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Indian experience of internal and international collaboration in TVET and prospects of regional cooperation

Abstract

Appropriately educated and skilled human resources (HR) are a real asset for a country and can be instrumental in accruing several other assets such as a sound, sustained economy; social development and cohesion; international leadership and suchlike. What can be considered 'appropriate' education and training is a question constantly at the centre of local and global debates and discussions. It is also a dynamic phenomenon as what is suitable and desirable today may not be appropriate tomorrow. For example, earlier, education and training prepared a person for a lifetime's career but now the trend is towards frequent and multiple career changes, part-time and casual work. To remain relevant and meaningful, the process of education has to undergo various transitions, reforms and adaptations even more frequently in the current context. The fast pace of development is even driving 'established' set-ups to continuous review and reforms. Regarding Technical and Vocational Education and Training (TVET), throughout the world, the countries are constantly trying to adapt to a new economic and social order. No country today can prosper in isolation. All are part of a global landscape. The changes, challenges and growth of one affect the other. The latest example is the crisis in Greece. The entire European Union is working to pull the country out of it. Another example is the reported global shortage of skills (HR) in the future while Asia is being seen as a potential hub for the development of competent and competitive HR. At the same time if the much talked about demographic dividend of this region is not suitably cashed, it would be a global disaster. Thus, 'growing together' is the key to global peace and prosperity wherein internal, regional and international cooperation is going to play a determinant role. These collaborations must address the issues of skill requirements, international benchmarking of skill standards and competency assessment, comparability of qualifications and suchlike. Moreover, it is essential that such initiatives rise above the paperwork and declarations become functional, responsive and effective. The paper discusses in detail the Indian experience and experiments with internal cooperation and various international collaborations. Regional prospects are also identified.

1 Introduction to the Indian system of TVET

In India, long ago, education was wholesome, and demarcated into levels (primary, middle, secondary or higher) or forms (academic, religious, moral, career oriented). It included knowledge, character building and skill training. Students were taught to develop qualities of self-reliance, respect and mutual equality. This system gradually spread to small villages and continued for thousands of years. Some world famous universities of India, such as, Nalanda, Taxshila (now in Pakistan), Vikramshila were based on this system of education. Aside from

this, the two age-old methods of learning on the job (apprenticeship) and learning from family tradition existed in ancient cultures, including India. As the cultures progressed, demands for development necessitated the formalization of education to be imparted outside homes in schools and colleges (Agrawal 2009,191).

Traditionally, history, culture, political and sociological features affected the TVET systems in a country. Later, the pace of urbanization and industrialization, technological revolution and labour demands set the pace of expansion and reforms. However, in the last one to two decades, globalization, emergence of the knowledge society, liberalization and employment equations in free economies have necessitated rethinking on the policies and long-existing structures of education and training. Concerns regarding gender equity, social equilibrium and justice exercise demands on policies and programmes for specific social groups. The mandate has extended to all to build human resources to cope with all areas of need within an emerging global society (Agrawal 2009, 44).

1.1 Vocational education

The integrated system of imparting knowledge with manual work (skills) gave way to two distinct systems of General and Vocational (or Technical) education. General education, even today, aims to enhance general proficiency, is mostly knowledge-based and does not prepare the learner for any specific job or occupation. Vocational education (VE) on the other hand, is designed to develop competencies especially suited to identifiable occupation(s). , In India as is the case in many other countries general education and VE were also conceptually and operationally separate from each other. Vocational education is usually offered at secondary or senior secondary level (10 or 12 years of school education, respectively) and terminates at that point with the awarding of a certificate. Some options for continuing VE exist leading to a diploma, but it still remains at the sub - university level with no attachment to academic education. VE and vocational training were also distinctly differentiated from each other by their relative content of knowledge and skills. The VE programmes were designed to develop a considerable knowledge base along with skill development but regarding training, there was often very little, if any, theoretical content. The target groups, mode of delivery and management also differed. At present, the VE programme in India is under the aegis of Ministry of Human Resource Development (MHRD). Under the Constitution of India, education is a concurrent subject of State and Central Government. While the Central Government has the responsibility for developing policy, training standards and procedures, etc., its actual implementation is largely up to the State Government. This implementation, however, as the state's responsibility, has, not been uniform throughout India.

School education in India offers learners the opportunity of vocational exposure, orientation, exploration and training in different ways, i.e. work education from classes I to VIII, prevocational education in classes IX and X and vocational education as a distinct stream in XI and XII. The work-oriented education offered at elementary level under various nomenclatures, is intended to prepare children to face life with the proper attitude, knowledge and skills in relation to work. This is expected to promote socio-personal and vocational development and

ultimately lead to a smooth transition into the world of work (Agrawal 2000, 31). The need to extend the scope and outreach of vocational training was recognized by the Planning Commission in the Tenth FYP, 2002-2007 and several reforms have been introduced.

1.2 Technical education

The All India Council for Technical Education (AICTE) is a statutory body entrusted with the task of planning, co-coordinated development, quality assurance, monitoring and evaluation of technical education (TE) in India. Its mandate extends to technical and managerial education, training and research at various levels (diploma, undergraduate, post-graduate). It covers a wide spectrum of fields such as Engineering and Technology, Computer Applications, Information Technology, Architecture and Town Planning, Management, Pharmacy, Applied Arts and Crafts, Hotel Management and Catering Technology, Vocational Education etc. The Council is also responsible for industry linkage. The entry requirement for a diploma in engineering and technology is a secondary, i.e. 10th pass certificate (age of entry 15/16 years) and the duration is not less than 3 years, unless otherwise specified by the AICTE. The duration of new programmes in emerging technologies as well as those based on flexible modular structures with multiple entry are of different duration.

1.3 Technical and vocational training

Development and co-ordination of the vocational training in different sectors is the responsibility of the Ministry of Labour and Employment (MOLE). Under the Ministry, the Director General of Employment and Training (DGE&T) covers training services for all categories of jobs through its country-wide network of Industrial Training Institutes/ Centres (ITIs/ ITCs). DGE&T trains over one million people every year. Aside from these MOLE and MHRD initiatives, there are several other programmes and activities under the purview of seventeen different Departments/ Ministries. These include the Ministry of Rural Development, Department of Women and Child Development, Ministry of Industries, Khadi & Village Industry Commission, National Institute of Open Schooling (NIOS), Department of Small Scale Industries, Department of Tourism (Food Craft Institutes) etc. All these programmes, with a capacity of approx. 1.3 million cater largely to the needs of the informal sector in a limited manner.

1.4 The lessons learnt and the reasons for reforms in TVET

There has been an intense need to coordinate and establish internal cooperation among these ministries and departments offering TVET at various levels to a variety of clientele. The bottleneck was caused by courses of a fixed duration of 2 years, that were often not needs-based and vertical linkage was not built-in into the system. These issues have been addressed recently by the creation of a suitable management structure and the launch of National Vocational Education Qualification Framework (NVEQF), which will be discussed in the appropriate section.

The 10th Five Year Plan (FYP) 2002-07, posited that the growing problem of unemployment among youth requires a recasting of the entire vocational education scheme. For future policies on vocational courses it emphasised that the vocational courses should be demand and need-based, keeping in mind the constantly changing requirements of technologies/industries and they must also feature an in-built flexibility to allow students to switch courses in line with the changes in demand patterns. The existing scheme should be strengthened by involving industries via MoUs in the designing and certification of courses and training of students and faculty. In view of the exploding opportunities in the services sector, vocational courses should concentrate more on this sector. Apex industry associations such as the Federation of Indian Chambers of Commerce and Industry (FICCI), Associated Chambers of Commerce and Industry (ASSOCHAM) and Confederation of Indian Industry (CII) need to be involved to a greater extent in the implementation of vocational education programmes and imparting of skills. Among the suggested measures for the improvement of effectiveness, efficiency and relevance of training are: strengthening interaction between industry and ITIs, the introduction of modular training and multi-skilling, the introduction of competency-based certification for workers without formal training.

2 Some initiatives for reforms

2.1 National Curriculum Framework (NCF), 2005

This proposes that work-centred pedagogy be a central organizing theme for the reconstruction of the present education system from the pre-school stage up to Class XII. Work needs to be interwoven in the curriculum for the purpose of acquiring knowledge, building values and promoting multiple skill formation within the framework of generic competencies. Systemic competencies need to be paid attention to, which relate to the overall understanding and capacity for working in changing contexts. These include the ability to comprehend the whole system, develop a holistic perspective, alter parts and design new systems; the capacity to work with transfer of learning; the capacity to appreciate a paradigm change and re-define one's role; the courage to take initiative and chart new paths; and others. The assessment must be based on such evaluation parameters that will test the multi-dimensional attributes and capacities (including generic competencies) that are expected to develop in the cognitive, affective and psycho-motor domains in a holistic manner (NCF 2005, 116).

2.2 New policies

A National Policy on Skill Development was introduced in 2009 with the objective of creating a workforce empowered with improved skills, knowledge and internationally recognized qualifications to ensure India's global competitiveness in HR. The salient features include creating a system to deliver 'competencies' in line with nationally and internationally recognized standards and provide greater space for Public Private Partnership (PPP).

The MHRD has brought a revised scheme of the vocationalisation of Higher Secondary Education in 2011. The revised scheme has greater provisions for partnerships and the involvement of industry. The states are announcing their own measures to cope with the demands of the growing economy.

2.3 National Vocational Education Qualification Framework (NVEQF)

Offering students general courses – like science, arts or commerce at the +2 level and later in the tertiary sector of education constitute the bulk of the 60 million educated unemployed youth in the country. These youth and those who are under-employed or those seeking a change of job can benefit immensely by from suitable training opportunities. Even those already employed, training to upgrade skills is important in maintaining productivity and remaining useful to the employer. Further, the tenth FYP envisaged that vocationalisation of the curriculum is necessary to ensure a disjunction does not take place between the educational system and the workplace. The need was also felt to integrate various qualifications, directly from secondary level to Ph.D. level, interweaving academic education, vocational education, technical education and skill training for vertical mobility and career growth. This is now being realized with the introduction of NVEQF. The framework is market driven. The salient features include competency based, modular, flexible courses with a provision for the recognition of prior learning, flexibility in delivery mode, training design and diversity in a range of courses and training options, covering both the organized and un-organized sector. Each module will lead to certificate of attainment.

2.4 Creation of new management structure

To make the much talked about ‘demographic dividend’ a dividend in reality, the XI Five Year Plan proposed a comprehensive National Skill Development Mission. Consequently, in 2008, a three tier institutional structure was created: (i) National Council on Skill Development (NCSD) chaired by the Prime Minister - its Charter includes vision setting and laying down core strategies, (ii) National Skill Development Coordination Board (NSDCB) chaired by the Deputy Chairperson, Planning Commission which will coordinate action for skill development both in the public and the private sector. As mentioned earlier, as many as 17 Ministries and Departments are associated with skill development. This body will bring in much needed linkages, amongst these are: (iii) National Skill Development Corporation (NSDC) which is to promote private sector involvement. The NSDC is a unique PPP Enterprise which has been mandated to skill 30% of the overall target of 500 million people by the year 2022.

The National Policy on Skill Development envisages creation of Sector Skill Councils (SSCs), through the NSDC, performing a wide range of functions, the most important of which are to determine competency standards and qualifications, and accreditation.

3 Indian experience of internal collaboration

The models of TVET, although delivered and managed separately, were based on a collaborative approach. A close collaboration with the industry was envisaged. Vocational schools were not established separately, with only few exceptions, but vocational wings were started in regular higher secondary schools to keep open a link between academic and vocational education.

3.1 Linkage with the industries

For vocational courses, industry representatives were involved in curriculum development at a national level. Provision was made to involve experts from local industry as a guest faculty to conduct practical classes. The extent and nature of collaboration with the industry, however, was not uniform all over the country as implementation is carried out within the various states. Some locations do not have the industries in their area and in such cases a novel concept of Production cum Training Centres was introduced. It also varied with the nature of vocational course, e.g. for an x-ray technician's course, association with a hospital or nursing home is naturally imperative. It has been interesting to note that industry participation in events such as a National Seminar or Workshop was not entirely stimulating. At Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE), National Council of Educational Research and Training (NCERT), we carried out vocation-specific national conferences with the industry but the presence was limited. The industry representatives did not seem interested in travelling long distances to participate in such events from which it is likely they did not recognise an immediate outcome or interest. Hence, we planned a different approach for industry linkage for a food processing vocational course in Gujarat. We conducted meetings at schools where the course was being run, involving local industries and bank managers (for financing entrepreneurial ventures of vocational graduates) along with one representative from state-level industry, the Gujarat Agro Industries and one representative from a national level association, the All India Food Processors' Association. While the representative from the Association was helpful in mobilising state-level representation and local industry participation, the local industries became interested as they did not have to spend much time in travel and the prospect of a trained, skilled HR for their venture was at hand. These meetings proved to be very useful as branch managers agreed to give soft loans to vocational graduates upon the recommendation of the school principal and local industries agreed to provide the opportunity of employment to students for they could interview students there and then and be satisfied with the education and training of the students. The managing director of one leading beverage industry in the state offered to conduct campus interviews in the school he visited and employ two top students from each batch. The success of such efforts, however, depends on sustained efforts and monitoring, as well as maintaining the quality.

Some of the courses were planned and organised in collaboration with industry. These were need-based and tailor-made according to their requirements, hence, absorption in employment

was direct. A course on insurance with the Life Insurance Company (LIC) of India and a course for Indian Railways for instance.

3.2 Internal academic cooperation

Vocational students can directly join the second year of the three-year diploma programme under the lateral entry system in all polytechnics. Their intake is restricted to 10% of the sanctioned intake of the diploma courses. There is a possibility of lateral entry of meritorious diploma students to the degree level, provided they have secured at least 60% marks on aggregate in the diploma. Such students are considered academically equivalent to a student who has passed the first year of a 4-year degree programme and thus, are allowed entry into the second year (third semester) immediately. An additional 10% seats are reserved for such students and admission is given on the basis of merit obtained in an entrance test. Once admitted there is also provision of a remedial course if required. The entry requirement for degree programmes in engineering and technology is a senior secondary, i.e. 12th pass certificate (age of entry 17/18 years) and duration is 4 years. The pass certificate of vocational students in areas of engineering and technology also makes them eligible to compete for entrance into the Indian Institute of Technology (IITs).

Eligibility is also given for degree-level courses in respective vocations, such as for bachelor degrees in Commerce, Home Science, Agriculture, Dairy Science etc., however, state-level differences occur as universities have their own regulations for admission, which may also differ between the universities. Ironically, when University Grants Commission (UGC) started degree level vocational courses, the vocational graduates of higher secondary stage were not considered eligible.

Some state level initiatives have brought rich dividends for vocational students. In Chandigarh, students of X-ray technician course were considered eligible for a course in radiology at the prestigious Post Graduate Institute of Medical Education and Research (PGI), Chandigarh. This opportunity opened good opportunities for employment for students taking this course and the course gained a considerable popularity on this account. There are many such examples with different courses in different states but no uniform pattern.

3.3 Some recent initiatives of internal cooperation

In the XII FYP, education and skill development have been given exceptionally high priority. Presently, the MHRD has taken up with the Department of Economic Affairs in the Ministry of Finance, the issue of nationalised banks and finance companies to provide soft loans to help those who have completed vocational education in setting up their own enterprises. The Labour Ministry launched a scheme on skill development initiative through public private partnership under which short-term training courses on modular pattern are conducted (PIB Dec. 2006, 1). For producing a multi-skilled work force of international standard and targeting 10 million employment opportunities per year, the upgrading of 500 existing ITIs into Centres of Excellence has been taken up. The introduction of multiskilling courses in the first

year followed by advanced/ specialized modular courses in the second year; adoption of an industry-wise cluster approach, multi entry-multi exit provisions; public private partnership in the form of an Institute Managing Committee to ensure greater and active involvement of the industry are specific features of the scheme (Ministry of Labour and Employment, 2006-07).

DGE&T under the Ministry of Labour and Employment, in 2006-07, has started a new scheme of 'Testing and Certification of Skills' acquired through informal means. Initially 8000 construction workers were tested and certified involving the Construction Industry Development Council. For 46 skill areas, competency standards have been developed, while for several others the process is in progress. Approximately 17 states have given their assent to implement the scheme at state level (Ministry of Labour and Employment 2006-07).

The prominent industry associations in India, namely, FICCI, CII and PHD Chamber of Commerce and Industry, are now taking keen interest in skill development. It is becoming understood that an Industry-Academia Collaboration is immediately required to generate opportunities for the development of skilled human resources to give India a global edge. These chambers have taken steps in creating training opportunities in various sectors with the industries concerned, organising national and international level discussions, conferences and studies.

However, till recently these have been 'stand alone' efforts rather than real collaborations among a variety of education and training providers, industries and employers, financing bodies, policy planners and academic institutions. The system will be effective in meeting the challenge only when collaborations become functional amongst them.

This issue is being addressed by the creation of new management structures, launch of NVEQF etc. as described above. The NSDC, one of the new management structures created, through the SSCs funded by it, has been coordinating with the MHRD and MOLE for evolving a skills qualification framework to allow for a seamless transfer from vocational education and training to academic education. In partnership with MHRD and NSDC, a pilot is being run in one of the Indian states. Working towards the vision of making India the skill capital of the world, a number of skill gap studies have been conducted/ coordinated for important sectors in the economy and the task of specifying national skill standards for different occupations has been undertaken. NSDC has also reported reaching out to government bodies, institutions and organisations internationally to import expertise and know-how, wherever necessary, in certain sectors, e.g. food processing, retail, automobile, construction etc. Steps are also being taken to bridge the skill gaps identified through studies. For example, a study shows that the auto and auto ancillary segment will face a shortage of 35 m by 2022. To meet the challenge, TVS Motor Co. Ltd. is linking up with NSDC to create a trained workforce pool (NSDC Annual Report 2012, 6-7,16).

4 Indian experience with international collaboration

India has cultural agreements with 118 countries. The education component forms a part of most of the Cultural Exchange Programmes (CEPs). Since 2002, the MHRD has entered into exclusive Educational Exchange Programmes (EEPs, in some cases called MOUs) with many countries including Australia, New Zealand, Sri Lanka, Brazil, Afghanistan, South Africa, China, France etc. (MHRD 2012, 1). Regarding TVET, the policies and programmes have been particularly inspired by TVET systems in Germany, Australia, New Zealand and the U.K. In April 2002, the UK India Skills Forum (UKISF) was established to provide a platform for organizations across the technical and vocational education sectors in the UK and India, to tap business opportunities in the sector by exchanging ideas for the delivery of skills training by collaborations between the two countries. The UK India Business Council (UKBIC) acts as the point of contact for the UK skills-providers, while the FICCI acts as the main point of contact for Indian skills-providers. Germany has been providing both financial and technical assistance to India since 1958. Institutes such as the Foremen Training Institute (FTI), Bangalore; National Instructional Media Institute, Chennai or the Central Staff Training and Research Institute (CSTARI), Kolkata were set up with assistance from Germany. A meeting of the Indo-German Joint Working Group on Vocational Education and Training saw a consensus on creating a PPP on the pattern of the German dual system. The Indo-German Joint Commission on Industrial and Economic Cooperation has emphasized more investment by the German Companies in India to take advantage of the business opportunities available in India. Recently, a leading German Automobile manufacturer, Volkswagen, started an apprenticeship programme in India based on the dual system of vocational education and training in Germany. Australia is also collaborating with India in various skill development initiatives to share expertise and experiences. This is also facilitated through the new bilateral Australia India Education Links website. The website is an information portal which supports education and training collaborations between Australian and Indian education and training institutions, business and industry. A Bureau for Vocational Education and Training Collaboration (BVETC) was established by Australia and India in 2010 to facilitate linkages in the skills areas. The BVETC meets regularly to consider collaboration proposals from the vocational education and training sector and provide advice on the best ways to achieve successful partnerships between the countries. India and the U.K have also undertaken several collaborations and initiatives on skill development. The UK India Education and Research Initiative aims to work with a range of different skills and training bodies to enable the participation and facilitation of skill development requirements in both these countries (FICCI 2012, 12-13). The New Zealand Open Polytechnic and National Institute of Open Schooling have also signed an agreement for skill development through distance learning. An India-New Zealand Education Council has been constituted to draw up a framework and devise mechanisms of co-operation and set the agenda for improving educational relations between the two countries. During its first meeting held in October 2012, both sides expressed their commitment to earmark US\$ 1 million annually to enhance the co-operative activities through specific programmes designed by the council. The programmes will include joint research, student mobility, qualifications framework and vocational education and training, among others. The

members of the council recognized skill development, especially catering to the needs of the industry and keeping pace with the exponential growth in the global mobility of the workforce, as one of the major challenges facing the two countries and pledged further collaboration (Digital Learning 2012, 1). In addition MOUs for mutual recognition and equivalence of degrees, diplomas and other educational qualifications with many countries are also under consideration. My organisation, the NCERT, has exchange programmes with a number of countries. In the past, it has held training programmes for Sri Lanka, the Maldives, Afghanistan, Indonesia etc. More recently, in pursuance of the developments in the Indo-Afghanistan Collaboration, a 20-month diploma course in English and English Language Teaching was organized for Afghan youth in 2010-11. For UNESCO/APEID i.e. Asian Programmes of Educational Innovations for Development, NCERT acts as its secretariat and as an associated centre and has thus been active in the designing, development and implementation of APEID activities in the region. PSSCIVE, NCERT is also a UNESCO/UNEVOC centre. A number of visitors/delegations continue to enter NCERT from across the globe as well as many faculties going abroad for various programmes. NCERT keeps contributing in JWG's and MOUs with various countries.

5 Future priorities

The competition is no longer local but a global phenomenon. People are compelled to compete with others around the world. Therefore, HR policies and skill standards in other countries has become crucial and benchmarking needs to be achieved and set against international standards. One has to keep an eye on the best practices in other countries and learn from the success and failures of initiatives in the global scenario. Bilateral and multilateral partnerships, with the high potential to remain functional need to be established. In view of the fast changes in technologies and the financial markets; the emergence of global economies, products and services; growing international competition and new forms of business and management practices, such partnerships become even more crucial if we wish to provide a competitive advantage to our work force.

Some priorities for the future in international collaboration could be:

- International benchmarking of and recognition to
 - o National Qualification Systems
 - o Standards of skills / competencies
 - o Prior learning / Credit accumulation
- Joint Certification
- Documentation of Best Practices/ Innovations
- Exchange of
 - o Officials
 - o Trainers/ Teachers
 - o Learners

However, specifics have to be worked out regarding bilateral partnerships,. For example, in the case of Indo-Australian collaboration, during a meeting in the MHRD in Feb.2010, Australian counterparts expressed that Australian Council for Educational Research (ACER) is keen to work with India on aspects of vocational skills, especially in the service sector, the implementation of NQF and the international recognition of skill standards. For India, it would be interesting to study and learn from the Australian experience in continuing education in TVET and the acknowledgement of previous learning. It would be worthwhile to study the decentralization and school management practices in New Zealand while South Korea has gone far ahead in TVET for the age group of 10-18 years. However, a recent delegation to NCERT mentioned that they too are facing a problem of youth's decreasing interest in TVET. They do not have a qualification framework and were planning to design it at the present time. Having just launched an NVEQF India can share material and experience with them. Indonesia could also be another country of interest for collaboration with India as it is one of the E-9 countries and shares various similarities with India. Thus, specific collaboration elements can be worked out for bilateral cooperation.

6 Regional perspective

Approximately a quarter of the world's population (24%) resides in South Asia, a large percentage of which is in the productive age and youth. Projections by the United Nations reveal a 40% increase in the region's population by 2050 and the 35% increase in the working age population by 2030 is expected to increase to 50% by 2050. Thus South Asia will contribute to the majority of growth in the world's working age population over the next several decades. At the same time an estimate reveals a global shortage in skilled HR to the tune of 56 million by 2020. By extending regional cooperation in TVET, the SAARC countries can become a zone for potentially employable and skilled competitive HR. The international division of FICCI has also felt a need to create a regional Skills Development Forum (SDF) amongst SAARC countries and has conceived some areas for which SDF can be useful (Taneja 2012, 9-10).

In India, in 2004-05, the total employment in the country was estimated at 459.1 million of which 56.8% of the workforce were self-employed, 28.9% in casual labour, and 14.3% earned regular wages. About 8% of the total workforce in India is employed in the organized sector, while the remaining 92% are in the non-formal sector. The quality of employment in the organized sector is generally high though the scope of additional employment generation in this sector is rather limited. Significant employment generation is taking place in the tertiary sector, particularly, in the services industries. Self-employment and small businesses continue to play a vital role in this regard. It is, therefore, necessary to promote main employment generation activities such as (a) agriculture, (b) the labour-intensive manufacturing sector such as food-processing, leather products, textiles (c) services sectors: trade, restaurants and hotels, tourism, construction and information technology and (d) small and medium enterprises.

It is similar with regard to other countries in the region. SAARC economies are primarily agrarian, but are now attempting to diversify and industrialise their economies. The service sector is emerging as the major contributor in the GDPs. Bangladesh, for instance has the second largest workforce of SAARC countries after India, 19% of its contribution to GDP is from agriculture, 29% from industries and 53% from the service sector. In Sri Lanka, 58% of its contribution is from service sector. Agriculture, forestry and fisheries are important sectors in Bangladesh, agriculture and forestry in Bhutan, tourism and fisheries in the Maldives, agriculture and textiles in Nepal, textiles and construction in Pakistan and textiles, tourism, IT, gems and jewellery etc. in Sri Lanka (Joint ADB-FPCCI Report 2010). In India, 20 sectors have been identified as sunrise sectors including most all of these. Thus, we see that the SAARC countries can gain a lot with regional cooperation.

Some prospects of regional cooperation

- Policy research on TVET: policies on TVET in different countries and their implications on HR development, the utilisation of research findings in introducing appropriate changes in education and training systems, curricula etc., thus making them more responsive and relevant
- Establishing sector-wise regional vocational qualification frameworks in sectors of common interest, such as, agriculture, fisheries, tourism, textiles, gems and jewellery, health, medicinal plants etc.
- Sector-wise research on market trends for HR requirements and skill gaps
- Identification of skill standards and their international benchmarking
- Ensuring quality standards at various levels
- Identifying strength areas for skill-development in each SAARC country and designing suitable exchange programmes to learn from one another
- Designing standards and processes for competency evaluation and ensuring comparability and transferability.
- Working on the possibility of joint certification

7 Epilogue

The Asian countries look forward to seeking an edge in the global HR market through TVET as a prominent strategy. In the Asian region, there is a common realization of the importance of skills in socio-economic development as reflected in the conference report on case studies on TVE in Asia and the Pacific in 1996 – “The future international competitiveness in trade and increases in national productivity will only occur by having a skilled work force capable of meeting the technological changes of the 1990s and beyond”. However, designing education and training is a continuous endeavour of exploration, experimentation, invention and reinvention; with a pace that society demands (Agrawal 2009, 201). Much needs to be done

in Human Resource Development at a constant level. India has a young population eager to learn and work. It requires suitable and timely education, training and retraining. Efforts are ongoing but appear inadequate at present in view of the growing domestic demand and international openings available. The encouraging signs are the appreciation of the issues concerning TVET at every level and the willingness of the policy formulators to find solutions. India is on the march and has the experience to ensure that a skilled, competent and committed workforce supports it. All the countries in the region and most of the countries in the world are giving high priority to TVET and believe in the policy that 'together we achieve more' thus paving way for vibrant functional collaborations.

References

- Agrawal, P. (1999). Vocational Education for All. In Pandit Sunderlal Sharma Central Institute of Vocational Education (ed.). Vocationalisation of Education: Perspectives for the new Millennium-the Challenge. PSSCIVE, Bhopal, India, 44-50. Online: www.voced.edu.au/content/ngv3222 (retrieved 20.4.2013).
- Agrawal, P. (2000). Vocationalisation of Agriculture Education and Gender Issues. In: Indian Journal of Vocational Education. Vol. 3, no. 1, 30-34.
- Agrawal, P. (2009). Traditional and Transitional TVET Systems. In Maclean, R. & David N. Wilson, D. N. (eds.): International Handbook of Education for the Changing World of Work. UNESCO-UNEVOC. Springer, Vol.1, 189-202.
- Digital Learning (2012). First India-New Zealand Education Council Meeting Held, 5 MoUs Signed. 23 October 2012. E-magazine. p.1.digitalllearning.eletsonline.com.
- FICCI (2012). Skill Development Sector Profile. Abstract. A brief overview of the Skills Development Sector, 12-13.
- MHRD (2012). Online: <http://www.mhrd.gov.in/hi/node/1974> (retrieved 20.4.2013).
- Ministry of Labour and Employment (2006-07). Annual Report.
- NCF (2005). National Curriculum Framework, NCERT. N. Delhi, India, 116-118.
- NSDC Annual Update (2012). National Skill Development Corporation: Transforming the skill landscape. New Delhi.
- PIB (2006). Online: <http://www.pib.nic.in/newsite/erelease.aspx?relid=78236> (retrieved 20.4.2013).
- Taneja, A. (2012). SAARC wide Skill Development Plan: Ideation, Innovation and Implementation. In: Diplomatist Magazine, 7-10. Online: www.diplomatist.com.

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