

2. Historical Overview of VET in India

2.1 Growth and Development of VET in India

Skill and knowledge are the driving forces for the economic growth and social development of any country (IAMR 2010; Chenoy 2013). As Stevens (1994) points out that human capital is one of the important factors that determine a country's growth. Therefore, India as a developing economy, which has the world's largest young population (MoLE 2010), constantly makes significant reforms in education and vocational skill training system to create the largest technical manpower in the world. At the national level, education has been given high priority in India's developmental process at all levels and, the country has long felt that significance of vocational training in developing new skills in individuals by means of raising his/her potential productivity.

2.2 Evolution of VET in India during Colonial Period

The eighteenth century was considered as a crucial period in the world's history during which machines came into existence to help man to improve productivity in all sectors involving human activities. This time period witnessed remarkable evolution in technological civilization which ultimately gave birth to "Industrial Revolution" (Sen 1989, p.225). Revolution in the industry sector created more demand for technically trained employees to meet the occupational needs. Yet, such demand was confined to the western countries that paved way for a new economic order and countries were divided into groups as imperialists and their colonists. Consequently, a new system of learning process came into existence to fulfil the growing needs of an industrial society, which is known as "technical education" (ibid. p.225). During the same time, VET in India was designed with the objective to supply trained manpower needed for managing the imperialists' colonial system of Government and to support an industrial society in the UK, and not to develop human resources for the improvement of industrial society in India (ibid. p.227). However, the British colonial Government started technical education centres mainly to train middle level technical personnel required to improve the infrastructure such as construction and maintenance of public buildings, roads, canals, ports and harbours, railways and other services and also to train artisans and craftsmen in the maintenance of instruments and equipment required for the army and the navy (ibid. p.226).

During the colonial period a number of committees were commissioned by the British Government to examine the problems of education in India. These committees greatly emphasised the need and importance of technical and vocational education and training in the country in order to develop country's economy and industry (ibid. p.227). In 1936-37, two British experts namely Messrs Abbot and Wood (cf. Sen 1989, p.229) were invited to offer advice on addressing certain problems of education and especially on issues of vocational and technical education. They recommended the colonial government to start its first nationwide massive training programme in 1940, called "War Technicians Training Scheme," in which the people were to be trained and made readily available to meet the World War II situation in the country. It helped them to meet the urgent requirements of defence forces and to produce armed products in industries (ibid. p.229).

Singh (2001) noted that the colonial government's policy in technical and vocational education failed to transform Indian VET system and bring about any significant change. Thus, VET faced a great set back (Singh 2001; p.210).

2.3 VET in India's Post-Independent Scenario (1947-1970)

After Independence (post 1947), the country realized the need for (high) skilled human resources to improve the economy which increased the demand for skilled manpower at various levels to keep pace with the emergence of several new technologies and competitiveness. The country felt that vocational education and training could make an individual more employable, when general education does not produce enough jobs. Consequently, Government of India took various measures to make the country to be self-reliant by way of massive economic and industrial development through its Five Year plans. One such measure was the formation of the AICTE (All India Council for Technical Education). Established in 1945 to contribute towards technical education in India, it had undertaken various initiatives and expanded technical institutions across the country and supervised the technical education above the high school stage. This body consisted of the Ministries of Education, Labour, Industry and Commerce besides the Central Advisory Board of Education. In the post-independence period, the Government has taken notable decisions to reform VET through expert committees which reflects in the policies. The following section discusses them in detail.

2.4 Significant Intervention in VET through Policy Developments

During Post-independence period, the Government of India commissioned many committees to suggest possible changes in the educational system which are employment oriented with an emphasis on vocational education (Tilak 1988).

As per records of the Ministry of Human Resource Development (1978), the very first commission after independence called, University Education Commission (1948-49) headed by Former President of India Dr. Radhakrishnan, recommended opening many intermediate colleges to provide a platform for 10th grade completed students in vocational fields. The committee stressed the need “to meet a variety of needs of our young men and women by giving a vocational bias to their courses, retaining at the same time their value in a system of general education as preparation for University courses” (MHRD 1978, p.81).

Similarly, Mudaliar Commission in 1952 also recommended the diversification of the courses at the secondary stage and stressed upon that at the post-secondary stage, a student should be in a position to take up some vocations, if he/she wished.

Later, the Education Commission in 1964-66 headed by Kothari re-examined the country’s educational system with the aims to improve the quality and standard of education. It also emphasised diversion of at least 50 per cent of the students who successfully complete 10 year schooling to the vocational stream to prepare students for employment and/or self-employment (Debroy 2009). It also suggested two distinctive streams at higher secondary stage: one to prepare students for advance studies at universities and professional colleges and, second, to prepare students for a variety of occupations.

The Education Commission also insisted that, work-experience should be introduced as an integral part of all education (NCERT 2007, p.6). Their recommendations were well taken by the Government which led to policy formulation in 1968 and 1986 on Vocationalisation of school education. The above section makes clear that almost every committee consistently has laid emphasis on the importance of VET in the country.

In India, VET is divided into two levels. (i) School level: There are vocational schools (under the Ministry of Human Resource Development) and (ii) Higher Level: Vocational Training Institutes run through Government supported and private institutions under the purview of Ministry of Labour and Employment. In the following section, vocational education at the school level is explained.

2.5 Development of VET (1970-1990)

Before we discuss the VET developments during the mentioned period, the school system in India is briefly outlined. The school system in India follows a 10 years +2 years +3 years pattern. Elementary education consists of eight years; each of secondary and senior secondary education consists of two years of education. Students pursue their higher education after passing the higher secondary or 12th standard. In some states, the +2 stage of education exists in intermediate, junior or degree colleges but it is not regarded as part of the ter-

tiary level of education. The graduation education can take three to five years and post graduate takes two to three years duration depending on the stream.

The Secondary and Higher Secondary educations are important stages in the school education system of general education due to the fact that, only at this point the young people decide his/her pathway on whether to pursue higher education or vocational education (Planning Commission 2009b). Vocational education was initiated in the school level with three main objectives.

- To enhance the employability of individual students.
 - To reduce mismatch between demand and supply of manpower.
 - To provide alternative to those seeking to pursue higher education.
- (cf. Nagarajan and Kaliyamoorthy 2010, p. 80).

There has been an array of consistent efforts in reforming the Indian education system in various vocations in order to minimize the unemployment issues in the country. The initiative started from the school level as Work Education is included in the primary (grades 1–5) and upper primary (grades 6–8) standards to make the students aware of the concept of work. Pre-vocational education is imparted in classes 9 and 10 (secondary level) with a view to providing the students a measure of familiarity with the wide spectrum of world of work (Krisanthan and Pilz 2014).

Vocational education, as a distinct stream, starts in the grades of 11 and 12 (IAMR 2010, p.3). Vocational Education at the Higher Secondary level came into existence in 1976 as a state scheme (Mizoue 1998). Initially, it was started in 8 states namely, West Bengal, Delhi, Karnataka, Gujarat, Maharashtra, Tamil Nadu, Pondicherry and Andhra Pradesh (ibid. p.82). Dr. Kulandaiswamy committee report 1985 specified guidelines for the expansion of the programme and recommendations for Centrally Sponsored Scheme (CSS). As a result, in 1998, the Government of India launched a Centrally Sponsored Scheme (CSS) of Vocationalisation of Higher Secondary Education. This scheme was launched mainly to encourage the State Government's initiative *viz.* Vocationalisation of education at 12th grade which achieved only partial success as majority of the students preferred to take general education.

In later 1980s, many international organizations, missionaries, foundations and other donor agencies offered vocational training to prepare young people for work in the informal sector (Fluitman 1989). In this period, wages of workers who had completed Secondary Education increased in spite of the conformity of such workers. But, relative supply of workers with vocational skill came down during this period which had cascading effect on their wages in early 1990. Furthermore, vocational education was provided high priority in the National Policy on Education 1986 which was concerned more with the student's "entry to workforce". Hence, a target was set to bring 10 percent of Higher Secondary students under vocational course by 1990 and 25 percent by 1995. In 1995-96,

an evaluation study was carried out and it was found that about only 4.8 per cent students were diverted to vocational stream. However, the success of the scheme was varied across the states (GOI 2009).

It gave new impetus to the programme and according to Planning Commission (2007a), 150 vocations is covered at school level. It proposed that the major aim of this scheme was to produce adequate number of middle level manpower in the country. It was also one of the reasons to imparting vocational skills in the same school where general education is imparted. This was mainly done to overcome the unhealthy mental barriers of status, means, intellectual abilities etc. among the students who are admitted to academic and vocational streams (MHRD 1978). Consistently, the Government of India encourages boys and girls particularly in the age group 14-18, to follow vocational courses. It provides for diversification of education opportunities for enhancing individual employability and reducing mismatch between supply and demand of skilled manpower (IAMR 2010). However, most vocational and industry related training programmes fail to attract the better graduates of secondary schools (Thakur 1979, p.343).

2.6 VET at the Higher Level

The VET in India is extremely fragmented with over 27 ministries involved in skills training in most cases (Panth 2013). Since Independence, Vocational Training has been concurrent responsibility of both the Union and the States. However, the Central government is responsible for the development of training schemes, laying down training norms, developing policy, examination and certification while implementation is relatively the responsibility of the State governments. In India, Vocational Training programmes are offered through two principal schemes called Craftsmen Training Scheme (CTS) and Apprenticeship Training Scheme (ATS). The CTS and ATS schemes are offered by the Directorate General of Employment and Training (DGET). The following section discusses these two training schemes in detail.

2.6.1 Craftsman Training Scheme (CTS)

Craftsmen Training Scheme (CTS) was started as a post-war rehabilitation measure for demobilized military personnel (Thakur 1979, p.343). It was introduced in 1950 which imparted full time training in various trades within the age group of 14-25 (ILO 2003).

Trainings were offered through Government sponsored ITIs (Industrial Training Institutes) as well as private run ITCs (Industrial Training Centers)¹. In earlier stage, it was supposed to speed up the process of industrialization in the Country (ILO 2003). Upon the successful completion of the All India Trade Test conducted by the National Council for Vocational Training (NCVT) the graduates were awarded Certificates and classified as semi-skilled craftsman.

But, enrollment wise ITCs are more than ITIs, as the later has only a few trades. Since they are flexible in terms of the number of courses offered, the ITCs have been able to proliferate covering as many as 16,92,836 students as against 11,94,466 in ITIs (DGET 2014). As shown in the Figure 2, growth of ITIs and ITCs are increase many folds between 1950 and 2014.

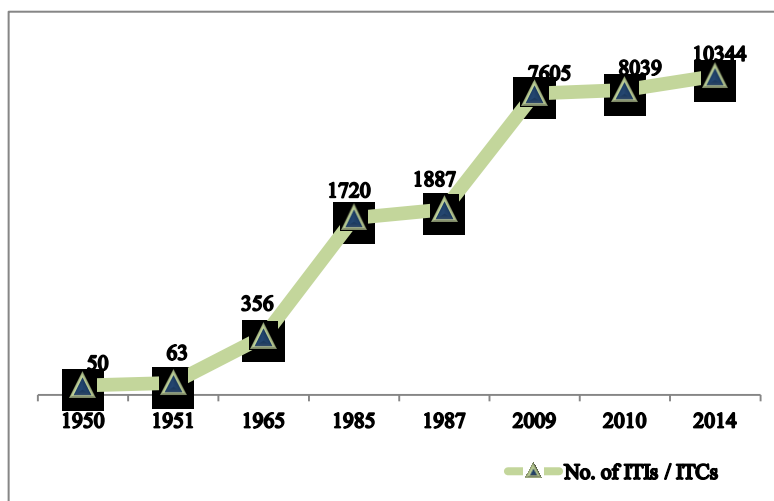


Figure 2 Growth of ITIs and ITCs (Source: DGET 2014)

2.6.2 Apprenticeship Training Scheme (ATS)

With the liberalization of the economy in the 1990s, the Government of India (GOI) endeavored to produce required skilled manpower to achieve economic growth by utilizing the facilities available in the industries for training technicians. Thus, the apprenticeship training was envisaged and the Apprenticeship Act 1961 mandated to provide practical training for the ITI students to enhance

¹Industrial Training institutes(ITI)are training providers established by the government, whereas industrial Training Centres (ITC) are training providers managed by private players on self-financing mode. These ITCs are sanctioned and regulated through the craftsman Training Scheme (CTS) by Directorate General of Employment & Training (DGE&T), Ministry of Labour and Employment, Government of India (IAMR 2010, p.22)

their technical competency. The technical education and vocational training system produces labour forces through a three tier system. The system comprises of Engineers and Technologists (Graduate / Post graduate level e.g. ITI, Engineering Colleges), Technicians and Supervisors (Diploma level who are trained in Polytechnics) and semi-skilled and skilled workers (certificate level craft people trained in ITI and formal apprentices).

2.7 Growth of VET in 1990s and 2000s

In 1990s, there was a massive change in science and technology policy which induced the need to improve in the quality of life and to reduce poverty (Singh 2009). After 2000, India as one of emerging economically stronger countries witnessed huge demand for manpower at different levels including unskilled, semi-skilled for the lower, middle and at supervisory levels respectively. The Government's approach was to "enhance individual employability, reduce the mismatch between demand and supply of skilled manpower and provide an alternative for those pursuing higher education without particular interest or purpose" (cf. World Bank 2006, p.12).

Sen (1989) asserts that VET could promote economic and industrial development in a country. The essential requirement is the capacity to develop technical manpower of good quality in adequate numbers. However, a well-organized system of technical education and training is required which could be used as a tool to develop manpower. India's transition to knowledge-based economy require a new generation of educated and skilled people (Singh 2009). In India, DGET (Directorate General of Employment & Training) of Ministry for Labour and Employment (MoLE) supervises the biggest training system accounting for more than 60 percent of beneficiaries while the utilization capacity of the Vocationalisation of secondary education programme being run under the Ministry of Human Resource Development just 40 percent (ILO 2003).

2.8 VET Scenario since 2000

2.8.1 Demographic Changes and the Impact on Labour Market

The Indian labour market is constituted by an undeveloped economic structure differentiated into formal and informal sectors which continues to be dominated by agriculture. Nearly, 57 percent of the workers are employed in agriculture, either as cultivators or as labourers (Srivastava 2008).

According to Ministry of Labour and Employment report (MoLE), there will be approximately 63.5 million new entrants to the working age group of 15-59 years between 2011 and 2016. By 2020, it is expected that the population in the working age group (15-59) years is likely to increase from 58 percent in

2001 to more than 65 percent by 2021. Moreover, bulk of this population will be in the younger age group of 20-35 years which would make India as “country with the maximum young population” in the world which is characterized as “Demographic Dividend” (MoLE 2010; Jayaram 2009).

The current trend of increasing industrialization and declining agriculture are the consequences of the youth migrating from rural to urban areas for profitable employment (cf. sec. 3.1). The education and skill characteristics are not in line with the rapidly industrialising and developing economies. A broad shift in the occupational structure of the Indian economy—from farm to non-farm has resulted in new skill requirements for the emerging workforce (Srivastava 2008, p.769).

The World Bank report of 2006, indicates that skill development enrolment in vocational educations in India is negligible when judged by international comparisons. It also states that successfully reforming countries are moving in the direction of providing youth with good quality general education.

In India, only 5 percent of the Indian labour force in the age group of 20-24 has received vocational training whereas, the percentage in industrialised countries is much higher, varying between 60 percent and 80 percent. Korea has 96 per cent skilled work force (Planning Commission 2007b and IAMR 2010).

Therefore, the Government has enunciated notable policies and adopted various measures of skill development to enhance Vocational skill training system to ensure those who enter the labour force acquire relevant skills (MoLE 2010).

The Government of India initiated a new scheme in 2007, aim to train one million people in short term modular course in five year time period and one million in every subsequent year. The National Council for Vocational Training is awards certificates to the successful trainees upon assessing their competencies by independent assessing bodies (MoLE 2010, p.33).

In 2008, India developed a roadmap for skill development with an institutional structure at the national level which was followed by the National Policy on Skills Development in 2009, with a target of imparting skills training to 500 million by 2022. It also focused on outcome and linkage to jobs and employability of the trained people (GOI 2009). The primary objective of this policy is to empower individuals, especially youth and women, through improved skills, knowledge and qualifications to gain access to employment in an increasingly competitive global market (Planning Commission 2008). It also committed to create a pool of skilled workforce to get decent employment on the one hand and to meet challenges in the global labour market on the other hand.

However, it has been observed that the current growth is being mainly urban centred, which has failed to incorporate the vast majority of the rural population and other backward sections of the society. Relatively, 70 percent of the Indian population is living in rural areas and remains predominantly as an agricultural- based society.

Though the agricultural sector has seen considerable growth in the five decades since Independence in spite of substantial increases in agricultural production, the general livelihood of the rural population still remains low. Only 3 percent of rural youth (15-29) and 6 percent of urban youth were found to have gone through any kind of vocational training (ADBI 2008).

2.8.2 Improving Image of VET - NVEQF

The concept of Vocational Education and Training is shaped by many socio-economic factors and the culture of a country. VET has been viewed negatively, as low status and conceived as only for poor and educationally backward sections, which attributed majority of the people, believe that they were not eligible for higher education (Tilak 2002; Mehrotra and Saxena 2014). Besides this, the social stigma of low prestige attached to vocational education and its inherent inequalities when compared with higher education are common phenomenon in India and in many other South Asian countries (World Bank 2006 and Pillay and Ninan 2014). During the last few decades, VET has come across various weaknesses due to rigid training structure, inadequate infrastructure, and lack of linkages with industry and improper provision of vertical mobility for the vocationally qualified people.

Prof. Yashpal Committee's report (MHRD 2009) noted that, there is no linkage between vocational education sector and higher educational institutions. Hence, students who attend vocational and technical education after their higher secondary education are deprived of any possibility of pursuing higher education upon completing vocational training (cf. IAMR 2012, p.7).

In order to address these issues, the National Policy on Skill Development 2009 identified National Vocational Education Qualification Framework (NVEQF) as the main instrument for linking various education modes and training pathways. It envisaged permitting individuals to accumulate their knowledge and skills and convert them through testing and certification into higher diplomas and degrees (IAMR 2012, p.1). The aim was to increase employability of young people by bridging the gap between demand and supply of skilled workforce. Therefore, the NVEQF is expected to bring necessary changes in the education and training system of the country. The key elements of NVEQF are including multiple entries and exit to Technical Vocational Education and Training (TVET), transfer with and between TVET and general education and progression within and between TVET (ibid. p.4). Further, it also provides possibility for horizontal mobility to the students from the vocational stream if they desire and allows them for University degree thus integrating the academic and vocational education. But, it requires major changes both in curriculum and organization level (IAMR 2008, p.4).

The basic problem in skill development and vocational training system in India is the fact that it is “**non-responsive**” to the labour market demand, due to

demand and supply mismatch including quality, quantity and skills type (Planning Commission 2008 and Rao et al. 2014) resulting in low productivity of firms and is often observed to be the main reason for low levels of development (Eichhorst et al. 2012).

According to ILO (2009) report, the National Sample Survey Organization 61st Round data revealed that about 89 percent of the population in 15-59 year ages have had no vocational training. Among the 11 percent of the people who received vocational training, only 1.3 percent received formal vocational training. The mismatch between demand and supply of skills in the labour market and the perceived shortage and poor quality of trained persons is likely to become an impediment in the path to sustained economic growth in the absence of timely corrective measures (ADB 2008). The obsolescence of trades and technologies due to rapid technological advances and emerging technology fields is leading to mismatches between the skills acquired in vocational training centres and those required by industry or in the labour market. The low skill levels and general lack of education of the workforce is a hurdle in the path of attaining quality production and adapting to advancing technology and emerging fields. In addition, there exists a great mismatch between the skills being taught in the educational institution and those required by industry.

The high level of illiteracy and limited reach of the current VET system also contribute to the skill shortages felt by India. Indian labour market is faced with skill shortages and a corresponding low level of productivity. The skills expected by the employer and workplace demand are totally different from what had been taught through vocational training (World Bank 2006). Against this backdrop, the author intends to explore to what extent the demand-driven vocational training programme is possible for rural population.

Recent years have witnessed considerable increase in demand for skilled workers including semi, medium and highly skilled. Indeed, the skill gaps is one of the key challenges that Indian labour market is facing presently and this issue has been discussed by many scholars (See Chenoy 2011; Eichhorst 2012; Jamal and Mandal 2013; Mehrotra et al. 2013; Sodhi 2014; Palanithurai 2014; Pilz and Pierenkemper 2014). Despite India having many higher education institutions that provides quality education; there is a huge gap particularly in developing, acquiring skill in new technologies emerging in the industry sector and providing the skill to employees through vocational training. The National Knowledge Commission report (NKC 2009) reveals very little capacity for imparting VET in India and also state the comparison between the total capacity available and the capacity utilization is quite poor.

Sasikumar (2008) points out that VET programmes in India are driven more by supply-side considerations and fulfilling certification requirements that are largely academic than by needs of the labour market (this issue is discussed more detail in ch.3). Such a trend often leads to shortage of skill and talents among the large sections of population who cannot afford access to quality higher education.

Therefore, VET is an important means to meet the twin objectives of creating skills for the future and providing livelihood opportunities for young people, rural population and disadvantaged people. As VET has the potential in supporting human resource development, economic growth and social development process in the country by improving the quality of life, it is imperative to investigate demand-driven approaches of VET.

Demand-Driven Approaches in Vocational Education
and Training

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