EMERGING CHALLENGES IN TVET IN COLOMBO PLAN REGION : CPSC'S RESPONSE

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Abstract

The twenty first century presents a radically different economy and society, which is likely to have profound implications on TVET. The globalization of trade and commerce, rapid technological changes, emergence of new technologies, ICT revolution, and the emergence of a knowledge economy are bringing forth new challenges around the world in general, and in Asian Pacific region, in particular. Technical and Vocational Education and Training (TVET) is gaining competitive edge in the growing knowledge economy. It is because of such factors that there is great focus on Technical and Vocational Education and Training (TVET). However coupled with expansion are some challenges. The present paper discusses about some of these challenges and to the need get rid of these challenges, particularly in the region of Colombo Plan.

1. INTRODUCTION

In spite of great geographical, economic and demographic diversities among Asia and the Pacific countries, the region has its share of many common challenges and is faced with common issues which are fundamental to improve the quality and relevance of Technical and Vocational Education and Training (TVET) to gain competitive edge in the growing knowledge economy. It has distinguished itself in the past decade as world's most rapidly developing region. The Asia Pacific region now accounts for more than 35% of the world gross domestic product (GDP) in purchasing power parity terms (1). However there are large variations and disparities in economic growth among the countries.

Despite impressive economic progress, a growing body of evidence points to serious human resource development related problems that require urgent attention if the region is to sustain its progress. First of all a large number of Asia Pacific countries still remains mired in poverty. Even in rapidly growing developing countries, there are substantial cases of poverty and unemployment. Overall growth throughout the region has been non-inclusive. Large scale economic growth with widespread urbanization along with foreign direct investment has fueled the demand for skilled workers. A severe shortage of skills is apparent in the organized and unorganized sectors. The labor market today faces an emerging shortage of skilled workers in the face of growing demand in various sectors including semi-skilled labor-intensive sectors of manufacturing and modern services such as organized retail, civil aviation and construction (1). The skill shortage also manifests itself as a problem of retention and attrition in the fast-growing knowledge-based industries as well as in social sector services like health and hospitality.

The task of technical workforce development is faced with the changing realities of globalization and competitiveness, on one hand, and the need for inclusive growth on the other. The low literacy rate and lack of skill training of the vast majority of the populace poses a major hurdle for its journey towards a knowledge economy (2). Therefore, policies to ensure higher quality education and the expansion of vocational education and skill training for the poor and underprivileged are needed in order to produce a new generation of educated and skilled employees who are flexible, analytical, and can serve as driving forces for innovation and growth.

The region does, however, enjoy the demographic advantage of an increasing young population, in comparison to the aging societies in most advanced countries. Nearly million youth joins the workforce every year. In order to exploit this demographic advantage in the future, there is a need to create a model to impart vocational education and training that is flexible, sustainable, inclusive, and creative (3). The challenge therefore is how to train and equip this young population to gain productive and meaningful employment.

The Second International Congress on TVET organized by UNESCO pointed out that from economic growth to human development the bridge has to be built through the teachers who are well trained. The most important Change Agent in 'Knowledge Society' will be the teachers (4). UNESCO-UNEVOC and CPSC, and various international organizations highlighted the need for innovations and quality improvement in training of TVET teachers to meet the challenges in the knowledge society.

The paper begins with an overview of the global emerging trends in terms of economic, social and technological changes and their impact on TVET system. The major global trends and TVET trends are discussed and approaches in TVET in responding the emerging trends are enumerated. The specific TVET interventions and cross cutting themes are identified for Low Income Countries (LIC), Middle Income Countries (MIC) and High-Income Countries (HIC) respectively. The role of CPSC in the changed context has been put forward finally.

2. BACKGROUND

The twenty first century presents a radically different economy and society, which is likely to have profound...
implications on TVET. The globalization of trade and commerce, rapid technological changes, emergence of new technologies, ICT revolution, and the emergence of a knowledge economy are bringing forth new challenges around the world in general, and in Asia Pacific region, in particular (5). The goal of meeting the challenges of globalization in most developing countries is however coupled with the goal of reducing poverty and inequality. Many Asia Pacific countries currently stand on development crossroads where the balancing of the processes for achieving poverty reduction, global competitiveness and inclusive development of the workforce have gained immense importance for sustainable economic growth.

Knowledge economy generates new demands, structures and systems requiring new skills and knowledge. It recognizes the key role of information-based technologies in providing a basis for the generation, management and utilization of knowledge as never before (6). Developing countries are also fast moving towards knowledge economy and thereby present new challenges in the TVET systems of these countries.

A paradigm shift has taken place in terms of economic changes, worker changes and output changes in the changed context. The economy has now moved from manufacturing to knowledge, from manual to knowledge worker and tangible deliverables to intangible deliverables. All of these have profound impact on the TVET system in the Asia Pacific region.

3. EMERGING TRENDS

To understand the profound impact of the emerging trends on the TVET system in the region there is a need to explore the details of these changes in terms of technology, economy and social transformations.

3.1 Technology Trend

Technological trends are sweeping across globally and regionally. Continuous changes and technological advancements are happening, and their benefits are envisioned to enhance TVET delivery and access in the region's developing countries.

Table 1: Technology Trends

<table>
<thead>
<tr>
<th>Moving From</th>
<th>Moving To</th>
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<tbody>
<tr>
<td>Narrow Band</td>
<td>Broadband</td>
</tr>
<tr>
<td>Divergent</td>
<td>Convergent</td>
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<tr>
<td>Wired</td>
<td>Wireless</td>
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<tr>
<td>Local</td>
<td>Global</td>
</tr>
<tr>
<td>Electronic</td>
<td>Integrated</td>
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<tr>
<td>Petro-based energy</td>
<td>Agro-based energy</td>
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The major shift in technology is dominated by the move from the traditional focus into emerging new technologies. The trend of new technology is moving from narrow band to broadband, divergent to convergent, wired to wireless, local to global, electronic to integrated, and finally from Petro-based to Agro-based energy.

With these changes, the deepening of technical knowledge raises more demand for workers with competitive edge in performing work fit for high-end and emerging technologies.

Furthermore, the excessive pace of technological changes has emphasized the requirement for life-long capabilities of a knowledge-based worker. Keeping this in mind, the phenomenon on the life and span of retention of knowledge is reinforced, as presented in Figure 2. It has been observed that the economic pace of technological change makes 50 percent (50%) of computer knowledge irrelevant within one year, technological knowledge in three years, specialized vocational knowledge in five years and higher education knowledge in 10 years. We are now in the era of embracing life-long learning to realize competitiveness in life and learning to learn skills become principal component of emerging generic skills. In this trend, TVET's role is important to consistently provide a learning platform where knowledge can be updated and enriched as required by the job market and the workplace. Today's integrated technology namely information & communication technology (ICT), biotechnology, nanotechnology, energy technology, space technology, entertainment technology, and community and rural technology are characterized as interdisciplinary, oriented to Research and Development (R&D), information-intensive, has shorter life cycle and globalized.

The focus of business, technology, structure and the role of change agent have been changing from 1980 to present era. Figure 2 below illustrates the evolution of work and work orientation in the area of focus of organizational technology structure and the main initiator of change in the workplace. It has been observed that in the era of integrated technology and network structure and innovation, knowledge worker will be the key change agent in the workplace.
3.2 Economic Trend

The 21st Century economy points out that material value has changed to knowledge value with the coming of knowledge economy. The role of manual workers is fast changing to knowledge worker. Knowledge economy places more value on the knowledge that catalyses technical innovations and achievements which propel economic gains. This signifies the important role of TVET as breeding ground for the necessary skills and work qualifications.

It has likewise become a commonplace that the globalizing world has dictated, in part or in whole, the mobility and economy of trades and human resources. The opening of trades subsequently opened new doors where there is an encouraging borderless movement of technology, product, services and labor, contributing to the expansion of economic activities.

3.3 Social Trend

Reducing poverty, promoting sustainable development, equity and inclusive growth are key social directions that have influenced development interventions. In many parts of the world, innovative initiatives are actively undertaken to either directly achieve or contribute to achieving the Millennium Development Goals (MDGs). Many of these, if shared with other countries, can offer new insights for planning and implementing effective human resources development programs to help in specifically achieving life-long learning and skills training necessary to keep stable employment and supply labor market demand.

Observed trends in the social front are mainly on the shift from mere economic growth to inclusive growth, conventional development to sustainable development, gender inequality to gender parity and conventional academic skills to life and functional skills.

While dramatic economic growth has emancipated new economic players in the globalized world, favorable economic gains and income growth have spread sporadically in the region. Due to this pattern, inclusive growth has never been more important than now in Asia Pacific region. It has essentially become a key development goal for the region due to the growing inequality in income, which leads to a more serious concern on how the benefits of the region’s awesome GDP growth are not being equitably shared. Given this, growth process is derailed at the macro and micro levels.

Similarly, other shifts have rendered prevailing social development focus to be wider, more significant and long-term. Consistent with this, social interventions have been characterized by provisions for life and functional skills, which have now gained more ground than ever, instead of being limited to providing traditional academic skills that nevertheless become suddenly less functional in cases where rapid change in the work place takes place.

4. TVET CHALLENGES & OPPORTUNITIES IN COLOMBO PLAN REGION

Technological, economic and social trends have clearly posed profound implications on TVET systems in Asia and the Pacific region. The changing nature of the world of work, especially due to globalization, technological, economic and social changes, require an understanding of how these changes impact upon the quality of TVET systems.

To illustrate, there are four major emerging challenges in TVET based on the broader sectoral trends mentioned in previous sections. These challenges, seen at the global and regional points of view, are significantly addressed through specific interventions that aid in refining the focus of TVET (Refer to Table 2).

<table>
<thead>
<tr>
<th>Major Global Challenges</th>
<th>TVET Opportunities</th>
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<tbody>
<tr>
<td>Knowledge-Based Economy</td>
<td>The role of worker has been changed from manual worker to knowledge worker. To perform the role effectively, a worker needs to have analytical skills and critical thinking. Therefore, Higher Order Thinking Skills (HOTS) are introduced to advocate critical thinking, analysis and problem solving to augment and enhance learning outcomes in TVET. They have also become common features of standards-based education transformation.</td>
</tr>
<tr>
<td>Rapid Technological Change</td>
<td>Rapid technological changes require workers to adopt with the fast changing technological environment. Possession of Generic Soft Skills has become a prerequisite in the new work place. Skills</td>
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5. KEY APPROACHES IN TVET TO RESPOND TO EMERGING TRENDS

Specific features characterize the Asia Pacific region and define the implications of emerging trends on TVET. The Asia Pacific region is experiencing an unprecedented growth in some sectors in the recent times. The unprecedented economic growth in developing countries has caused an exponential rise in demand for TVET skills to meet job requirements in the industries. Many developing countries are unfortunately suffering from acute skills shortage, thus their inability to meet these demands.

The Asia Pacific region however has the ability to champion key approaches in TVET. These approaches can be in the form of (i) integrating tech-voc in school curriculum, (ii) promoting demand-driven and modular employable skills development, (iii) entrepreneurship skills development, (iv) reorienting TVET in the informal sector and (v) increasing mobility of the workforce in the region and ICT integration.

5.1 Integrating Tech-Voc in School Curriculum

Recognizing the large scale school dropouts and growing demand of skill workforce, there is a concern to integrate technical and vocational training in school curricula. Integrating tech-voc in school curriculum cuts across the idea of addressing both issues faced by the rural and urban youth. It is a sound foundation to build upon. Available streams in secondary education should have strong vocational component in the curricula to ensure that students can be sufficiently equipped both in knowledge and skills to directly join the labor market or have the option to pursue higher studies. Flexible pathways are thus integral part to bring this into fruition. Secondary education should be comprehensive both to be terminal for those who do not want or cannot proceed for further education, and to have a strong academic foundation for higher studies for those who show intelligence and aptitude for a specific higher discipline. Keeping this in view, there needs to be four major components in the Secondary Education: Academic, Technical, Entrepreneurship Skills and Life Skills. Skills need to be context and area sensitive.

5.2 Promoting Modular Employable Skills (MES) Development

The concept of MES bears particular significance for small scale enterprises and the informal sector, as it involves providing formal skill training to the poor and backward sections of society for whom the length and cost of usual formal training options are impractical due to social and economic constraints.

Many jobs in the current labor market do not require long-term rigorous training, but rather specific skills that may be imparted through short modular courses. The concept of MES embodies the idea of imparting various types of “minimum skills” that enable a person to obtain gainful employment. These courses should be demand-driven with curricula responding to market needs. The same applies to many formal courses.

The flexibility of such modular credit-based courses is likely to lead to better opportunities for skill upgrading, multi-skilling, multi-point entry and exit, vertical mobility and recognition of prior learning through certification of skills acquired informally.

5.3 Entrepreneurship Skills Development

With the expansion of the service sector economy, the development of appropriate entrepreneurship skills is an urgent imperative for enhancing participation in the labor market. On completion of education, one has broadly two career options, which are wage career or self-employed career. However, with the emergence of the knowledge economy and trade liberalization, the development of new opportunities has substantially gained ground with more bias to self-employment.

The importance of developing entrepreneurial skills is also increasing as current trends indicate that the majority of the workforce is likely to be absorbed in the unorganized and informal sector in the near future. Therefore, encouraging workers to develop micro and small enterprises or to become self-employed is likely to provide a better option for earning a livelihood than be absorbed in the wage labor.

5.4 Re-orienting TVET in the Informal Sector

TVET in Asia Pacific region has so far primarily addressed the need for skills in the organized sector, ignoring the large
number of workers in the unorganized and informal sector. With more than 90% of the labor force being absorbed in the informal sector in low productivity jobs, the development of appropriate skills training facilities for this sector is an urgent imperative for enhancing inclusive growth. Employment prospects and the average productivity of unskilled labor are low. Even in rural areas, employment prospects are better for more qualified workers, and the situation is likely to become tougher for the untrained or uneducated workers in the coming years.

So far, vocational outreach programs for the informal sector have significant weaknesses. They often lack exposure to modern training systems and technologies as well as the innovative aspect of learning. The range of skills tends to be narrow, limited to a particular traditional occupation. In addition, these skills may easily become outdated in the fast-changing labor markets. Identifying the skill requirements of the informal sector and facilitating skill development in this sector will be necessary not only for enhancing their productivity and developing an enabling environment for the vulnerable sections of the society, but also for overcoming the skills shortage in the growing sectors of the economy.

5.5 Increasing workforce mobility in the region

Another approach is to increase workforce mobility in the region through the harmonization of skills standards. Disparities in skills standards and recognition of qualifications pose a major challenge in workforce mobility. India, as an example of a country with various VET providers and institutions with different levels of quality systems and qualifications frameworks, is facing serious challenges of achieving harmonized skills standards to ensure greater mobility of the Indian workforce. Glaring evidence of the lack of mobility accompanies the opening of the labor markets.

Robust skill accreditation and certification is thus required to ensure mobility and complement the efforts of vocational institutions to produce skilled graduates every year. Partnerships with the private sector would be an excellent provision to make this happen. In addition, there is a need to support regional efforts and implement a standardized vocational qualifications framework across Asia and the Pacific region to achieve mutual recognition of skills and qualifications by training institutions, industries, and countries. This has been started by CPSC through the Asia Pacific Accreditation and Certification Commission (APACC) established in 2004.

5.6 ICT Integration

Learning ICT skills is not sufficient, but using ICT to improve the teaching and learning is the key for pedagogy-technology integration (Majumdar, 2005). Understanding the changing role of teachers from instructor to facilitators, teacher lead instruction to learner-centered instruction is the key to the successful implementation of pedagogy-technology integration for teacher development. Therefore, preparation of teachers to face the challenges of an ICT enriched teaching and learning environment is crucial. Teachers need to be equipped with the fundamentals of ICT tools and sufficient understanding of how integration of these tools in teaching and learning can be facilitated smoothly is necessary. Efforts must be oriented towards changing the mind set and developing positive attitudes towards ICT application in teaching and learning.

The said key approaches are illustrated below at the core of various considerations to make TVET responsive to emerging trends.

6. CROSS-CUTTING AND SPECIFIC INTERVENTIONS

It is imperative to understand that there is no single solution fit for all. Policy initiatives and strategy developments are diverse and manifold for transforming and repositioning TVET systems for their sustainability and competitiveness. Owing to the uneven development of TVET systems in the region, there cannot be a single solution that can match all the requirements. Any TVET policy must take into account diversity within the region and address it accordingly to the specific challenges faced by the respective clusters.

Attuning the education system as a whole and TVET in particular to the new global environment by promoting flexibility, creativity, leadership and lifelong learning opportunities and attaining excellence in all levels of institutions are therefore the basic requirements for addressing the shifts in various sectors.

In an attempt to come close to addressing specific issues, CPSC clusters its member countries into three sub-groups based on income level. Clusters are characterized by respective countries’ shared academic, cultural and economic challenges and background, which make it easier to identify specific thrusts with which the pursuit of specific TVET agenda and thematic focus of programs may be anchored to (2).

For the High-Income Countries (HIC), TVET interventions are inclined to focus on innovative skills, cross cultural skills,
7. THE ROLE OF COLOMBO PLAN STAFF COLLEGE

In the changed context and in the light of its implication in technical and vocational education for the knowledge society, there is a dynamic link in the way CPSC embraces its role in assisting the member countries address issues and challenges at hand.

First, CPSC is all the more reinforced to act as a CATALYST in introducing changes in the various components of the technical education system. Second, it needs be more PROACTIVE in visualizing and mapping changes in industry, technology, economy and society. Third, its role as a FACILITATOR of the change management process in the technical education system has never been more important than now (5).

Moreover, there is a greater role for CPSC to lead in (a) assisting member countries in transforming the TVET framework in the knowledge society, (b) providing guidance and assistance in its restructuring efforts, and (c) modifying the training and development strategies, program offerings and research & development efforts.

7.1 CPSC’s Skill Development Projects

As part of CPSC’s response, the College puts forward specific Skills Development Programs/Projects consistent with priorities of the respective countries and cluster countries. These programs are:

1. Skills Development for Poverty Alleviation
2. Capacity Building for Developing Competency-Based Curriculum
3. Capacity Building for Technical Teachers Training in ICT Integration
4. Accreditation and Certification for Workforce Mobility in Asia Pacific Region
5. Promotion of Internet-Based Tele-education Network for Asia Pacific Region

In promoting the 12-Point Strategy for Action as outcome of the Skill Development for Poverty Alleviation symposium in January 2008 organized by CPSC with development partners including UNESCO-UNEVOC, ETF, FAO and ADB, the five projects have been prepared for funding and eventual implementation to benefit CPSC member countries. The projects intend to organize massive program implementation and interventions to assist national governments in addressing priorities and reflecting them in country-level agenda, namely: Skills for poverty alleviation, sustainable development, competency standards, ICT integration in education, accreditation and certification, Tele-education network, regional integration, knowledge management, institutional management and technical teachers training.

8. CONCLUSION

CPSC is uniquely placed as a premier inter-governmental organization in the Colombo Plan region (largely referred as Asia and the Pacific region) with specific focus on TVET development in the region. It can facilitate actions to link efforts, create opportunities and cultivate the spirit of south-south cooperation in a truly harmonized way.

TVET is seen as an integral component of human resources development. The implications of technological, economic
and social trends are intervening factors that refine pedagogical strategies, leading to molding TVET as a more effective platform to catalyze pragmatic approaches to prepare the workforce in the world of work.

Regional integration and harmonization of skills in the region have become key concerns and the strength of the Asia Pacific region. They are considered as overarching interventions needed in TVET to address major issues and challenges brought by emerging economic, social and technological trends.

The Asia Pacific region, having the ability to champion approaches for sustainable TVET, should focus on implementing key approaches such as integrating Tech-Voc in School Curriculum, promoting demand-driven and Modular Employable Skills Development, entrepreneurship skills development, Reorienting TVET in the informal sector, ICT integration and increasing mobility of the workforce in the region.

Repositioning TVET to achieve the simultaneous tasks of building Centers of Excellence for developing competitive and highly-skilled knowledge workers and at the same time facilitating the process of encompassing the unorganized and informal sector are of greater importance.

CPSC strives to intensify efforts and draw partnerships (bilateral and multilateral) towards building Asia and the Pacific region through technical and vocational education and training for peace, harmony and sustainable growth in this time of knowledge era.

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