital whereas technical and vocational training was also equally emphasized by it. Employment based vocational training is argued to be the main contributory factor in national development. Its importance is even more pronounced in developing country. Similar to Backer, Psacharopolous also argued that the cost of on-the-job training is shared by employers and employee as per the type of training and nature of labour market (Psacharopolos, 1988).

All of the above theories are based on a uni-dimensional approach of human capital and mainly focused on on-the-job training. This approach defines human capital as a stock of knowledge or skills which is directly the part of production function. But, education which is also the major component of human capital also adds intrinsic value in individual. Amartya Sen argued that the value of education should be gauged in terms of the capability

The baseline data collected for the purpose of employment verification study of SEP-graduates of selected programs are the main source of information for this analysis. The statistical software named "SPSS" is employed to analyze the data. Rate of return in this study is calculated under two different approaches. First approach assumes constant income throughout the life since any increment in lifetime income is not attributed to the earlier investment. This increment is argued to be attributed to experience -a kind of on-the-job-training. The second approach argues that this increment is also attributable to earlier investment (to learn skill) since fully unskilled workers do not enjoy significant increment in income throughout their lifetime. Hence under second approach, the annual increment in salary is also projected and considered while calculating rate of return. This annual increment was projected by a logarithmic model developed by regressing income to experience from another data set.

Analysis and Discussion

Out of the total numbers of employed graduates, 387 graduates were sampled out for the study. Out of them, majority 140 are from Building Electrician. Similarly 68 are from Brick Layer Mason, 34 from Tailoring, and 68 and 77 are from Assistant Beautician and Junior Plumber respectively.

Assistant Beautician Training is justified as highly rewarding training programs. The rate of return of investment in it is calculated under the first approach is 37.25% whereas the calculated rate of Tailoring was the lowest (11.96%). It is interesting to note that both of these training programs are considered as women friendly. In rest occupations, the rate of return calculated for Junior Plumber is 30.51% followed by Brick layer Mason-25.36%, and Building Electrician- 20% . Under the second approach, the calculated figures of rate of returns are even substantially higher. These figures are 149.47%, 126.35%, 120%, 98.4% and 89.70% respectively for Junior Plumber, Brick Layer Mason, Assistant Beautician, Building Electrician and Tailoring occupations.

The higher rate of return does not indicate the higher post training income but also lower investment or opportunity cost or both since rate of return is the function of all these three components. If we analyze occupation wise post training income, it is found highest of Junior Plumber occupation (Rs. 7,084) and lowest (Rs. 5,323) of Tailoring among the five. Moreover, significant variation of salary is found not only among trades but also among development regions and between gender¹.

The variation between male and female was observed both within and across occupations. Some part of these differences can be attributed to discrepancy of wages between male and female in informal sector, whereas this is only the part of the story. The preference of trade between male and female is also found varied. Assistant Beauticians and Tailoring are counted as female friendly or female preferred occupations whereas Junior Plumber and Building Electricians are found largely preferred by males. Thus the variation of income among trades is also the cause of variation among gender.

If we analyzed the variation among development regions, this variation is also associated with economic factors since economic activities are varied across these regions. Although, human capital theory indicates that returns to investment in human capital is not only the function of type and duration of training but also the quality of training, however the analysis of influence of training-quality in income was beyond the scope of this paper.

Significant correlation was found between investment in and experience of vocational training to its returns. But, the result of this research can't explore enough evidence to justify years of formal education as a contributing factor for higher income among vocational workers. Informal opinion of key professionals involve in TVET sub-sectors is also found analogous to this result. This may be true if we conceive the general tendency

¹ The obtained F-value under one-way-ANOVA of income level of graduates between gender and among development regions and trades are 6.16, 4.023, and 4.28 respectively. The corresponding probability values of these F- values are 0.013, 0.003 and 0.002.

of educated youth in Nepal. The more schooling achieved by a person, the more he was repelled from traditional and blue collar occupations and vice versa. The post training income was regressed with direct investment, age as proxy of experience, and schooling as independent variables as depicted in multiple regression equation 1.

$$Income = 2507.67 + 0.123age + 0.05schoyear + 0.202inv. + 0.625\epsilon_i \dots \dots 1$$

t value	-2.18	3.66	1.5	6.18
P value	0.030	.000	.132	.000
R-square	= 0.051	F- 15.96		

This regression analysis suggests that increase in age by hundred percent leads to increase in income by 12%, similarly increase in investment by hundred percent leads to increase in monthly income by 20%.

Expenditure pattern of these vocational workers shows that large share of their income (60%) goes to consumption where as significant portion of income also goes to investment of health and education (components of human capital). Although, the outstanding returns to investment in vocational training are calculated, the analysis has also some limitations. It didn't considered the employment status of graduates¹ neither it analyzes on the quality issues. Both of these components affects significantly in macro level analysis. A detail and deeper analysis is thus needed to explore the benefit of vocational training in macro level.

The rate of returns to investment in vocational training in Nepal is found more pronounced than other sector and countries in the world. The aggregate figure of rate of return of vocational training calculated in this report under the first approach is 25%. The corresponding figure of China is 11%. The rate of return of secondary education in vocational training in Vietnam is 12.2%, the corresponding figure of Czech Republic is 9.6% and 6.8% in Slovakia in 1997 (Filer et al 1999). Other countries have further low returns: 2.4% in Kazakhstan in 1996, 4.8% in Uzbekistan in 1995 and 3 % in Russia in 1996 (Newell and Reilly 1999).

Conclusion and Recommendation

Nepal is an exception among developing countries which is lagging behind despite having tremendous natural resources. This fact further clears that natural resource is only the necessary but not sufficient condition for development. Human resource development can supplement this lack. Moreover, the level of skills in the available labour force plays the decisive role for the development of nation.

The result of the analysis in this research further underpins the idea that vocational training is not only the fastest and easiest way to increase the level of skills in people but it is also an effective way. The figure of higher rate of return of vocational training programs relative to other countries and sectors is the evidence for the same, however the regression analysis carried out in this research also reveals that level of schooling, investment and experience together explains only part of income increment. Probably, the quality and duration of training which is omitted in this analysis explain the major variation of income among vocational workers. A comprehensive study about the rate of return analyzing all of the three components is therefore recommended to explore the economic importance of vocational training programs.

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¹ This rate of return is calculated based on the income level of employed graduates; it didn't consider what proportion of graduates is employed.

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Investment in Youth and Skill: An Escape Route from Poverty and a Chance for a Better Future

- Hari Lamsal¹

Abstract

The scope of this paper is to discuss on the need of investment on youth and skills for the development of a nation. First there is a need to improve the school education system for enhancing foundational (basic) and transferable skills in all young people. Then vocational training and youth development programs would add value because it helps youth to develop competencies in specific technical areas that will be useful for decent jobs. In order to accomplish all these, the present allocation for skill development will be inadequate, therefore additional resources are required which can be either managed by prioritizing the existing allocation or explored sources of extra funding. The investment on skills development is one-time costs and after a year it will pay back to the individual as well to the country as a whole. Engaging youth in relevant skill development and equipping them with appropriate and necessary skills to become productive and contributing members of society is an escape route from the poverty and a move towards prosperity for a better future.

Demography and Development Status

Population of Nepal as per the Census 2011 is 26.4 million with the per annum growth rate of 1.35 percent. Out of the total population, 24.8 per cent of the population lives below the national income poverty line². If poverty is defined in terms of PPP \$ 1.25 income per day, population below the poverty line will be about 25 per cent. Significant improvements are observed in access to education (DOE, 2013). However, there are noticeable regional, castes, ethnicity and gender based disparities in access to and participation in education. Overall literacy rate for population aged 5 years and above is 65.9 percent (male - 75.1% and female- 57.4%) (CBS, 2011). Despite of the significant progress made in health and education, Nepal still remains one of the poorest countries in the world. Out of 168 countries of the world, Nepal scored itself (0.467 HDI value) in the rank of 157th position in Human Development Index (UNDP, 2013).

The Three Year Plan (2010-2013) has been formulated on the basis of the long-term vision of transforming the country from least developed to a developing country. Efforts have been put into practice to achieve the stated objectives but the results are somehow disappointing. In this 21st century, most of the countries of the World are aiming to trap the benefits from the globalization, information revolution and technological advancements. But Nepal has been struggling to fulfil the basic facilities to its citizens. The Census Report (2011) further highlights that only 47.78 percent of total population has tap/piped water source of drinking water. Almost two thirds (64 percent) of the total population is dependent on firewood as a usual source of fuel for cooking. Likewise, more than two third (67.26 percent) of the total household's main source of lighting is electricity and more than one third (38.17 percent) of the total households do not have toilet in their houses. Similarly, access to media is also limited in terms of its coverage and size.

Youth and National Development

The 2011 Census Report shows that the working age population (aged 15 to 59 years) is about 57 percent which is increasing as compared to 2001 Census. The population of below 15 years age group and 15-39 years age group is 34.91 percent and 40.42 percent respectively (CBS, 2011). This shows that Nepal has large youth population which should be taken as an important issue for social and economic development of a country. Youth age is highly productive age of human development, if they are provided access to

¹ Author is Under Secretary at Ministry of Education.

² World Bank, PovCal 2010.

economic opportunities and political participation; they can act as a critical engine of economic growth and development (World Bank, 2008). Recognizing the importance of a growing youth population, Nepal has to increase investment on youths so as to provide opportunities for education, skill development and employment. However, the available figures show that large share of public education budget goes to basic education but less in secondary as well as tertiary education (MOF, 2013).

The size of Nepalese economy is still small and the pace of labour market development in the country is slow. The growth of Gross Domestic Product (GDP) per annum in an average has accounted almost 4 percent (UNDP, 2013a). However, Nepal has managed to halve the amount of population living under the national income poverty line from 53 per cent in 2003 to approximately 25 per cent in 2013 during the past decade (World Bank, 2010). Furthermore, during the same period income equality has increased and poverty gap decreased.

Because of the lack of opportunity for jobs within the country, Nepalese youths are forced to go abroad for their livelihood. As a result, the trend of labour mobility to the international job market is increasing every year. And, there are estimations that currently approximately 1,500 workers leave Nepal every day. Most of these people certainly fall under the category of young age population (aged 15- 44 years). At present, the migrant workers have an important contribution in the national economy but in the long run it may reproduce several adverse effects in the society. Absence of young age population in the rural areas has negative effect on the agro-based farming. And, it has also promoted internal migration in an unbalanced manner that may create pressure in the use of natural resources in some part of the country.

Revolution in information technology and advertisement has increased youth expectations rapidly even though opportunities in Nepalese markets are limited. Youth are either motivated themselves or forced by some factors to go abroad rather than looking viable options within the country. It is equally true that the opportunities for public and private jobs within country are limited but it does not mean we do not have opportunities in other areas. Tourism, agriculture, rafting, flowering, poultry, fishery, animal farming could be the potential areas of entrepreneurs. But the society itself has been putting in-country jobs in second categories. People used to go abroad for more earning and better life in the future that ultimately pay back social recognition as well. The continuation of such tendency could lead to adverse long-term consequences such as higher risk of future unemployment, deterioration of skills, prolong periods of unstable employment, and poverty (World Bank, 2008). The Labour Force Survey (2008) highlights that almost 30 percent households receive remittance and out of total remitters, mostly (53.8 percent) were from 15 to 29 years age groups and with an additional 23.5 percent being those aged 30 to 44 years. Annual average amount per recipient household is NRs 65,755.

Youth and Skills Development

In line with the increment of young age population, the jobs for them are not created fast enough to meet the demands of youth people. This is common in the World as well where one person in eight across the World is looking for work (UNESCO, 2012). Nepal Labour Force Survey (2008) mentions that almost 19.8 percent of 15-19 years age group population are unemployed. This ratio will be 67.6 percent when age group of below 30 years is taken into account. Similarly, youth unemployment rate of 15-19, 20-24 and 15-24 years age group accounts 2.9, 4.2 and 3.5 percent respectively. Of the employed population, almost 64 percent are engaged in agriculture sector.

Critiques argued that the education system in Nepal is characterized by rote learning, memorization and teacher-centred. Some efforts have been put into implementation through reforms such as School Sector Reform Program (SSRP), but these are heavily focused on infrastructure development such as building more schools, providing personnel to schools, providing textbooks and other teaching materials to schools, and decreasing the gender gap in education. The relevancy of school education from the perspectives of skills for work is highly questionable. Mismatch is seen between school and world of work. Educational programs often

are disconnected from the demands of the labour market thereby creating an adverse effect on the employability of the individual. School graduates do not have necessary skills and competencies required to carry out a job (ILO, 2012). The demand and growth of market are not properly analyzed while offering skills development training. There is a need to revisit school curriculum for the enhancement of entrepreneurship skills among secondary schools graduates that facilitates to start small enterprises and engage in self-employment (UNESCO, 2012). This is urgent as well as extremely important because the well being and prosperity of young people depend on the skills that education and training can provide.

The capacity of the education system is also inadequate to cater the needs of all eligible people that resulted unequal access to and participation in education. Unequal access to education pushes many young people from poor households into a life of disadvantage (UNESCO, 2012). The report further shows that young people who have grown up in poverty and exclusion are more likely to have had little education or to have dropped out of school. And young people with little or no ability to acquire skills, they are further trapped in low paid and vulnerable jobs. This makes little earning to them. Such situation pushed young people into insecure life in the future. Hence, poverty is seen as a major barrier to education and skill. Despite little efforts of the government in terms of investments in basic education, the outcomes are not seen satisfactory and almost disappointing in the areas of learning achievements and basic skill development. Graduates of grade 8 (Basic Education) hardly translate their education to the real world (daily lives) through the use of basic skills they have earned during schooling.

Weak economic development including poor business environment, mismatch between labour demand and supply, and attitudinal and behavioural dimensions persisted in the society and within an individual have resulted high rate of youth unemployment in the country. Poor economic growth did not produce or create sufficient number of jobs for job seekers. This could be because of lack of supportive policies and programs (ILO, 2012). Second, there is a mismatch between labour demand and supply. Many of the new jobs have been generated disproportionately in some of the urban areas. Even for job holders, there are high living costs in these cities because of high inflation so it is hard to survive with the low salaries and benefits. Moreover, young people in Nepal hardly prefer to engage themselves in manual jobs or jobs that demand high physical engagements, they prefer white collar jobs, which is usual. In absence of these they prefer to go abroad even in manual jobs. Without changing these attitudinal and behavioural dimensions, the agro-based, tourism based and other service sector of Nepal could not grow as expected.

Investment on youth and skill: A Chance of Better Future

The major concern at present is what are the skills and competencies required for youth to be more productive and how can it be managed in terms of investment? There may not a single answer for this. Global Monitoring Report 2012 (UNESCO, 2012) highlights the importance of investment in skills development. The report further states that skills development is vital in reducing unemployment, inequality and poverty, and promoting growth. For every US\$1 spent on education, as much as US\$10 to US\$15 can be generated in economic growth.

Equipping youth with relevant skills and training may be done by different ways. The experiences from "East Asian Tiger" show that among others the crucial elements of skills development were linked with the industrialization, expansion of technical and vocational education and training, and learning from mistakes (UNESCO, 2012). Similarly, South Korea provided great attention on primary education then secondary education; it then focused on skill development of whole population. The following measures could be useful for skills development in the context of Nepal.

1. In order to equip young people with skill, the foremost requirement is to ensure equal opportunities in schooling. Then they need to provide the quality education with wide range of skill needed for them to perform the job. They need to equip with foundation skill, at least lower secondary level education. Second chance education for young people is equally needed that can be offered through different ways.

The partnership with community based organizations and a non-governmental organization is seen beneficial in some part of the World (UNESCO, 2012). For securing basic skills, it is necessary to make sure all children can complete good quality primary schooling and proceed to lower secondary school. Therefore, universalization of primary education and transition to lower secondary and secondary education are pre-conditions for developing basic competencies of young people. To happen this, it may takes time.

2. Evidence from rich countries shows that staying in school longer helps assure the acquisition of problem-solving skills. A good quality education will also boost confidence and motivation of students. Transferable skills, which could help many young people working in the informal sector in poor countries become successful in their jobs, can be developed through formal education. More needs to be done for disadvantaged youth to develop these skills. For this strengthening formal schooling is necessary which may take time, efforts and resources.
3. To achieve grow and prosperity in a rapidly changing world, greater attentions are required on the skills development by aiming to prepare young people for decent jobs that help to fulfil their desire in the future (UNESCO, 2012). OECD (2005) has defined three main competencies to live in an increasingly diverse and interconnected world: (i) ability to use tools (e.g. language, technology) interactively, (ii) the ability to interact in heterogeneous groups, and (iii) the ability to act autonomously. Nepal can learn from these initiatives and utilize them.
4. It is seen that many young people face a difficult transition from school to work. The Global Monitoring Report 2012 identifies three main types of skills needed for young people. These are - foundation, transferable, and technical and vocational skills. Young people can acquire these skills through formal as well as technical and vocational education. In addition, skill training opportunities can act as alternative provisions for those who missed out formal education as a second chance education to acquire foundation skills to work-based training, including apprenticeships and farm-based training.
 - Foundation skills: It includes skills relating to the literacy and numeracy which is necessary for meeting the daily needs. Such skills are considered as a prerequisite for continuing in education and training, acquiring transferable as well as technical and vocational skills to enhance the prospect of getting good jobs.
 - Transferable skills: It includes the ability to solve problems, communicate ideas and information effectively. In addition, other dimensions are be creative, show leadership and conscientiousness, and demonstrate entrepreneurial capabilities. These skills are considered important for people to adapt to different work environments and improve chances of staying in gainful employment.
 - Technical and vocational skills: It includes specific technical know-how and skills on certain areas. The weakest domain of the Nepalese education system is the lack of vocational skills training for young age people. Young age people (15-39 age groups) are potential targets for the vocational training. They do not have other options, except vocational training or skills development. The LFS (2008) mentions that almost one million Nepalese people received vocational training till 2008. There would be an increment of one hundred thousand people each year, it means the cumulative figures would be maximum of 5, 00,000. As per the Census 2011, the 15-39 years age group population comprises almost 11 million. It means there is a need of skills development training to about 9.5 million numbers of people. This number can go up because of the secondary school leavers and some graduates may also like to join in skills development domains.

If all these people receive skills development training that will be an important investment for human capital formation. This will pay back to the individual as well as to the nation in the long run. Skilled workforce can earn more within and outside the country.

Therefore, the urgent need at this time is to provide skills training to all youths as per their interests and priorities. At present it will have huge cost implications. But it will pay back to the country. State can establish a mechanism where candidates receive loan for skill developments and later on they

will refund to the State. The training should be designed in such a way it helps to produce job creators rather than job seekers.

5. Community based youth development program would also be beneficial. Participation of youth in civic as well as community-based activity can allow them to gain critical skills such as leadership and decision-making. It also helps to develop social values, responsibilities and sense of ownership (Wilson & Musick, 1999). This could be an important platform for young people to establish social networks and expand their relations with other people. All these will be useful to job opportunities (Douglas & Alessi, 2006). Therefore, youth development programs can help to develop leadership, critical and independent thinking, problem solving, conflict resolution, and decision-making skills through active community and civic engagement.
6. Coordination collaboration among stakeholders, especially with the private sector is an in urgent needs for expanding the skills development programs and , could allow the programs to be informed by the needs and identified skill gaps of local businesses, thereby increasing employability of the youth.

Conclusion

There is an urgent need to develop an education program that focuses on developing skills through a combination of classroom instruction and exposure of youth to real work experiences. By coordinating and collaborating with multiple stakeholders in the education landscape to provide youth with relevant skills, challenges of youth skills gap can potentially be addressed more effectively. This will help to increase youth employability and enhance productivity.

In order to reduce the youth skills gap, cross-sector collaboration is required. Feasibility and sustainability of the collaboration will only be successful upon the assumption that stakeholders across sectors are willing to participate in skills development programs under the leadership of the government. The institutional capacity and resources together with a common vision and goals are also equally crucial.

In order to equip youth people with relevant skills, one time investment is required. Then it pays back to the people and country. Therefore wise decisions are required for increasing investment in skills development programs.

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Conducting Cost Benefit Analysis of Vocational Training

- Madan Singh Khadayat¹

Abstract

This paper aims to examine the applicability of cost benefit analysis (CBA) guidelines to take decisions regarding technical and vocational education and training (TVET) projects with some measures like net present value (NPV), benefit cost ratio (BCR), internal rate of return (IRR) etc. to minimize the uncertainty in public investment. CBA provides decision making criteria like $NPV > 0$, $BCR > 1$ and $IRR > \text{discount rate}$ that makes NPV equal to zero and BCR equal to one for the public sector investment. Incorrect decisions and mis-investments in such projects can therefore be minimized with appropriate cost benefit analysis.

Background

Cost-benefit analysis has long been a part of public program evaluation. As early as the 1920s, the federal government of USA to evaluate public programs had used this technique derived from the field of economics. Although cost-benefit analysis is often associated with other types of economic evaluation, it mainly refers to the comparison of a program's monetary costs and benefits in order to determine its efficiency, i.e., to determine if its benefits are greater than its costs, or to compare it to other alternative uses of resources.

Cost-benefit analysis is based on several economic concepts. The rationale for its use centers on the need for government intervention in the free-market model when it fails to sustain conditions of *perfect competition*. Perfect, or pure, competition refers to the free-market system reaching an ideal state in which nothing else can be done to the market (i.e., reallocating or redistributing resources, goods, or services) to make someone better off without making someone else worse off. However, there are no means inherent in the market system that can ensure the conditions of perfect competition, that is, resources, goods, or services will be distributed equitably without being influenced by the wealth or income of buyers or sellers. The economic rationale for the evaluation of public programs, then, is to determine the most efficient alternatives for government intervention in the form of policies or programs when they are needed to move the market back toward the state of perfect competition.

Cost-benefit analysis is one of the tools of government intervention. The terms "cost" and "benefit" have somewhat different meanings when they used by economists than they do when commonly used. Economists generally view costs as "*the measure of value a society places on the use of its resources*" (Klees & Wells, 1978) or *opportunity cost* (the opportunities foregone or sacrificed) in choosing a certain use for a resource. Which further differentiate between private and social costs (benefits); that is, costs borne by (benefits accruing to) individual participants compared to society. Similarly, Benefits refer to the utility of the outcomes of the project to which resources were allocated. Although benefits are typically conceived of in monetary terms, the economic meaning of benefits is not limited to only those benefits that can be given a monetary value.

Costs and benefits also include a distinction between tangible & intangible costs and benefits. At an individual level, for example, intangible benefits might include factors such as increased well-being or knowledge gained by program participants, while nonmonetary costs might include loss of free time due to program participation. Finally, if the length of time of a program is a factor in an analysis, both costs and benefits must be adjusted, or discounted, to reflect the true present and future costs and benefits of the program.

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Literature Review

Cost-benefit analysis and other economic research methods have been used to evaluate employment generating training programs for individuals from the first quarter of 20th century. Early cost-benefit studies conducted generally maintained a 10-to-1 ratio of benefits to costs. It was from the 1970s that economists and social scientists began to look at the vocational training program more closely.

Conley (1969) established the basic model for cost-benefit analysis to evaluate vocational rehabilitation programs by analyzing cost and earnings data obtained from the R-300 databases at the federal rehabilitation services administration of the USA. A similar study by Bellante (1971) was conducted on Florida's vocational rehabilitation (RSA) system of USA. These basic models assess costs and benefits primarily from the R-300 data and other data obtained from the federal RSA or state-level vocational rehabilitation agencies. Costs included reported figures for case services and overhead. Benefits included the difference between preprogram and post program earnings, increased tax contributions, and reductions in public-assistance payments and costs.

Later studies in the 1970s and 1980s built upon the models developed by Conley (1969) and others while simultaneously attempting to address the shortcomings of those analyses. Researchers increasingly began to question the use of cost-benefit methodology in evaluating vocational rehabilitation programs. Noble (1977) presented a comprehensive summary and critique of cost-benefit analyses of vocational training. During the 1980s, a number of cost-benefit studies of supported employment programs were conducted. Several researchers have attempted to address the shortcomings of the existing cost-benefit models. A number of these studies were examined and summarized by Noble and Conley (1987). Dean and Dolan (1987, 1991) developed techniques to address the deficiencies found in the available economic data on vocational rehabilitation services, such as using comparison or control groups, using longitudinal earnings data, and enhancing cost and earnings data through the use of augmented databases. Collingnon (1988) illustrates the use of such cost-benefit models used in state-level evaluation in USA. During this period researchers used a wide variety of approaches, assumptions, and data; yet most studies consistently found high benefits-to-costs ratios. However, such studies still contained weaknesses and inaccuracies in earnings and cost data. Despite the variety of methods, most studies—even those using conservative methods—have typically found greater benefits than costs (Rhodes, Ramsing, & Hill, 1987).

Many studies using similar strategies in estimating costs and benefits found that low initial benefits-to-costs ratios for supported employment programs gradually increased over time (Hill, Wehman, Kregel, Banks, & Metzler, 1987; Conley, Rusch, McCaughrin, & Tines, 1989; Zilovich, Shueman, & Weiner, 1997). Sav (1989) presents a simplified methodology used in cost-benefit analyses of transitional and supported employment programs. Misra, Bua-lam, and Majumder (1992) designed a study using work-life expectancy tables to more accurately estimate the long-term earnings of vocational rehabilitation clients.

As with the Conley (1969) model, cost-benefit studies of supported employment typically include costs such as overhead, administrative, and other program costs, while benefits include increased earnings, increased tax contributions, and reductions in public assistance use. Benefits in supported employment cost-benefit studies also often include reductions in alternative programs costs.

The technique of cost-benefit analysis of employment for unskilled youth is based generally on the methodology used by Bellante (1971), Gibbs (1988), Sav (1989), and Misra et al. (1992). The next sections detail the, methods, and estimates of costs of unemployment, costs of vocational training services, and benefits of services and employment for unskilled or semi skilled youth.

Modeling CBA for Vocational Training

The main issue in this process is what significance should be attached to the results obtained by the application of cost benefit analysis to the outcome of training programs. Usually discussion was centered on two broad issues:

- (1) What is the relationship between Cost-Benefit Analysis and social decisions?
- (2) What are the particular techniques and problems encountered in applying CBA to vocational trainings?

The Scope of CBA

The concern in CBA is, will the economy as a whole become better off by undertaking this project rather than not undertaking it or by undertaking instead any of a number of alternative projects? But once the net is thrown wider and the repercussions over the economy at large are brought into the calculus a number of problems arise which requires extended treatment. Chief among these are the distinction between benefits and transfer payments, the concept of shadow pricing external economies and diseconomies.

With social variables the problem lies in quantifying i.e. to attach a financial quantity to the social value of increased employment. In economic analysis such values are attached in costs-benefits stream. From the view point of society this is necessary too. But in the financial analysis such types of issues are ignored. As training costs consists of monetary value, some kind of financial analysis is inevitable. It is therefore essential that the relationship between financial and social values be rationalized, permitting each to be handled by complementary techniques. The use of cost-benefit analysis has attracted criticism for its tendency to anticipate values which are moral or political. The fact that this can happen is a direct result of muddle and lack of clarity about domains of decisions. If actions within the field of training policy for instance are made and judged without reference to the wider domains then the values appropriate to those domains are naturally unrepresented. The fault lies not in any form of financial analysis but in the poor context within which it is used. A property of the technique which is not often recognized is its contribution precisely to the process of value judgment. By attempting to quantify inputs and outputs it focuses debate and clarifies issues of value in a particularly acute way. In the correct context therefore, ethical values and CBA are complementary aspects of the same problem.

The effective use of cost-benefit analysis depends therefore upon a clear conception of the place of training within the various domains of policy. Despite weaknesses the power of the technique to assist decisions about investing resources is already considerable and too great to waste where limited resources are subject to so many competing demands.

Techniques and problems in CBA

Comprehensive description of the experimental design of cost benefit study for a vocational training program should be prepared. The test group used for the study should be fixed. Because those who receive training, whether or not they complete the course or whether or not they utilize the training immediately afterwards (This is because some wastage is regarded as a normal part of a training course). The control groups are those who are trainable, are willing to be trained but who are not trained due to a shortage of places in the training centers.

The methodology and concepts of CBA reviews the results obtained in applying it to vocational education and training. The next important point that makes CBA results very sensitive to the measurement of what are displacement effects i.e. the process whereby trainees obtain jobs which could have been filled by untrained people and vacuum effects i.e. the process whereby other members of the labor force may be taken into jobs vacated by trainees or complementary to those newly occupied by the trainees. These effects are extremely difficult to measure and therefore care must be taken in the interpretation of results.

Steps in Cost-Benefit Analysis

Several authors (Johnson, Lewis & Bruininks, 1993; Sav, 1989) have described the basic steps needed to perform a cost-benefit analysis. They include:

1. Defining the program to be studied;
2. Defining the alternatives to the program being studied;
3. Determining the accounting framework;
4. Quantification and monetization of benefits and costs;
5. Analyzing the benefits vis-à-vis the costs.

Costs Associated With Vocational Education and Training

Vocational training costs can be divided into direct costs including apprentice wages, salaries for training personnel, teaching material, equipment, building infrastructure etc. and indirect costs such as tax expenditures or subsidies but also opportunity costs (forgone earnings as unskilled workers) and drop out costs. Compared to general or academic education, the costs of VET are substantial, in particular for those occupations that require heavy equipment and sophisticated infrastructure.

Benefits associated with vocational education and training

Benefits can take various forms and arise at different points in time, during or much after the course or training. Individuals enjoy benefits from improved earnings, employment chances, mobility, capacity for lifelong learning, measures of working conditions and job satisfaction. Employers' benefits arise mainly from apprentices' productivity increases. The state yields net benefits both in terms of social rents (both individual and public costs plus positive externalities from increased productivity due to better education) and in fiscal terms (education expenses versus increase in tax income from higher earnings from better educated individuals) (Wolter and Weber, 2005).

Some benefits such as greater general openness and ability to learn and upgrade skills later in life are not easily quantifiable. One alternative way to assess benefits beyond an economic analysis of the material labor market benefits is to survey satisfaction both of employers and of individuals. Beicht and Walden (2005) have carried out a survey to assess subjective current and future benefits for further VET. This include issues like: personal development, improvements in efficiency on the job, networking, improved perspective for better or more interesting employment, chances to move up the career ladder, better earnings etc.

Cost-benefit analysis has traditionally used three measures of efficiency for analyzing the present values of a program's costs and benefits: net present value, internal rate of return, and benefit-cost ratio. The net present value of a program refers to the difference resulting from its costs minus its benefits. The internal rate of return of a program refers to the discount rate at which the program's benefits equal its costs (expressed as a percentage). The benefit-cost ratio of a program is simply the ratio of benefits to costs.

When monetary values for benefits are not available, a cost-effectiveness ratio can be developed between the cost of a program and its outcome. The detail discussion of these measures is as follow.

Net Present Value

Define lifespan of a program to be conducted. Construct costs and benefits stream. Finally calculate present value of costs and benefits to obtain net present value of the program by subtracting net worth of costs from net worth of benefit. Usually market rate of interest is taken as the rate of discount to obtained present values and the net present value is computed by using the formula given by

$$NPV = \sum_{t=1}^n \frac{B_n}{(1+i)^n} - \sum_{t=1}^n \frac{C_n}{(1+i)^n}$$

Where NPV is net present value, B_n and C_n are benefit and cost for nth period of time, n is life span of project and i is discount rate.

Table 1 provides the general idea about calculating NPV.

Table 1 Calculating NPV of Program

Year	present value of costs	present value of benefit	Net Present Value
1	xxx	00	Present Value of Costs - Present Value of Benefit
2	xxx	xxx	
3	xxx	xxx	
4	00	xxx	
5	00	xxx	
6	00	xxx	
Total	= xxx	= xxx	= xxx

In table 1, the program is considered with life span of six years. Second and third column represent the present value of costs and benefits (discounted values of costs and benefits for each year). Last row presents the total of present value of costs and benefits. Finally fourth column stands for the net present value on the basis of difference between present value of costs and benefits. The program with positive NPV is selected for investment. In case of more than one programs with positive NPV, the program with higher NPV could be selected for investment if there is no other socio-economic restriction.

Benefit-Cost Ratio

It is simply a ratio of present value of benefit to present value of cost. Mathematically it is expressed as

$$BCR = \frac{\sum_{t=1}^n \frac{B_n}{(1+i)^n}}{\sum_{t=1}^n \frac{C_n}{(1+i)^n}}$$

Where BCR is benefit cost ratio and other symbol represent same as in NPV.

Table 2 Cost Benefit Ratio of Vocational Training program

Discount Rate	r = 8%	r = 10%	r = 12%
Present Value of Costs	Rs. xxx	Rs. xxx	Rs. xxx
Present value of Benefits	Rs. xxx	Rs. xxx	Rs. xxx
Benefit-to-Costs Ratio (pvc/pvb)	= xxx	= xxx	= xxx

Table 2 illustrates benefit-cost ratios of program based on the average costs and benefits estimated from data. Three different rate of discounting are illustrated in table. Usually market rate of interest is used as

discount rate but government can choose different rate as per priority. Generally the program with ratio greater than one is accepted for investment but program with higher BCR is selected in case of more program with BCR greater than one.

Internal Rate of Return

The IRR is a break-even discount rate i.e., the discount rate that makes the NPV of project equal to zero BCR of project equal to one. It is then argued that if the ‘appropriate’ discount rate falls below the IRR, the NPV must be positive and the reverse must hold for discount rates above the IRR. The higher a project’s internal rate of return, the more desirable it is to undertake the project. The IRR rankings have no relation with the relevant NPV rankings. It represents the average earning power of the money used in the project over the project life. Mathematically, IRR is the discounting rate ‘i’ such that

$$NPV = \sum_{t=1}^n \frac{(B_n - C_n)}{(1+i)^n} = 0 \text{ and } BCR = 1$$

The computation of IRR for project involves a trial and error method. The rule for estimating IRR lying between two discount rates too high on one side and too low on other is

$$IRR = r_1 - (r_2 - r_1) \left\{ \frac{NPV_1}{NPV_2 - NPV_1} \right\}$$

Where r_1 = lower discount rate, r_2 = higher discount rate, NPV_1 = NPV at r and NPV_2 = NPV at r_2 .

Limitation in conducting CBA

It is important to keep in mind the limitations inherent in estimating costs and benefits. Rhodes et al. (1987) outlined some technical problems common to cost-benefit analysis in general. These include the use of non experimental methods (no comparison or control groups) and a lack of adequate data; attempting to account for all costs and benefits (including intangible ones), converting costs and benefits to monetary measures, and reducing them down to a single ratio or outcome measure; and the difficulty of selecting an appropriate discount rate.

In addition to the issues mentioned above, other specific problems are encountered in cost-benefit analyses of employment programs for individuals. Vocational training cost data have often been considered to be deficient in a number of respects. Benefits and earnings data also have weaknesses. Many clients begin vocational training programs having little or no earnings (zero earnings at application). Other clients are not accepted for services, drop out, or are terminated from the program before being employed (zero earnings at closure). Additionally, difficulties are encountered in estimating the work-life benefits of clients.

Conclusion

Despite the several limitations to such analysis it should be kept in mind when making conclusions about the costs and benefits of vocational training program. However, the methods used in such study allow for relatively accurate estimations of costs and benefits given the available data; indeed, benefits may actually be conservatively estimated. Moreover, findings of similar studies indicate that even the most conservative analyses typically find high benefits-to-costs ratios for such programs. Benefits of vocational training program include increased earnings, reduced public assistance use and costs, and increased tax contributions. Other benefits include increased consumer spending and economic stimulation occurring as a result of increased earnings of clients.

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Voucher Based Short Term Training - A New Practice of EVENT Project

- Laxmi Ram Paudel¹

Abstract

Nepal is a developing country with agrarian economy. However, agriculture contributes only 35% to the GDP (MoF, 2012) and employs nearly 75% of the labour force (NLFS, 2008). Remittance has contributed to reduce poverty level in Nepal. It contributed 21.2% of Nepal's GDP (MoF, 2012). The proportion of poor people in the country has declined substantially in recent years. More than 200,000 Nepali youth go to abroad every year for work. About one third of all Nepali households receive foreign remittances.

Nepal has a small but growing stock of human capital. Workforce skills must be enhanced to increase the productivity of Nepali workers. In order to fully harness the nation's human resources, the Government needs to invest additional resources for enhancing the skill of workers. An accessible, efficient, demand-driven and high quality Technical and Vocational Education and Training (TVET) system is an important part of any strategy towards enhancing worker productivity and improving economic growth. An effective TEVT system can also contribute to making Nepali workers more competitive in a globalized labour market of the world. Enhancing the skill levels of potential migrant workers can also be a strategy for diversifying the nation's economic base.

Technical and Vocational Education and Training (TVET) in Nepal is provided by a vast number of institutions of different types. This includes Council for Technical Education and Vocational Training (CTEVT), private institutions, technical institutions of the universities, secondary schools (annex schools), government agencies associated with the various ministries, and training programmes supported by NGOs and INGOs. A number of donor-supported TVET projects have come into operation, substantially increasing short-term training opportunities across the country. Several ministries of the GON such as Ministry of Education, Ministry of Industry, Ministry of Labour and Transport Management, Ministry of Agriculture and Co-operatives and others also provide short-term training. The National Skill Testing Board (NSTB), under the CTEVT provides opportunities for testing and certification of skills acquired formally or informally.

Introduction

Ministry of Education with the assistance of World Bank has been implementing Enhanced Vocational Education and Training (EVENT) Project since June 30, 2011 (Ashad 16, 2068). It has come into effect from 23 August 2011 (Bhadra 6, 2068). The objectives of the project are to: (i) expand the supply of skilled and employable labour force by increasing access to quality training programs, and (ii) strengthen the technical and vocational education and training system in Nepal. The Enhanced Vocational Education and Training (EVENT) Project, provides its supports throughout four components; Strengthening TVET Regulatory Activities and Capacity Building, Strengthening Technical Education, Supporting Short-Term Vocational Training and Recognition of Prior Learning and Project Management, Monitoring and Evaluation.

Under Supporting Short-Term Vocational Training, two modalities of support are being employed: (i) a voucher-based financing mechanism for training in Kathmandu, Lalitpur and Bhaktapur districts and (ii) a result-based financing mechanism for training in the rest districts. The voucher-based financing modality provides approximately 10,000 beneficiaries with vouchers which will allow them to purchase training from their preferred training providers (TP). Vouchers will be made available to potential beneficiaries to be

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redeemed for training at a selected number of pre-approved short-term training providers drawn up by the Secretariat that satisfy a set of eligibility criteria.

The value of the voucher will be benchmarked to the average unit cost. An average unit cost for a training programme will be computed prior to the award of contract to the training provider. Vouchers are not transferable to anyone. The voucher recipient should utilize the voucher within the stated time period, and the training providers with voucher based training should proceed for reimbursement within the said time.

Voucher Based Short Term Training Process

- a) Information dissemination: The information desk (ID) at the Project Secretariat (PS) will provide information services to both potential training providers and trainees. PS will conduct publicity campaign through media for voucher based training programme.
- b) Pricing of training cost: For fixing the unit price of each trade in voucher based training, per trainee cost will be calculated through collection of price list of each trade from different institutions.
- c) Selection of training providers: The PS calls for the Letter of Intent (LOI) to provide result based short-term vocational training. LOIs of TPs are screened based on criteria. The training providers will be selected on the basis of technical proposal and fixed cost. The announcements are publicized by the project website as well. PS will orient the selected training providers about the voucher based training delivery, skill testing, job-placement and payment system. The other details will be provided in voucher based training guideline.
- d) Selection of trainees (voucher recipients): Potential trainees come to the information desk of PS to get further information on the courses offered and to apply for vouchers. The PS verifies whether the candidates are eligible to apply, and receives the applications of eligible candidates. Voucher recipients will be selected by PS based on criteria. The PS works for orientation of beneficiaries for the selection of institution, selection of trade/programme, and placement for job through the training providers. The application and admission will be in a rolling process throughout the year. PS will provide during training and post-training counselling to the trainees as required.
- e) Voucher distribution: Vouchers are issued to the selected candidates. The voucher status at this point is "non-redeemable". The voucher recipient takes the voucher to the training provider of her/his choice and enrolls in the course.
- f) Conduction of training: The training provider conducts training for voucher recipients and makes provisions for them to take the relevant skill test at the end of the course. The arrangement of skill test will be done by the TPs. The cost of skill test is covered by the voucher.
- g) Payment of voucher: The training provider submits the completed feedback forms and trainee attendance records to the PS as part of the requirement for voucher redemption. The TPs will get payment in four instalments. The PS will verify the status of the trainees. If trainees are found in place, the supervisor/monitor will sign in voucher for the payment. Voucher will be designed by PS in consultation with experts. Validity (time limitation) of vouchers will be mentioned in issued voucher and expired voucher cannot be used without renewal in PS. The procedure of renewal will be mentioned in voucher based training guideline.
- h) Counselling to trainees: Counselling of trainees will be provided from training provider during and after the training. During the training, counselling will be focused on acquiring training knowledge, occupational skills and positive attitude to work. The training provider will also visit trainees during employment and provide necessary counselling to fit trainees in the work place and work culture. This type of counselling will enable the trainees to their satisfy employers technically and behaviourally. Counselling process will be mentioned in "Training Provider's Guideline".

- i) Payment of voucher: The training provider submits the completed feedback forms and trainee attendance records to the PS as part of the requirement for voucher redemption. The TPs will get payment in four instalments. The PS will verify the status of the trainees. If trainees are found in place, the supervisor/monitor will sign in voucher for the payment. Voucher will be designed by PS in consultation with experts. Validity (time limitation) of vouchers will be mentioned in issued voucher and expired voucher cannot be used without renewal in PS. The procedure of renewal will be mentioned in voucher based training guideline.

Counseling to Trainees

Counseling of trainees will be provided from training providers during and after the training. During the training, counseling will be focused on acquiring training knowledge, occupational skills and positive attitude to work. The training provider will also visit trainees during employment and provide necessary counseling to fit trainees in the work place and work culture. This type of counseling will enable the trainees to their satisfy employers technically and behaviorally.

Role of Training Providers

Training Providers will be involved in voucher management. Training providers have to fulfill the following tasks:

- a) Periodically submit updated company profile and schedules of training event to the ID;
- b) Create welcoming and stimulating environment for trainees in selected trades or programmes;
- c) Register trainees in their own selected trade courses
- d) Provide quality training to trainees that satisfies skill test, immediate employers and other customers;
- e) Provide job placement service to trainees;
- f) Submit reports on time;
- g) Get payment from the Bank against voucher upon completion of training;
- h) Monitor training programme and job-placement;
- i) Provide feedback to PS for further improvement.

Screening Criteria for EOI of TPs for Voucher Based Training Providers

EOI of Training providers will be screened on the basis of screening criteria. Training providers in the three districts of valley (Kathmandu, Bhaktapur and Lalitpur) will be selected by the Secretariat according to a set of criteria, which will include among other things availability of infrastructure and resources for training, good management practices, and the market relevance and quality of training being offered. The list of training providers will be revised every year with Expressions of Interest being invited annually.

Training providers supported under this activity can be from the public or private sector. They need to have current legal registration and with no tax arrears. Seventeen criteria will be used for determining the eligibility of training providers and selection of training providers .The criteria are: employment rate of trainees trained in the last 2 years, average annual number of trainees trained in the last 2 years, percentage of trainees who have passed skill test (of the total trainees in the last 2 years), no. of new trades taken up for skills training in the last 2 years, Percentage of trainees provided with soft-skill training in the last 2 years, modality of training and employment placement implementation, quality of training information management system, availability of electronic training database with information on individual trainees, organizational capacity, number of trainers per trade per class, working capital for pre-financing, infrastructure, standard accounting system in use, annual audits conducted in the last years and quality and relevance of training etc.

Selection of Training Providers

The PS will select training providers using fixed cost based selection method while selecting training providers among the enlisted TPs. In case of eligible public training providers, the selection will be done using Direct Contracting method as per the procurement guidelines or procurement plan of the project. Training cost for public training providers will be negotiated based on actual incremental cost.

Eligibility Criteria for Trainees

Any interested Nepali youth having the following qualification and age limit can apply for voucher from the project:

- a) Education: basic reading, writing and numeracy skills
- b) Age: Between 16-40 years (16-45 for female)

Application Process and Selection of Trainees

The Secretariat will invite applications from candidates, and the vouchers will be allotted to the selected applicants. Selection will be done based on the criteria . Dalit, girls, disable and youth from disadvantage area get extra points. To select the trainees PS will formulate a 7 member Selection Committee comprising: TVET expert, representative from MOE, Senior Planning and Monitoring Officer, responsible officer of PS, Employers/TP representative.

Payment modality of voucher based training

Selected trainees will be provided a package of four different vouchers in different four installments which are as follows.

Voucher Type and Installment

Installment	Type of voucher	Value of voucher	When voucher can be redeemed	Documents to be submitted
1 st	V1	10% of the total training cost	Registration and start of training	Registration records, evidence for start of training
2 nd	V2	40% of the total training cost	Completion of training and skill testing	Training completion report, skill test attendance record
3 rd	V3	25% of the total training cost	Job placement of trainees for 3 months	Evidence of employment
4 th	V4	25% of the total training cost	Job placement of trainees for next 3 months	Evidence of employment

Source: EVENT, (2069). Voucher Based Short Term Training Operation Guideline, 2069.

The trainee will submit the voucher) to the training provider at the time of registration however the training providers will claim money in four installments as mentioned in above table.

Unused vouchers occurred because of trainees drop out or being unable to place a trainee in job will not be paid. Those vouchers will be deposited back to PS by the provider. Each payment will be done based on the verification from the PS or its monitors.

Conclusion

Now more than 1000 trainees are participating the vocational training of this modality in Kathmandu valley. In this modality, trainees can select the occupation and training institute of their choice. This is the beauty of this modality.

This is a new practice in our context. However in 2003 A.D., Education and Training Voucher Program was implemented through this model in Washington State of USA (DSHS, 2007). This practice was successfully implemented in Kenya with the assistance of The World Bank in 2008 A.D.

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Technical Education in Community School (TECS) for the Sustainability of Technical / Vocational Education and Training (TVET)

- Diwat Kumar Shrestha¹

Abstract

Technical Education in Community School (TECS) is one of the successful TVET programs in the Asian countries of advance science and technology. The networking of community schools and their infrastructures is the main factors which contribute to maintain cost of production in reasonable level. Government of Nepal has been implementing TECS program since F. Y. 2058/59 to maximize access and opportunities of disadvantaged group in TVET. Most of the TECS programs are running effectively in the remote areas of the country and some of them are not due to management problems. In order to effectively respond to the desired changes and improvement in TECS, CTEVT needs to be restructured, strengthened and decentralized its operations and requires reengineering adequate number of dynamic, qualified and capable professionals to lead system towards desired change and improvement. TECS should institutionalize the linkages with the business and industries to enhance quality, relevancy and efficiency. Provide essential support to start small businesses for new graduates to initiate self-employment.

Introduction

Technical and Vocational Education and Training currently is gaining strength in many developed and developing countries essentially in response to high levels of youth unemployment. Many countries have become prosperous in a short span of time by linking their technical vocational education and training programs with future employment opportunities. Socio-economic development of nation is not possible without a relevant and need responsive employment and training system. Best practices from other countries suggest that Nepal need to develop relevant and meaningful education and training system that makes people capable for employment and supply appropriately trained human resources for national development. TEVT is referred as those aspects of the educational process involving the study of technologies and related sciences, and acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life (Lijima & Tachiki, 1994).

TECS program is an additional program, attached to community schools, which provide Technical Education through maximum utilization of existing physical facilities, human resources and management of the community schools. It is believed that this program can allow the youths a strong option to advance their carrier (PACE, 2006).

TECS in Nepal

Government of Nepal has launched several skill development schemes to enhance the capacity of Nepalese workforce. According to CTEVT Annex program concept paper (2001), one of the schemes initiated in the past was to focus vocational education at school.. It was assumed that basic level skilled workforce could be prepared by integrating vocational training in school curricula. Multipurpose schools in early 1960s, vocational education schemes in early 1970s and technical school schemes of early 1980s are some examples of workforce preparation initiatives taken in the past under Ministry of Education. Evaluation of vocational education schemes in the past showed that skill development through integration of vocational component in the school curricula affected the quality of both vocational and general education. Vocational schools could not impart employable skills to graduates. It was realized that intensive practice-based skilled training was essential to prepare skilled workforce for the national and international labor markets.

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Technical Schools established under CTEVT addressed the shortcomings of vocational education and are preparing graduates of superior quality having appropriate KSA (Knowledge, Skill and Attitude) needed for job market. However the technical schools under CTEVT are in limited numbers and are not being able to provide access to border segments of the population. To develop and expand technical schools require heavy investment, which does not seem possible in the present scenario because of the economical condition of the country. Private Technical Schools operating in affiliation with CTEVT charge very high Fees, thus students from deprived segments of the population and poor background cannot afford fees. Poor, deprived and geographically disadvantaged areas, which really need skilled training, are beyond the reach of the skill development System. Therefore, a cost-effective skill development scheme needs to be explored to address the training needs of deprived segments of the populations. A technical education and vocational training program annexed to the general high schools seems to be a viable scheme for expanding the skill development opportunities among the unemployed and non-college bound youths from the targeted segments of the population (CTEVT, 2001).

According to (CTEVT, 2013)CTEVT (2013) there are 73 Community Schools having Technical Education Program in the 73 Districts of Nepal except Manang and Mustang... The detail of the program is presented below:

Table 01: Number of TECS program and their year of operation

Year of operation of TECS	No of School
Fiscal Year 2058/ 59 B. S.	15
Fiscal Year 2066/ 67 B. S.	15
Fiscal Year 2067/ 68 B. S.	15
Fiscal Year 2068/ 69 B. S.	28
Total	73

Source: CTEVT. (2013). *Annual Report*. Annex Division, Council for Technical Education and Vocational Training (CTEVT), Sanothimi, Bhaktpur, Nepal.

Table 02: The Courses running in TECS program and their numbers

Courses	No of School
Agriculture (Plant Science)	33
Livestock	7
Civil Engineering	9
Computer Engineering	17
Electrical Engineering	5
Mechanical Engineering	1
Automobile Engineering	1
Total	73

Source: Source: CTEVT. (2013). *Annual Report*. Annex Division, Council for Technical Education and Vocational Training (CTEVT), Sanothimi, Bhaktpur, Nepal.

The TECS programs in CTEVT are for both SLC pass and failure students. The durations are 15 and 29 months respectively. According to the School Sector Reform Program (SSRP) Government of Nepal, Department of Education in collaboration with CTEVT started Technical Education program in 100 community schools of 71 districts for grade 9 and 10 as the piloting basis from Baisakh 2070 BS. If the program is successful after 2 years, the TECS program under CTEVT will also follow the same system. All the administrative and financial matters are under Department of Education and Technical matters like

Curriculum, Monitoring and Examination are under the responsibility of CTEVT. Among the 71 districts Manang, Sarlahi, Mugu and Dolpa are not included due to some technical problems (DoE/CTEVT, 2013).

Table 03: The courses running in 9 class onwards program and their numbers

Courses	No of School
Agriculture (Plant Science)	43
Livestock	14
Civil Engineering	17
Computer Engineering	21
Electrical Engineering	5
Total	100

Table 04: The Districts running in 9 class onwards program and number of school

47 Districts having 1 school	19 Districts having 2 schools	5 Districts having 3 schools
Tplejung, Panchthar, Sankhuwasabha, Terhathum, Bhojpur, Dhankuta, Sunsari, Soluhkumbu, Okhaldhunga, Khotang, Udayapur, Siraha, Dolakha, Ramechhap, Mahottari, Rasuwa, Nuwakot, Kathmandu, Lalitpur, Bhaktapur, Dhading, Chitwan, Makawanpur, Parsa, Rautahat, Lamjung, Tanahun, Gorkha, Mustang, Mayagdi, Parbat, Palpa, Kapilbastu, Humla, Jumla, Kalikot, Rukum, Rolpa, Salyan, Pyuthan, Dang, Jajarkot, Bankey, Bhajang, Bajura, Doti, Achham	Ilam, Saptari, Sindhuli, Dhanusha, Sindhupalchowk, Kavrepalanchowk, Bara, Kaski, Sayanga, Gulmi, Arghakhanchi, Dailekh, Surkhet, Bardiya, Kailali, Darchula, Baitadhi, Dadeldhura, Kanchanpur	Jhapa, Morang, Baglung, Nawalparasi, Rupandehi

TECS in Asia

Most of the Asian countries, which are already advanced in science and technology, incorporate TVET in their school education. They are able to convinced people about the value of Technical Education for the development of country as well as people. Countries in the Asian region have placed varying emphases on general and vocational education, depending upon several historical, social, economic and political considerations. While general secondary education is somewhat of homogenous nature, there is a diverse pattern of provision of vocational and technical education and training in many countries. It includes at least two major forms: vocational and technical education in formal education systems (lower and senior secondary schools, post-senior secondary but less than college level institutions like polytechnics, and colleges at tertiary level), and training outside formal system of education (pre-employment training and on-the-job-training). The later kind also includes apprenticeship-training systems, non-formal training centers, enterprise based training, etc.

Polytechnics in many countries, industrial training institutes in India, technical colleges in Sri Lanka etc., belong to the post-secondary level (below tertiary level). Vocational and technical education has been an important part of senior secondary education, but it was also introduced in the tertiary level (colleges) in India in recent years (Tilak, 2002).

Most countries have both exclusive vocational schools and diversified secondary schools with general academic as well as vocational courses. In several East Asian countries, the emphasis was not on formal vocational/ technical secondary schools, but on training institutions and on-the-job training. In many of the countries of the region, employers are also responsible for specific skill training. With rapid transformation of societies in social, political, economic, technological, and education spheres, there has been a change in the

perspectives on the need for and nature of TVET. New challenges have begun to emerge, and old ones to reemerge.

All countries in the Asian region have, however, not accorded equal degree of attention to TVET. As a result, they are at various levels of development of Technical Vocational Education. As the Asian Development Bank (1991) categorized the several Asian countries, and described, Korea stands as “a leading example” of how governments can promote an extensive school-based VET; Singapore had developed a “comprehensive vocational training infrastructure,” forging strong linkages between education institutions and training agencies; Indonesia, Malaysia, Philippines, Thailand and Sri Lanka have “fairly developed” vocational and technical education systems – both in public and private schools; the agrarian economies of Bangladesh, Nepal, Pakistan and Myanmar have “patchy” systems of vocational and technical education; and India and China, the two big countries on the globe, suffer from “prejudice against manual work” and hence have “lopsided” education development structures including for VET. On the other extreme, Japan has the most developed and well-established infrastructure providing school based as well as enterprise based TVET.

The nature of VET also differs from country to country. Vocational education in many countries generally refers to inculcation of vocational and technical skills relevant for specific occupations. In a few countries, vocational education is also general in curriculum. For example, vocational education in Japan and Korea is fairly general in character. General skills, broad attitudes and discipline are more valued than vocational skills *as such* in labor market. Accordingly schools, even vocational schools emphasize, for example, in Korea, moral education and discipline (Green, 1997).

Positive Trends of TECS in Nepal

The TECS program was started assuming the following positive aspects. In some schools, it is running very effectively, where the principals and the local communities are very active. They have been generating the huge amount of local fund. In remote places of the country, the program is much demandable and running as a model. In most of the city area and eastern mountainous region the program is not running well. As the positive aspects, the TECS is being able to:

- Mobilize local school management committee (SMC) and the principal to take whole responsibility to administer the program.
- Make responsible to SMC to create a local training fund (LTF) by mobilizing the local resources.
- Bring TEVT within the reach of target group (Women, deprived, under privileged, disabled etc.).
- Make participation of CBOs, NGOs, and local authorities in TEVT.
- Utilize the available resources of school in TEVT.
- Minimize the production cost of TEVT and make it affordable for general public.
- Plan and implement locally demand driven training programs.
- Assess the needy people and launch the training program for them.
- Upgrade the local indigenous technology.
- Develop entrepreneurship to minimize unemployment and underemployment.

Challenges of TECS in Nepal

The success of any training program depends on a broad range of circumstances within the country. However, training by itself will not be effective unless the conditions of deployment of learned skills are

favorable. This includes the political and economic climate of the country. The first and foremost precondition is the creation of jobs. Unless jobs are being created, training runs a high risk of being ineffective. Except these external conditions the TECS program has the following issues:

- Staff turnover: Due to lack of permanency of job and attractive remunerations the school is not being able to retain quality instructors.
- Fund management: Some of the schools are not utilizing properly the government fund and they are not able to create local fund as well.
- Program management: Program is not managed properly in some school. Principals are not able to make TECS Coordinator responsible.
- Lack of monitoring: Auditing and monitoring of the program is not done properly.
- Lack of Marketing and Networking: the management is not able to market the program for sustainability.
- Responsibility feeling from local agencies: there is lack of ownership feeling of local community towards TECS program.
- Lacking of infrastructure: Government is not able to supply training materials in time and the schools also lack the land and buildings for TECS.

Conclusions

Overall performance of TECS program is satisfactory. It has attempted to include socially deprived community. Although, enrollment pattern of the TECS program is not proportional to the population of dalit, janajit, disable as well as it can't balance the gender, the ratio is encouraging in comparison to the other educational system. There are lots of possibilities to bring the people of deprived communities in the main stream by making easy accessibility and affordability for them after expansion of the program in the coming future. Students' fee and grant from CTEVT are the major income source of these TECS program, which is not sufficient to sustain the program in most of the schools. Existing Infrastructures are satisfactory for the beginning but it requires further improvement in the pace of time and requirement. Existing recruitment system of staffs and provision of their facilities are in ad-hoc basis. It is necessary to adopt integrated approach to manage the humanresource in the long run considering their future career as well as moral boost up. There is need to develop a strong quality assurance system facilitated by the professionals and experts with significant improvement in examination and testing system, accreditation system, instructor/trainer's system, monitoring and supervision system and on-going professional support to teachers, curriculum and learning material development.

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Developing the strategies to strengthen Council for Technical Education and Vocational Training, in Nepal¹

- Shiva Shankar Ghimire²

Abstract

The growing concern of quality of the technical and vocational human resource needed for the development of new Nepal should be urgently addressed to strengthen council for technical education and vocational training (CTEVT). In the ever changing social and economic context, change in technology, change in education and training are inevitable. Therefore, CTEVT should adopt some of the strategies to strengthen its capacity and efficiency. The social and economic transformation of our country is only possible through the adequate & competent technical and vocational human resource development in identified potential sector of Nepal. CTEVT, as being national body for technical education and vocational training, needs to address workforce gap in emerging technologies and trades. Therefore, this paper tries to discuss some of the strategies that need to adopt by CTEVT for its strengthening.

Introduction

Technical and vocational human resource is the foundation for the development of a country. Nepal, a least developed country, has a huge potentiality for the socio economical development of hydropower, tourism, agriculture and forestry based green enterprises which demands Competent and qualified human resources with modern skills and knowledge. So, the competent and adequate numbers of technical and skilled vocational human resources are the major fundamental element for the development of new Nepal.

Arts and crafts skills were transformed from generation to generation as the way of life. However, these skills were imparted spontaneous and informal way (Belbase, 1981). The present TVET (Technical Education and Vocational Training) sector can be traced back to 1930 when an engineering school was established to produce skilled human resources (CTEVT, 1996). Vocational subjects like agriculture, cutting, weaving and handcrafts were included in Aadhar schools from B.S. 2004 to 2014 (CTEVT, 2010). These Aadhar schools were up-graded and converted into multi-purpose high school on the recommendation of national education conference. In terms of producing really productive craftsman, Butwal Technical Institute (BTI) and Mechanical Training Centre (MTC) were established in 1962 and 1963 respectively. To expend the vocational education, "New Education System Program (NESP)" was implemented (B.S. 2028 to 2037) throughout the country where vocational subjects were compulsory in all high schools. This program was failure due to mismatch of vocational subjects with local needs and culture, lack of trained teachers, lack of tools and equipment, lack of managerial capacities etc. (Sharma, 1999). After the failure of NESP and on the recommendation of National Education Committee, technical schools were started to establish as a separate wing of education "Directorate for Technical Education and Vocational Training". Karnali Technical School in Jumla was first such school established in 1980. The Council for Technical Education and Vocational Training (CTEVT) is the outcome of various efforts made by the government to produce basic and middle level skilled human resources in Nepal. The Council was formed under the "Technical Education and Vocational Training Council act of B.S. 2045 CTEVT (CTEVT, 1997).

Present status

CTEVT is the policy formulation and coordination body for Technical Education and Vocational Training programs in Nepal. Within the national frame works of development Policy Plan both Long Term and Short Term Vision of National Planning Commission of Government of Nepal, as per the Nepal Development Vision 2030, Concept

¹ This article is based on the proposal submitted to compete for the post of Member Secretary of CTEVT.

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paper (NPC 2011) have one of the guiding principle is “wider application of information, knowledge and technology promoting innovations” and Human Development Index (HDI) from 0.43 of 2011 is projected 0.68 in 2030, and one of the strategic intervention in Social Sector: Education is “Develop and expand skill based employment oriented training through quality technical and vocational education” means TEVT sector has priority.

In addition, Three Year Plan (NPC 2011) has clearly mentioned in its document that unemployed youths should be prepared for employment. To face this challenge CTEVT will be restructure creating two main streams one vocational training stream, and other technical education stream. Hence, from skills trade to higher level education opportunity will be created. In this context, with national broader development agenda CTEVT should proceed on with its policy, legislation and institutional mandate but demands gradual progressive reforms for delivery and quality outputs. As, It is a national autonomous body committed to the development of basic, middle and higher level technical and vocational human resources. It has an assembly with 24 members for policy directives and a governing board of nine members, which is known as the Council. The Minister of education chairs the assembly and the Council. The council has a full time Vice Chairperson and a Member-Secretary. The CTEVT Headquarters is located at Sanothimi, Bhaktapur. The system has about 932 personnel to carry out its functions.

Functions of CTEVT

- Formulate national TVET policy and advise the Government of Nepal concerning TEVT in Nepal,
- Coordinate and streamline country’s technical education and vocational training in Nepal,
- Conduct short-term and mobile training programs,
- Train TVET trainers,
- Develop curricula and instructional materials for TVET,
- Classify occupations, develop skill standards, test and certify skills.
- Assess and standardize curricula and training programs operating both in public and the private sector and accredit and recognize them,
- Take necessary action in developing basic and middle level technical human resources,
- Make arrangements for apprenticeship training programs,
- Prepare program and budget for CTEVT,
- Seek support from international development agencies by acquiring prior approval of GON
- Assure quality of TVET graduates

Vision, Mission and Goals

CTEVT currently has following vision, mission and strategic goals

Vision 2020 We believe, no Nepali should be unemployed due to lack of access to TVET programs.

Mission At CTEVT, skilled workforce preparation is our key responsibility

Goals CTEVT will

- improve the quality and cost efficiency of the TVET sector.
- fulfill its social obligations towards broad access and poverty alleviation.
- use “rate of employment” as its primary measure for training program success.

- become a more customer-focused, service-oriented organization.
- shift its focus from implementing to guiding, facilitating and regulating.
- contribute to the protection of the national job market (CTEVT, 2006).

Divisions of CTEVT

Under the direction of the Vice-chairperson and the Member-Secretary, CTEVT is moving ahead to achieve the above goals. There are eleven divisions through which CTEVT's activities are carried out. A Director is assigned to each division to oversee its specific responsibilities. Similarly, professional and administrative staffs support each division. The 11 divisions are; Research and Information division, Policy and Planning division, Curriculum Development division, Skill Testing division, Technical division, Accreditation division, Annex division, Administrative division, Training division, Polytechnic division and Examination Controller office.

Under council, there are 27 constituted technical schools, 73 Annex schools (Technical training unit in high school) and nearly 400 CTEVT affiliated private technical institutes. The annual intake in these institutions is about 70,000 (CTEVT, 2011). The intake capacity in Diploma/Certificate level is 12500, in TSLC level is 12500 and in short term training is nearly 45000 (CTEVT, 2011). CTEVT conduct skill testing and provides certificate to nearly 40,000 per year.

SWOT Analysis

Strengths

Nepalese TVET sector has the following strengths which CTEVT can harness for the improvement and development of training and employment system of Nepal.

- A national body (CTEVT) with adequate legal foundation and autonomy to streamline, strengthen and develop Country's TVET sector,
- The government has given adequate emphasis on the development and expansion of TVET sector,
- There are number of qualified professionals in the field of TVET,
- There is a structure network of TVET providers covering most of the geographical locations,
- A strong TVET instructors/professionals preparation institute, TITI in operation,
- Most of the TVET providers in the public sector posses adequate physical facilities and infrastructure,
- CTEVT has expertise in competency-based curriculum development, performance-based evaluation, teachers' training and supervision and monitoring.
- TVET policy passed by the government.
- Two regional offices set up

Weaknesses

- Irrelevance of the program to the national and international market needs.
- Low quality of CTEVT graduates.
- Expensive fees for TSLC and Diploma programs. (Private Institutes)
- Inefficient service delivery eg. (Affiliation process, examination result publication and certification, skill testing result publication and certification.)

- Poor expansion of TEVT opportunities especially in the remote places and disadvantage segments of the population.
- Low motivation of the staff and not fully accountable to own responsibilities.
- Lack of relevant human resources.
- Not clear role and responsibilities of the divisions and units.
- CTEVT is not yet established as a Leaders TVET organization among the stakeholders.
- Problem in horizontal and vertical movement of the graduate (National Vocational Qualification Framework)
- Centralized system of administration.
- Lack of local participation in the management of constituent institute.
- No periodic plan of CTEVT.
- Not functional faculty boards and subjects' committees

Opportunity

- High potentiality of agro-forest based green enterprises, hotel and tourism industries, and infrastructure development in Nepal which create larger market for the graduates.
- The economy of China and India is booming that additionally creates high demand for skill workers.
- Nationally and internationally recognized CTEVT
- Skilled workers have easy access to any countries.
- Increasing awareness among politicians, local bodies and general public.
- Structural change in school system, which opens the door for vocational education after grade 9 and it, can be up graded up to 12 grades.

Threats

- Political instability for long hampers the development activities which lead to shrink the domestic market for the skills workers.
- High skilled human resources captured the domestic labor markets from cross borders.
- Scatter funding in TVET. The government has allocated the budget in TVET through different ministries and other INGOs/donors do similar.
- Regulatory and implementation functions of CTEVT that will be questioned by private sectors, international partners and civil society.
- After full phase implementation of vocational stream in high school, present diploma and TSLC level programs will be at risk.
- Unfocused technical and vocational human resource development programs starting from basic level to higher level.

The strategies explained below will minimize the weaknesses and consolidate the strength of CTEVT. Similarly, the given strategies can foresee the opportunities and threats.

CTEVT Strengthening Strategies

The following strategies will be implemented gradually to address above mentioned problems, issues. These strategies will optimize the uses of existing strengths of CTEVT.

Quality assurance and service delivery

Quality assurance and service delivery is perceived not as a 'tool' or additional task that has to be performed. It is a process and attitude, which embedded in every activity performed by the staff. The issue of quality assurance and standardization of TVET program is not only the main concern of parents but also the concern of general public, policy makers, employers and other stakeholders. The quality assurance of private institutes operating with a strong profit motive is even more challenging.

The primary responsibility of the CTEVT is to make assure to the general public, the stakeholders, the employers, and the industry and business sectors about the quality of the graduates. Therefore, some strategies need to develop and implement to address the quality concern of CTEVT graduates and to ensure effective service delivery mechanism. These strategies could be;

Supervision, monitoring and evaluation

Regular supervision of the training institutes, training programs, facilities needs to be done at least twice a year. Supportive technical supervision will help the training institutes to overcome the weakness. Regular monitoring of the practical classes, "on the job training" and trainees evaluation system add another brick in the improvement of the quality of the graduates. Program evaluation and impact evaluation gives feedback for further planning of TVET programs. Supervision, monitoring and evaluation should be the backbone of the system, which contributes in the institutionalization of the training programs, enhances quality of the training and ultimately improves the overall quality of the graduates.

Accreditation of the training institutes

CTEVT needs to accredit to all its affiliated institutes within the five year of affiliation. There should be a benchmark of the training institutes. The accredited institutes need to grade (grading system) on the basis of facilities, training quality, exam results and graduates employment situation etc. After accreditation, the institutes will get logo of accreditation. The general public, students and parents will have the access of the information of the standard of the training institutes. They can choose the institutes according to their interest. The accredited institutes can be facilitated by CTEVT for getting overseas expert volunteers, tax resumption on vehicle, equipment and machinery import.

Examination system

Independent and autonomous examination system is one of the key factors to assure the quality of the graduates. The standard practical examination is more important in TVET sectors. The training institutes and the practical examiners should be accountable to their job. Computerized examination management needs to implement for fast and quality service to the students/TVET client.

Technical support (teachers' training)

CTEVT has to provide necessary technical supports to its constituted and affiliated institutes. One of the important areas of technical support is teachers' training. Most of the teachers are from technical and professional background. They know the contents, technical matters, but are not expert in transforming knowledge and skills to the trainees. Therefore, Trainers' Training (ToT)/teachers training is one of the responsibilities of CTEVT. Gradually technical teachers licensing system will be established.

Curriculum focusing on employment

Training courses are simply being developed without need assessment which is found far away from the need of national and international markets. Therefore, demand driven curricula are to be developed for quality training and addressed labor market accordingly. Similarly, Competency based curricula development and timely revision and management of teaching learning materials are major responsibilities of CTEVT. Centrally developed curricula may not address the local needs. Therefore, individual institutes should be allowed to adjust the local needs by creating some allied courses. In this sense, flexibility in curricula is a must for quality training.

Training programs are designed for both self and wage employments. Unless majority of people who receive training do not start their own enterprises, self-employment is impossible. Therefore, to prepare the trainees for establishing enterprises, the curricula must include entrepreneur skills.

Faculty board and subject committee

The provision of faculty board and subject committees in CTEVT will be established. All the academic concern of technical education will be settled through these board and committees. The board and committees will be involved in curriculum development/revision, examination, supervision, monitoring, affiliation and other academic issues.

Regulatory function

CTEVT formulate policies, coordinates, ensures quality and provides services to facilitate technical education and vocational training programs to produce basic human resources for economic development of Nepal (CTEVT, 1997). CTEVT's mandates and policies are more focus in its facilitating, supporting and coordinating role in the production of technical and vocational human resources (Sharma and Shrestha, 1990). However, at present, CTEVT is heavily focused in the implementation of training programs and training institutes. Almost 90 % of its resources mobilize in training implementation activities. Therefore, CTEVT became less effective in the part of accreditation, facilitation, coordination and quality assurance. As a consequence, CTEVT is not well established as a leader organization in TVET sector. The primary purpose of CTEVT is to facilitate the growth and development of technical and vocational human resources in the nation. Now, it is time for CTEVT to shift paradigm from implementation to facilitation role and regulatory functions. In fact, as being the apex and regulatory body of TVET sector in Nepal CTEVT must move towards the changed role, however, without its own model institutions, there may be the question of authenticity and credibility in the sector.

Strengthening of constituent institutions

The constituent institutes should be provided autonomy gradually based on the capacity of individual institute management. CTEVT will focus on training competent human resources of the institute and encourage them to move for creating public-public/private partnership (PPP) modality at local level. Local authorities, local industries and communities will be encouraged to involve in the institute management for their ownership. The focus for linkage between industries and institute should be given priority for addressing the industry needs.

TVET expansion & development

Unemployment due to the lack of appropriate education is a big problem in the country. Now, it has been realized that TVET is the right type of education to mitigate the unemployment issues. Therefore, massive expansion of the TVET sector is the need of the day. Regional offices of CTEVT with all type of expertise and resources will be set up with top priority and in regions; polytechnics with multi-trades in a large scale will be established and or upgraded. In zones, industry based polytechnics will be established or upgraded. Similarly, in urban areas of districts, technical schools/Technical and vocational education at community schools (Annex, 9-10) will be expanded. Moreover, local authority and communities will be encouraged to

establish vocational training centers at rural part of the districts and constituencies. For the expansion of TVET scientific mapping will be carried out. Based on the mapping, private sector will be encouraged for establishing TVET institutions in the remote and disadvantaged part of the country. For such initiative, CTEVT will provide the grant system. The backward areas where private sector remains reluctant, CTEVT will expand its own presence. CTEVT will focus on various types of operational modalities such as public-public, public-private, and public-trust, cooperatives and NGOs. The facilities and grant will differ as per the social obligation born by such institutions.

Transparency & Accountability

Currently, CTEVT is on top of news, media for both good and bad information. This is happening because it is the priority and concern of all people since it has already been realized that without skilled human resources either we can develop the country or we can come out of vicious circle of poverty. Therefore, transparency and good governance of CTEVT is the prime issue of the day. To address the issue, citizen charter will be displayed. Public auditing will be done in a certain span of time. Regular meet the press will be organized. Electronic management will be focused and brought into action. Institution affiliation process will be made simple, clear and transparent through web-sites. Exam and skill results will be made fast through computerized system. Personnel of CTEVT will be assigned with clear cut job responsibilities and reward and punishment system will be enforced strongly. For career enhancement of personnel will be made transparent such as timely recruitment, transfer and promotion (predictable career).

CTEVT fund (income and utilization)

The government funding in TEVT sector is scattered. Different ministries get fund for TVET. There is not a quality assurance mechanism and compulsory skill testing system for the training conducted by different ministries and agencies. NGOs, INGOs and donors are funding training programs in their own way. The budget for TVET in different ministries, NGOs, INGOs and donor fund is really big. However, the output is not optimistic. Therefore, it is the need of the day to bring all budgets funding into one door system (TVET policy, 2064 & 2069).

To minimize the government investment, private sector will be encouraged to expand the TVET system. So far constituent institutes are concerned, different modalities will be applied and different sources will be identified at local level and minimized the CTEVT investment. The fund of CTEVT and its constituent institutes for the welfare of the personnel will be utilized in priority project of government such as hydro-project which will ensure sustainability as well as it will become more productive. Local governments will encouraged to invest in training institutes to develop human resources at local level.

Organizational reform

TVET policy 2069 has pointed out for restructuring of CTEVT. The roles and responsibilities of divisions are overlapping and causing problem for smooth administration. Therefore, CTEVT will be restructured into two major streams; Technical education and vocational training. Training Institute for Technical Instruction (TITI) and National Vocational Qualification Authority (NVQA) will be semi autonomous body. Similarly existing divisions will be renamed with clear role and responsibilities. There is a debate whether CTEVT should be converted in to Technical University. However, the consequences are yet to be studied.

The national, regional and international labor market is constantly changing and reform must be so designed that it can anticipate and respond to shifts in demand/technology in an effective way. The changes/reforms of CTEVT are not once and for all changes; the system must be flexible, responsive and continuously adaptable. The efficient research and information should back-up those changes. Periodic planning of CTEVT programs (ten years, five years and yearly) will be done and implemented accordingly.

As the conclusion, the emerging need, demand would be address with necessary restructuring of CTEVT and redefining functions and goals. Two stream of TVET (Technical education and vocational training) needs to manage separately with adequate studies and homework.

Access, Inclusion and Integration

The expansion of TEVT programs to reach to the needy population is obviously urgent. There are some initiation in expansion, inclusion and accessibility of TEVT programs. Technical and vocational training programs have already been started in resourceful general high school as a separate unit called "Annex Unit". Massive expansion of annex programs increase opportunities and accesses of technical and vocational training at local level in local environment. The technical and vocational stream will start at grade 9-10 in some selected high schools as a piloting basis. If this scheme appeared effective, massive expansion of this scheme will be done. Special programs of free training for identified disadvantaged groups of people could be organized with the collaboration of government, NGOs, INGOs and Poverty Alleviation Fund. Similarly, scholarship scheme could be developed to address these issues. Local government and community groups could be encouraged to establish community technical schools, where local needy youths get chance of training in own communities at low cost.

In Nepal, educational authorities do not recognized traditional inherited skills, self learned skills, skills impart from trainings. Therefore, development and implement of "National Vocational Qualification Framework" (NVQF) would be mile stone in mainstreaming of school dropped out and non schooling youths. NVQF could have provision to make horizontally and vertically to ensure linkage between educational streams at different level. The educational and skills gaps can be filling up with the provision of bridge courses. Exiting skills testing system could be the foundation for NVQF and the capacity need to strengthen to meet emerging demands.

About 80 % of schools going age children enter into school education system. Out 80 % enrolled students in grade one, only 15 % of them complete high school study. Remaining students were dropped out from grade one to ten. Almost 80 % of the youths, who do not complete high school need vocational training. Therefore, the emphasis of TVET needs to gear toward innovation in vocational training. The huge number of school dropped out youths neither gets job nor self employed. As consequences, they make social conflicts in one way or others. As a result of the conflict, they remain within a vicious circle of poverty, conflict and poor health. TVET need to intervene and break this circle providing them alternative solutions for their lively hood. The expansion of vocational training with locally flexible and diversified curricula will facilitate income generating activities. CTEVT could encourage the private sectors to establish vocational training institutes in the remote areas by making affiliation processes simple and cost effective. It is the need of the nation that the NGOs/INGOs working in TVET sector should provide support to make vocational training accessible, affordable to the people who are in urgent need particularly disadvantage groups and people living in the remote areas.

TVET Knowledge Management

The experiences and knowledge of CTEVT will be documented. Studies, researches, international experiences and own knowledge & experiences will be disseminated through publication and web. Management information system, training information & labor information system will be made functional and up-dated will be done regularly. Decision will be made depending on the information and guided by the system. The best performance awarding system will be initiated, national award will be provided to the best performing institute, trainee and employee. Well equipped regional learning centre will be established in the regional office of CTEVT. Similarly, CTEVT will be developed as a national "hub" for TVET research and development, TITI and Research division would work jointly to develop this national hub. Networking, national/international promotional activities will be carried to bring CTEVT in global scenario. Hence, CTEVT public relation will be improved.

The approach of network, teamwork and hard work to implement above explained strategies and strong will-power of the leader will certainly bring change in CTEVT.

Conclusion

Technical and vocational human resource is one of the essential factors for the social and economic transformation of Nepal. The challenge for CTEVT is how to make TVET programs relevant to the changing need of technology and similarly, CTEVT should assure quality of training, provide access & equity to the people in need. CTEVT strengthening strategies identified on the basis of SWOT analysis are essential to make Nepalese workforce able to harness the emerging job opportunities in the national and international market. CTEVT needs to consolidate its strengths and the areas of weakness should be improved in the initiation of dynamic leadership through teamwork, network and hard-work. If CTEVT top management would be responsible and accountable, the foreseen opportunities can easily be grasped and threats can be minimized.

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Non-formal and Informal Skill Assessment and Certification System in Nepal

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Abstract

This paper, first of all discusses the perception of the individuals regarding the words formal and informal and pinpoint the current situation of non-formal and informal workers accessibility as well as equity in access that will help in framing the skill assessment and certification system. Then it attempts to analyze and describes current activities and future policy of National Skill Testing Board (NSTB). The paper has been concluded that framing of assessment system for non-formal and informal learning achievements is ambitious efforts. It is important to consider not only individual and institutional level, but also to appraise economical, political and cultural context of every country.

Context

Being 'formal' or 'informal' is rather a perceived psychological state of mind than a physical condition. It is more a matter of perception or feeling of the individuals or social groups than a condition of overt employment, education and training. Interestingly, the state of being 'informal' does not always originate from the sources or causes such as profession, race, ethnic group or sex. Rather, the concept of being 'informal' refers to the condition of denied access to resources and means needed for a self-sufficient living. It may also be because some groups exist as negative stereotypes to other segments of society. Negative stereotypes of some social groups may be reinforced by the schools, social institutions, and media and by other segments of society as well. The informal sector which falls outside the scope of planned development effort and thus remains uncared in terms of productivity, social security and, of course, statistics. In Asia, 50-80 percent of the non-agricultural employment is under the informal economy (Kundu and Sharma, 2001). It is increasingly important to study and appreciate the impact of the informal sector to better understand, predict, or promote effective changes in national level policy.

The Number of workers in the formal sector is small and is flowing towards an informal structure of employment. The in-formalization of workplace and workforce has become a common phenomenon. Land has become increasingly insufficient for supporting livelihood though it is still the major asset and source of employment in Nepal. Both internal and international migration has made the working poor more vulnerable to exploitation and loss of security has become common. Gainful informal economic activities have become urgent in order to support their needs. The market has become less and less accessible to the working poor. Hence to make it people friendly, new initiatives and support for the informal economy are essential. The high diversity within the informal economy begs for better working conditions by ensuring minimum standards to all. The creation of decent jobs and upgrading of conditions and opportunities for those already in the informal economy must be the key objective.

Informal employment is understood to include all remunerative work – both self employment and wage employment that is not recognized, regulated or protected by existing legal or regulatory frameworks and non-remunerative work undertaken in an income producing enterprise (ILO, 2002). All small enterprises are categorized as informal include the production of ghee, honey; woolen goods like radi, bakhu; forest based products like bamboo mats, ropes; and carpet weaving and ready-made garment. In mining, there are unregistered informal operations in the form of gravel, stone, lime extraction and sand extraction. The care

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economy is a new term highly popularized these days and is one of the much highlighted components of the informal economy. Household and care economy activities are now gradually being recognized as economic activities; and the Population Census 2001 in Nepal has taken these activities into account. The informal economy is important in Nepal because it is a growing part of the local and national economy. Although incomes are low, they are collectively large and valuable and it contributes significantly to employment.

The tradition of family apprenticeship with informal education has been keeping it going for several centuries passing the knowledge and skills from one generation to another. As the traditional family business is no longer attracting the new generations, the old family apprenticeship system is dying. There is now a great risk of losing the age old valuable knowledge and skills, exist only some limited personalities. Human capital is viewed as an endogenous factor that drives growth through multiple channels. For developing countries, not on the technological frontier, large initial stocks of human capital enable them to adapt to new ideas readily and acquire technological capability. Endogenous growth theorists thus claim that the main engine of growth is the accumulation of human capital and the main source of differences in living standards among nations is differences in human capital (ILO, 1998).

Globalization of the labor market means that workers have greater mobility across borders, yet opportunities are not uniform from one country to another or in different segments of society within a given country. Equal pay for work of equal value is a commonly expressed goal that is seldom put into practice, even in so-called developed countries (Jackson, 1989). Technical education and vocational training (TEVT) is often regarded as inferior. Many people therefore dismiss promising and meaningful career paths in areas where employment demand is greater, simply because of the stigma attached to technical and vocational occupations. Education systems continue to be directed primarily towards preparation for university education, even though the majority of students move directly into the labor force (Morris, 1996).

Socially identified targets and balanced social interests must become one of the cornerstones of an up-to-date TEVT policy. In determining the modernization objectives and its implementation stages it must be clearly spelt out in whose interests the changes are introduced (students, families, teachers, educational institutions, other social institutes, economy, the state and society at large) and what reciprocal measures are required on the part of the interested stakeholders and structures. A developing society needs well-educated, moral and entrepreneurial people capable of taking independent decisions in a situation of choice, cooperative, mobile, dynamic, constructive citizens, ready for cross-cultural interaction and with a sense of responsibility for their country and its social and economic well-being. The TEVT system of Nepal is not yet oriented towards labor markets and future needs of development, which seriously affects its competitiveness. Under-employment and unemployment are widespread in all segments of the population; especially Nepalese youths are affected from it (ADB, 2011). Interaction between TEVT and the world of labor is impossible without an effective system of job placement for graduates and a targeted contract-based training. ADB (2011) claimed that Labor laws in Nepal, the most rigid in South Asia, are major block to job creation and need to be reformed to facilitate quicker recruitment and release of workers.

Employability is about work and the ability to be employed. The capacity and capability of gaining and maintaining productive work over the period of one's working life. A person's skills and interests are oftentimes developed through everyday living, work history, education in the classroom, special training, and in hobbies. Skills development depends on many different actors, including the private sector, non-for-profit actors, NGOs and civil society; as well as the large number of government ministries delivering skills based education and training.

Nepal will not develop without developing the informal part of the economy because the formal sector has been growing very sluggishly in comparison to the growing labor force participation in the overall economy (ILO, 2004). Many workers in Nepal have been performing formal and informal activities simultaneously with one or the other as the main job. Programs need to be developed that focus clearly on locally and regionally

evolving economic, social and cultural needs. A rush to adopt alternative systems often means that local needs, values and ways of doing business are relegated to second place and that informal learning and informal economies that produce transferable skill sets are overlooked.

The informal economy, by definition, is unorganized. This is true not only in terms of production but also in terms of the organization of workers. It is not that informal workers cannot organize themselves or are prevented from being organized, but there are some difficulties in their being organized. The most vexing issue is that of identifying informal workers who are, especially if they are women, still invisible, geographically dispersed and moving in and out of different economic activities. Identity cards may be issued, but such cards are generally enterprise/occupation based and many informal workers are multiple job holders with no fixed workplace or occupation. Identity cards can be issued through skill testing. This would help to give them visibility and legitimacy. By virtue of their invisibility and lack of organization, they fail to be counted and are overlooked in important consultation processes. An area-based organization of informal workers (e.g. the Skill Certificate Workers' Association) may be one acceptable solution which has not yet been considered in Nepal as most organizations are enterprise/occupation/ ethnic based. Since informal workers do not have the same legal rights as their counterparts in the formal economy, there is all the more need to organize themselves into cooperatives or area-based organizations.

TEVT make greater efficiency in production and increase the wage-earning ability of youth-both boys and girls- by helping them move from non-educative occupations as unskilled laborers to positions as skilled workers. The evidence shows that vocational education emerged as a result of a real concern for youth and of the failure of the schools to provide an educational program that was both attractive to them and fitted to their needs (Miller, 1985, p.15). Labor force survey (CBS, 2009) has depicted that about 47% of the total 15 years and above population (14.4 Millions) has never been to school. Moreover, 10.75% of the labor force had below primary level of education. Similarly, 13.49% and 8.87% of 15 years and above population had only primary and lower secondary levels of education respectively. Because of such situation, Nepalese workers are compelled to work as unskilled labor with lower wage in the national or international labor market. The majority of the out-of-school youth comprise of women, disabled, marginalized groups from the remote and isolated rural areas and conflict victims, who have been deprived of general education and technical vocational trainings (Nepal, 2005). TEVT comprises of all fields of initial and continuing Technical and Vocational Education and Training. It covers all kinds and levels of trades offered/to be offered in Nepal.

The establishment of Council for Technical Education and Vocational Training (CTEVT) by Technical Education and Vocational Training Council Act (1989) and amended in 1993 and 2006, the adoption of TEVT Development project in 1990, establishment of Training Institute for Technical Instruction (TITI) in 1991, Vocational Training and Community Development (VTCD) pilot project in 1992, TEVT Policy-2007, Labor and Employment Policy (2006), Skill for Employment Project in 2006, and Enhanced Vocational Education and training Project (2011) with the support of numerous external donors rejuvenated skill development in Nepal. However, while access has improved, quality has declined and large numbers of informal and non-formal sector youth are still not in TEVT certification system.

The aim of this paper is to pinpoint the current situation of non-formal and informal workers accessibility as well as equity in access that will help in framing the skill assessment and certification system in the future. The reason for choosing this subject is that the majority of Nepal's citizens leaves school early and are not trained from formal institutions to get gainful economic activity. Various international communities are interested to strengthen Nepal's skill assessment and certification system in support of its national TEVT policy. The paper analyzes and describes current issues and future policy strategies associated with the role of NSTB and TEVT policy of Nepal. Within the scope of the qualitative research method, the information was gathered through the examination of the written documents. In order to collect the data, the documents related with informal economy and workers, skill testing and certification system of Nepal were examined with the method of descriptive analysis. The paper is concluded based on the information of the text and authors'

individual experiences and observation regarding skill testing and certification system of Nepal. The authors believe that it will help in understanding the situation and problems in accessing skill testing and certification system of Nepal.

Assessment of Non-formal and Informal Learning

A person who has acquired new competencies in the working place, during the courses, seminars or independent work is given a possibility to carry out a certain part of program or module independently (if it is determined that this kind of knowledge is necessary in order to acquire a qualification), take qualification examinations on non-resident basis and acquire a qualification certificate or diploma recognized by the state. This opportunity, unfortunately, includes only TEVT/workforce education. Different TEVT service providers (formal institutions, non-formal education schools, universities and NGO) have to help learners in their educational path which has to be well-thought over, foreseen, unified, as well as flexible. Both institution and individual are responsible for this task. Evaluation is the systematic exploration and judgement of working processes, experiences and outcomes. It is something more than monitoring. Evaluation involves making careful judgements about the worth, significance and meaning of phenomenon. It involves, for example, developing criteria or standards that are both meaningful and honour the work and those involved. It operates at a number of levels. The result has to be an emphasis upon negotiation and consensus concerning the process of evaluation, and the conclusions reached.

Through all the economic and social development debates, it has been emphasized that peoples and their working and lifelong learning skills are a central factor in development. Framing of assessment system for non-formal and informal learning achievements is ambitious effort to integrate different frames including formal and informal learning. A skills assessment test can be a valuable tool for learning where proficiencies, interests and even weaknesses lie. The purpose of skills assessment is to help determine where a person's abilities lie in relation to certain occupations. In recent years informal educators have been put under great pressure to provide 'output indicators', 'qualitative criteria', 'objective success measures' and 'adequate assessment criteria'. A career guide can assist with general job descriptions for specific job fields and industries, average wages, the educational or training requirements needed and the potential for job growth.

The basic elements which are essential in analysis of non-formal and informal learning assessment and recognition systems module are the following:

- *Legal basis* which regulates processes of non-formal and informal learning in the country. Legal basis establishes assumptions for non-formal and informal learning assessment and recognition system function and integration into educational system of country.
- *Standards of vocational training.* Standards remount from the world of work and employ as significant digest of vocational competencies.
- *Social partners.* They represent educational institutions, labor market centre, and voluntary organizations being interested in non-formal and informal assessment. The engagement of social partners in the development of assessment and recognition systems of non-formal and informal learning is different in various countries; however, social partners are mostly involved in determination of occupational standards. In separate cases, social partners are directly engaged in the assessment process, examination boards, etc.
- *Consultants and assessors.* Activity of consultant is very important in the first step of person's competencies assessment process. Consultant helps candidate during preparation for assessment.

- *Assessors* function is to assess person's competencies applying various methods of assessment. Assessor should have special preparation in the area of non-formal and informal learning assessment.
- *Assessing methodology.* Validation methods should be recognized and used in all the regions of a country choosing the one which suits the person best or which is indicated by an assessor. They can be as follows: dialogue based assessment, professional skills assessment, portfolio, self-evaluation, test, etc.
- *Official validation* of non-formal and informal learning. National non-formal learning recognition system will be validated on the job site only when the benefit of the methodology will be obvious both to employers and employees. The success of validation depends on how easily the methodology can be comprehended and applied.

Considering the levels of skills and technologies in informal activities, the training needs in the informal economy are substantial. The lacks of skills are associated with low productivity and efficiency resulting in lack of competitiveness. The formal sector needs to support the informal sector by way of providing concessionary training in areas of technical skills, management and accounting. Quality and adequacy are important elements in training. Informal businesses are characterized by the mixing of enterprise and traditional skills, which blurs the economics of informal enterprises. So skill training is important. Access to training, technology and education; concentration at lower level jobs, poor working conditions; risk to personal security, limited market access, low income and progressive loss of proprietorship in the informal sector provide further challenges to women.

In the area of vocational training and certification in Nepal, the CTEVT by having training facilities in several locations of the country, has been providing required services. However due to the lack of market friendly and fast income generating character of the training is under question. Current efforts by the Government are basically focused on skill and vocational training and promotion of micro-finance and micro credit activities. Indeed, very few welfare programs are in operation. These initiatives have been launched through the Ministry of Labor and Transport Management; Ministry of Industry, Commerce and Supplies; Ministry of Women, Children and Social Welfare and the Ministry of Agriculture and Cooperatives. Coordination is always the major obstacle even among the Ministries in their activities.

In terms of equity, skill testing is one of the most powerful tools to open up economic chances to those who had been disadvantaged all their lives. Irrespective of education and formal training it offers recognition to those, who had picked up their occupational competencies on-the-job or during non-formal or even informal modes of learning. The effect is not only that hitherto disadvantaged workers can obtain official recognition which is nowhere else available, but also that one an entry point into assessment was done successfully, pride and self-confidence may increase for the workers, so that further upgrading becomes imaginable for them – and eventually a reality. Vocational training standards provide the basis for validation of learning at the moment; in the light of the fact, those standards have been already started to develop in Nepal. The Nepal law regulations permit valuation of competencies acquired through non-formal and informal learning. Demand of assessment of competencies being acquired through non-formal and informal learning is growing up in Nepal. Employees, employers and vocational training institutions are the main initiators to start recognize non-formal competencies.

Skill Testing and Certification System in Nepal

Skill testing and certification activity was initiated by a government decision to establish a national minimum standard of competence in a particular occupation in Nepal in 1983 through an autonomous body called Skill Testing Authority (STA). That decision was usually, but not invariably, based on the consideration of the occupation's importance in relation to the nation's economic objectives, or that public health or safety would

be jeopardized if certain minimum standards of competencies are not met. After the CTEVT was constituted in 1989, the STA was placed under the umbrella of CTEVT as Skill Testing Division (STD), which introduced a system of occupational classification, development of skill standards, skill testing and certification based upon the guidelines of Asia Pacific Skill Development Program/ International Labor Organization (APSDEP/ILO). Since then the division has been functioning as the Secretariat of NSTB.

National Skill Testing Board (NSTB)

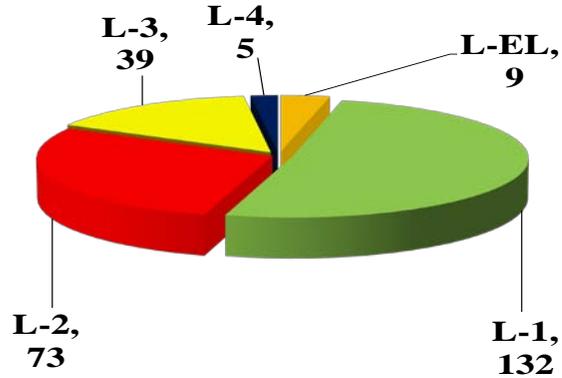
NSTB has 16 members, among them 50% representative from the private sector and 50% from government sector. The Member-Secretary of CTEVT is the chairperson of the board. It has developed National Occupational Skill Standards/Profiles in 258 different occupations within fiscal year 2011/2012., and certified 122,179. NSTB provides workshops for different technical sector experts, teachers/instructor, managers and entrepreneurs to help them understand the occupational skill standard (OSS)/occupational profile (OP) and guide them in developing/conducting quality assessment instruments. NSTB demonstrated its capability to earn sufficient enough to manage regular skill tests through its own earning.

A key feature of skill assessment in NSTB is the Recognition of Prior Learning (RPL). RPL is a form of assessment. Many workers have been working in an industry, business, company and project for many years and have gained many skills. They can have these skills formally assessed and, if the right skills (as described in the OSS/OP) can be demonstrated, and will be awarded a certificate. This is a very powerful tool and does set Nepal's NSTB apart from others. However, RPL is sometimes misunderstood and incorrectly used. RPL is a form of assessment, and should be undertaken using summative assessment. Typically, a worker is assessed against the units of competency in an OSS/OP, and if successful awarded the skill level certificate. If however, the worker is unable to demonstrate competency, they can be provided advice for gap and encourage giving reassessment which will enable to demonstrate competency. School students generally are unable to achieve RPL because they haven't been in the workforce for sufficient time to demonstrate competence.

The advantage of skill testing is: proof of achievement in individual's occupation/evidence for qualification; freedom to move more freely in response to career opportunities; increased opportunities to join labor organizations; get more and efficient training programs; increased pride and status; increase working confidence, employment opportunity, promotion opportunity, and bargaining power for terms and condition for employment; easy access to get loan; use certificate to acquire further skills; and move from informal to formal. Occupational Skill Standard is written specification of the practical skills, underlying knowledge, and experience demonstrated by an individual in a particular occupation. The NSTB already developed OSS/OP in different sector in different level. The following chart shows the number of OSS/OP developed by NSTB.

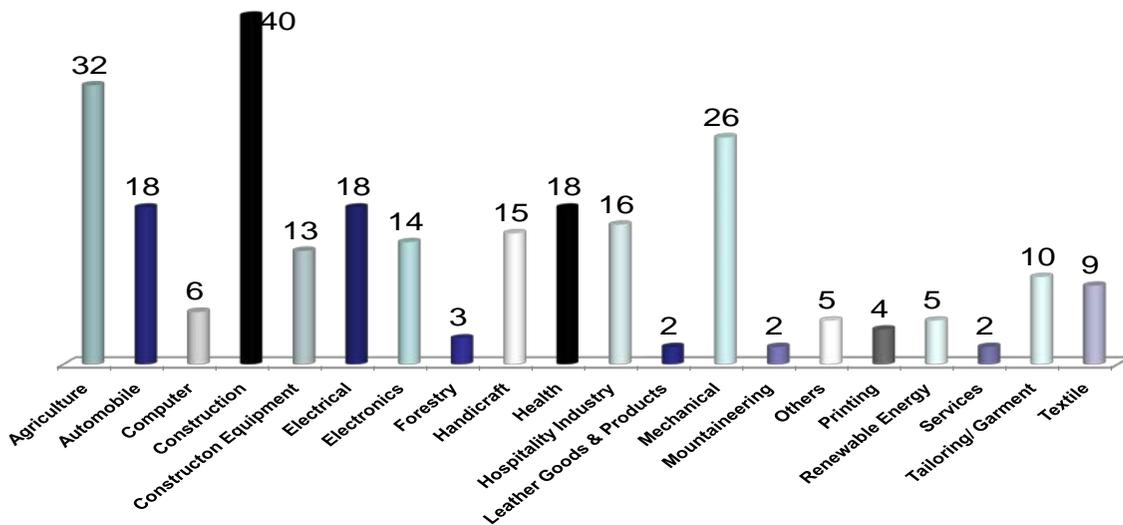
**Level wise Occupational Standard
(F.Y. 2011/2012)**

S.N.	Level	OSS/OP
1	L-EL	9
2	L-1	132
3	L-2	73
4	L-3	39
5	L-4	5
Total		258



Source: NSTB

**Sectoral Skill Standard Developed
(F.Y. 2011/2012)**

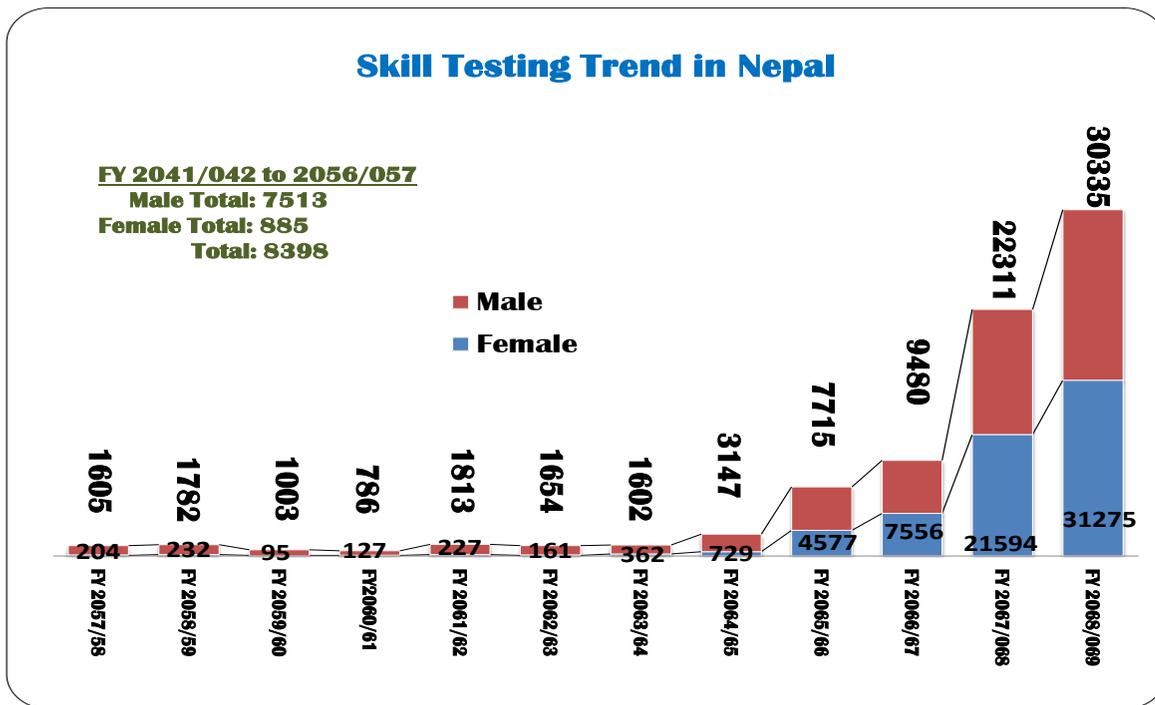


Source: NSTB

The purpose of the skill test is help to determine where a person's abilities lie in relation to certain occupations and reflect critically on the effectiveness of personal and professional practice to contribute to

the development of 'good' rather than 'correct' practice and improve performance of the labor markets in the formal and informal sectors of the economy.

Skill Test is basically a performance test (in some occupation written test also) conducted on the basis of approved OP/OSS and assess by qualified/certified assessors. Performance test is purely practical test. It covered all duties and critical task of OP/OSS without any repetition. Performance projects are evaluated by three expert assessors from three different organizations. The test item includes: real practical project/assignments as much as possible; simulation project, when real practical is not possible; and viva will be incorporated optionally or if not covered by real project or as necessary. Written test should cover supporting technical knowledge of duties and tasks of OP/OSS and also which are not covered by performance test. The following chart shows the trend of skill assessment and certification numbers of Nepal by NSTB.



Source: NSTB

Skill tests are open to all skilled workers and crafts persons pass-outs from pre-employment vocational training wishing to facilitate their transition to work; experience workers (employed or unemployed) lacking an official certification; and workers who, at the end of in-service training, seek an upgraded or additional certificate.

The Nepal TEVT policy approved on June 2012 indicates that the National Skill Testing Board (NSTB) is to be gradually transformed into the National Vocational Qualifications Authority (NVQA) which is currently under the CTEVT. NVQA will establish with the range of powers and functions that would enable a coherent development and management of the National Technical Vocational Qualification Framework (NTVQF). NTVQF should provide a clear basis for individuals to be able to move up the levels. It also requires that the

NTVQF include arrangement of recognition of the knowledge and skill learnt from TEVT towards the equivalence with general education. However, qualifications standards must be defined on the basis of the industry and professional skills required. Qualifications must be supported by up-to-date curricula. The curricula should be regularly reviewed and evaluated by stakeholders to ensure that they are current.

Conclusion

The NSTB is handling current demand in only a satisfactory manner. The skill testing system needs to be updated and made capable of testing all types of skills. The skill test systems need to be extended to different parts of the country by developing the necessary physical and educational infrastructure. It has to increase quality of services. It is not able to reach to the general mass due to number of reasons – staff, resources, test centres, standards etc. NSTB should have established networking among various stakeholders. TEVT curriculum development works and occupational skill standards development works should be done in parallel as there is a strong connection between both. A standardized, trustworthy certification system, backed by the NVQF, needs to be developed to indicate that the learners have achieved the required skills. The certification should be used by employers in selection of employment.

The issue of assessment method reliability and validity criteria is still a point for discussions in the initial stage of non-formal and informal learning achievements assessment system development. It is necessary to consider on the following priorities for the development of non-formal and informal assessment system in Nepal: revision of the existing laws, regulations and agreements; methodology for assessing non-formal learning; training of consultants and assessors; validation of non-formal and informal learning, including learning in workplace. Framing of assessment system for non-formal and informal learning achievements is ambitious effort to integrate different frames including formal and informal learning. It is important to consider not only individual and institutional level, but also to appraise economical, political and cultural context of every country.

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Gap between Theory and Practice of Curriculum in TVET of Nepal

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Abstract

This Article outlines what form a curriculum should take if it is concerned to promote a genuine form of TVET for a developing country. Schools have always been associated with the idea of a curriculum. But what actually is a curriculum, and how might it be conceptualized? It needs a clear concept of understanding curriculum. Curriculum itself is a confusing word gives several meanings for different scholars. Therefore this article starts with conceptualizing curriculum and tries to shape a clear image of curriculum. Describing theoretical perspective of the trends of curriculum development and comparing it with the practical trend of curriculum development in TVET of Nepal is the purpose of this article. It will further focus on gap between theory and practice of curriculum development in TVET of Nepal by raising various questions related to the different issues of curriculum. The author summarizes and explains the main aspects of curriculum theory, and shows how these can and should be translated into practice. At the end it will be wrapped up by providing theoretical perspective for future modification in practice of curriculum development in TVET of Nepal.

Conceptualizing Curriculum

The birth of curriculum is generally acknowledge to have occurred in 1918 AD with the first published book exclusively devoted to a discussion of curriculum by Bobotts (Bowers, 2006). Afterwards it has been defined by a number of scholars and includes several definitions. It has several meanings. Some of them have given notoriously ambiguous concept of curriculum. But all the definitions could be arranged in three classes. Prescriptive type of definitions of curriculum define curriculum as body of knowledge need to take place. Descriptive curriculum describes that curriculum is not merely in term of how it ought to be but how things as in the real class room. It provides experiences. On the other hand some define curriculum as the plan made for learning and the actual learning experiences. It captures the essence of both prescriptive and descriptive definitions. In this way definitions are vague and subjective. All the definitions clearly ignore the school's social role in the distribution of different forms of knowledge. Kerr defines curriculum as, 'All the learning which is planned and guided by the school, whether it is carried on in groups or individually, inside or outside the school. (Huenecke, 1982) mentions all the experiences provided by the school, college, university or agencies, which are designed to foster student learning is another simplistic definition of curriculum. In this way curriculum is both subjective and objective. Dall'Alba (2005) describes curriculum helps teachers develop strategies, activities and techniques that stimulate 'a desire to learn, promotion of learning in face-to-face and/or technology-mediated formats, assessment of student achievement and evaluation for improvement of educational practice' (p363). In this way it is a planned document of school activities to cultivate student's learning and equip students to get well fitted in the world of work.

Curriculum is more than Syllabus

People always confuse with the word curriculum and syllabus. In reality curriculum has three dimensions. Those are the needs of the students, the content (in terms of specific performances) and instructional methodology (Taba, 1962). On the other hand syllabus has only one dimension in the sense it merely presents the content or the subject matter to be studied. In this way curriculum is more than syllabus and syllabus is a part of curriculum.

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Curriculum as Perspective

A good curriculum provides different view points. Knowledge is the center of curriculum. Therefore curriculum must include the source of knowledge and clearly describe, whose knowledge counts in teaching learning activities? The way curriculum conceives the notions of good (and bad) teaching is the second perspective of curriculum which describes who will benefit from a particular teaching method? Similarly the third perspective includes possible orientations of a curriculum to judge good and better learning. That will be prescribed as strategies for assessing student learning. Who will be empowered via those methods? The fourth perspective of curriculum is ideology(s) to be promoted. Who is in the control?

Perspectives of Curriculum

There are two perspectives of curriculum. As Smiths (2000) describes, the first perspective is curriculum as a document, a set of materials, and content outlines. It is a body of knowledge the student needs to know. The second perspective is curriculum as unconscious and conscious performance in context. The student performs at real situation. In this way curriculum is both as a noun and as a verb.

Approaches to Curriculum Development

Approaches reflect the developer's view of reality, philosophy, history, psychology, social issues, and the domains of knowledge. Each curriculum describes several and different approaches. As Taba (1962) writes approaches impact on the design of the curriculum, the role of schools, administrators, teachers, learners, curriculum specialists, and requirements for implementation and evaluation. There are two classifications of Curriculum Approaches. Those are:

1. Technical/ Scientific Approach
2. Non Technical/ Non Scientific Approach

Technical/ Scientific

Technical/ scientific approach presents blueprint that includes goals, objectives, and step-by-step sequencing of content, activities, and learning outcomes (Taba, 1962). It is a written guideline of what, When, where, why, how and by whom to whom to teach. It also determines the criteria and methods of evaluation of teaching learning activities. It uses instruments and empirical methods in preparing a blueprint with well defined elements orderly-sequenced procedures and quality control measures to increase the probability of success in its implementation (Tyler, 1969).

Non-technical-Non-scientific

Nontechnical-Nonscientific approach considers that the curriculum evolves rather than being planned precisely. Wiles & Bondi (2002) mentions curriculum focuses on the subjective, personal, and aesthetic. It stresses not the outputs of production but rather the learner, especially through activity-oriented approaches to teaching and learning. Advocates of this approach might well identify themselves as postmodern (i.e., the world is viewed not as a machine but as a living organism). They believe subject matter has importance only if student can find meaning in it for himself or herself.

Ways of approaching Curriculum theory and practice

Philosophy is the way people perceive the world. It provides personal systems of beliefs and values by which philosopher determine the social values and purpose of education. In curriculum, philosophy helps for providing framework for curriculum development. Curriculum theory is the manner in which the philosophy of certain approaches to advancement and enactment of curriculum is described. Within the wider field of curriculum studies, it is both the analysis of the curriculum historically and a way of viewing contemporary

educational curriculum and policy decision. Kalim (2009) mentions four manners to approach curriculum theory and practice. Those are:

1. *Curriculum is seen as a body of knowledge to be transmitted.*

Many people still compare a curriculum with a syllabus. In reality syllabus means to the point statement, a table of the contents, the contents of a discourse and the subjects of a series of instruct. It is connected with courses leading to examination. Curriculum theory and practice focuses on syllabus is only concerned with content. Education is the process by which these are transmitted to students.

2. *Curriculum as a product*

Curriculum is an effort of producing certain level of student. It consists in the performance of specific activities. It shows the abilities, forms, habits, appreciation and attitudes that people need.

3. *Curriculum as process.*

Looking at curriculum as a process implies how teachers, students and knowledge interact. Curriculum has to be seen in terms of what essentially takes place in the classroom set up and what people do to prepare and evaluate.

4. *Curriculum as praxis.*

The praxis model on the other hand, conveys these to the centre of the course and makes an unequivocal dedication to emancipation. Therefore, action is not merely informed, it is also committed. As Taba (1962) mentions that, curriculum is not merely a set of plans to be implemented, but somewhat is composed through a dynamic process in which planning, acting and evaluating are all mutually related and incorporated into the process.

TVET in National Curriculum Framework of Nepal

Ministry of Education and Sports (2005) mentions that the present National Curriculum Framework of Nepal (NCFN) considers the need of giving work oriented experience in general school for making existing curriculum relevant, useful and acceptable. The reality with respect to our education is that the rate of pursuing higher-level education from all the students who complete different levels of school is very low. There are several terminating points during the school period. Ministry of Education and Sports (2005) further mentions that most of the students who leave school after completing or failing certain grade or level are either exposed to the world of work because of economic and social reason or join Technical Education and Vocational Training (TEVT) centers that are run by or are affiliated with the Council for Technical Education and Vocational Training (CTEVT).

NPC (2002) mentions that the tenth plan (2002-2007) has raised concern on providing technical and vocational education to support poverty reduction. It accepted the need to explore the modality to provide technical and vocational education and training that can take place in general secondary schools.

There is no single modality for providing TEVT in school setting. As mentioned in Kingombe (2011), there are three modalities for introducing TEVT: i) selecting a variety of vocational courses within the general secondary school; ii) providing vocational lines in addition to general education lines, and a technician line; iii) providing separate vocational and technical schools. In the developing world including Nepal, the tradition of the separate vocational schools has prevailed. It was experienced that the style of school based vocational education was not effective in Nepal by the mid-1980s. In these varying contexts, Nepal has to decide appropriate modality of introducing TEVT program in school education.

Trends in Curriculum Development in TVET

Bowers (2006) mentions the widely accepted model of curriculum development is systematic curriculum instructional development (SCID) model; SCID is an efficient and effective method for creating competency-based curriculum and instructional materials. Njogu (2012) mentions five phases of curriculum development. The phases in more detail are:

Phase 1. Curriculum Analysis comprises six components. Those are needs analysis, job analysis (DACUM approach is recommended), task verification, tasks selection, standard task analysis and literacy task analysis.

Phase 2. Curriculum Design comprises four components, make decisions about the training approach, development of learning objectives, development of job performance measure and preparation of a training plan.

Phase 3. Instructional Development comprises of four main components, develop a competency profile or learning guides or modules, develop a curriculum guide and lesson plans, develop supporting media and pilot-test and revise the materials.

Phase 4. Training Implementation comprises four components, activating the training plan, conduct a formative evaluation, Documenting training and instructor performance records.

Phase 5. Program Evaluation, the final phase, comprises three components, conduct the summative evaluation, Analyzing and interpreting information and taking corrective actions.

Trends in Curriculum Development in TVET of Nepal

Based on a short conversation with the director of curriculum division of CTEVT it was found that TVET of Nepal has adopted two methods for developing curriculum. The first one is DACUM, which has been used to develop curriculum of short course trainings. After following the DACUM process developed curriculum is submitted curriculum board. In the case of short course training programs curriculum board is chaired by director of curriculum division.

The second type has been applied for developing TSLC and Diploma level programs. Curriculum division organizes a meeting of experts of related course based on private sector demand of those courses to run. Experts select the subjects to teach in that course with references of different universities who had been run that program in the past or running the program and ready to hand over to the CTEVT. They also decide the total hours of that course as well as subject wise hours and hours for theory and Practical classes as well as hours for practical exposure in related line agencies. Generally the experts of Institute of Medicine (TU) and BPKIHS are used for health related programs. Similarly Experts of Institute of Engineering are for engineering related courses. After subject selection curriculum division gives responsibility to the experts of each subject to write up the contents to be taught.

The director further stated that selected experts write up the contents and submit to the curriculum division. The curriculum division organizes meetings of technical subcommittee for at least three days. Meetings of technical subcommittee continue for five to six meetings and discuss on each points of the whole course. Only after getting consensus of all experts of technical subcommittee on each point it becomes ready for going to curriculum committee for final approval.

For TSLC and Diploma level programs curriculum committee is under the chair of vice chairperson of CTEVT. Different senior officials at least first class officers of line ministry and experts of related institutes of different Universities and representatives of related professional organizations are the members of curriculum board. After getting approval from curriculum board the draft of curriculum becomes ready to apply by

technical institutes. The Director opined that the curriculum must be revised in five year application. But still the division is not adopted the regular revision of curriculum.

Gaps in Curriculum Development in TVET of Nepal

The above statements already described the concepts and theoretical perspectives of curriculum development as well as it also described the practice of curriculum development in TVET of Nepal. By analyzing the both statements the following gaps could be acknowledged. Those are:

Gap in Curriculum

Curriculum is an important input in TVET. Majumdar (2011) mentions that, Globalization continues to bring in changes in the competency requirements of jobs. Curriculum does not adequately meet the requirements of market in an on-going basis. Following are the relevance gap of curriculum.

- TVET of Nepal is not maintaining labor market information systems and needs surveys to provide a sound basis for updating and upgrading curricula in terms of changing needs of the market.
- It does not create and maintain data bases on the manpower and training needs of different industry
- It does not introduce systems and methodologies to develop occupational and training standards to ensure that the curricula are globally and regionally compatible.
- It does not establish effective mechanisms to develop comprehensive curricula so that the core competencies and portable skills are adequately imparted.
- It does not ensure articulation between different levels of courses to promote lifelong learning.
- It does not strengthen staff development programs to enhance the capacity for curriculum development.
- It does not ensure effective methodologies to make a balanced integration between theory and practice.

Gap in Resources to Implement Curriculum

Ministry of Education (2009) mentions that effective implementation of curriculum requires human, financial and infrastructure resources. Existing teaching-learning process in TVET of Nepal is largely teacher-centered, traditional, classroom based and less workplace- oriented. As a result, the outcomes of teaching-learning are less effective and student motivation levels are not satisfactory. Some of issues are, it does not establish center of excellence to ensure resource rationalization as well as it does not provide policy guidelines for training agencies to build partnerships with industry for the delivery of curriculum. It does not provide any information to the teachers as implementer, how it should be implemented in real situation?

Gap in Guidance and counseling

Guidance and counseling is essential to help youths to identify jobs and career paths as well as education and training paths that lead to selected careers in keeping with individual personalities and realities of the job market. Existing systems lack effective processes to generate and update occupational information and training of guidance and counseling staff.

Gap in Articulation and Lifelong Learning

Lifelong learning is not institutionalized in the TVET system due to lack of skills upgrading programs and absence of articulation between general/higher education and TVET.

Conclusion

An acceptable curriculum should be that which makes a learner to be creative, self-reliant and make him/her excel in all aspects of life that suite his/her desires. It would be unfair to have a curriculum which ignores the social aspect because he/she lives in a society that is ever social. The curriculum should also enable the student to apply that which he/she learns in the classroom in real life experience.

Recommendations

Therefore, curriculum should in due course produce students who are able to deal efficiently with the contemporary world. Curriculum designer must assess the needs of specific skills and techniques in the world of work. It should not be presented as finished concept, but should instead include the learner's preconception and should amalgamate how the learner views his/her own world. The curriculum should focus on problem solving teaching methods, experimenting, and projects, often having students work in groups. Curriculum should bring the disciplines together to focus on resolving problems in an interdisciplinary way. Rather than passing down organized bodies of knowledge to new learners, they should apply their knowledge to real situations through experimental inquiry. The fact that humans are social beings and do learn best in real-life activities with each other. In this connection Smiths (2000) adds John Dewey's model and describes that in learning learners should behave as if they were scientists. With this view on human nature, students should be provided with real-life experiences and activities that center on their real life. This is in comparison to a distinctive progressivism slogan which states, "Learn by Doing!". Curriculum has to provide a substitute to the test-oriented instruction as how he/she is ranks. This will enable the student to apply the knowledge he acquired to real-life situation in his/her daily life.

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