International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2013): 6.14 | Impact Factor (2013): 4.438

Development of Skilled Workforce through Technical and Vocational Education and Training (TVET) System in India

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Abstract: ***India has one of the largest technical manpower in the world. But compared to its population, this manpower is not sufficient to cater all the technical requirements in the country. Since the quantity of the skilled manpower is essential for the sustainable development of the nation, at the same time emphasis should also be given to the quality of technical education system. To meet the growing demand of skilled workforce & to maintain India's competitiveness worldwide, the government has taken various initiatives to provide the quality technical & vocational education throughout the country. These initiatives are not limited to a particular community or area; these initiatives are for each & every individual of the country. Government has ensured that the marginalized sections of the society, including women, get adequate representation in these courses. Thus it can be expected that the TVET will play a vital role in the overall development of qualified skilled workforce & also their lives.***

Keywords: Technical & Vocational Education & Training (TVET), National Skill Development Corporation (NSDC), National Council for Vocational Training (NCVT), National Vocational Qualification Framework (NVQF), Economic growth, Development of Human Resource.

1. Introduction

Technical education mainly refers to theoretical preparation of students for jobs involving applied science and modern technology. It is usually considered as part of the formal education system, and usually falls under the responsibility of the Ministry of HRD. It emphasizes the understanding of basic principles, rather than the actual attainment of proficiency in manual skills as is the case with vocational education. The goal of technical education is to prepare graduates for occupations that are classified above the skilled crafts but below the scientific or engineering professions [1-4].

On the other hand, vocational training is better linked to the labour market and employment development system, and usually falls under the responsibility of the Ministry of Labour [4]. It is primarily non-academic in nature and offers practical training and skills needed to pursue an occupation straightaway. It provides students with courses directly aligned to land a job in a chosen profession or a skilled trade [6]. Hence it also ensures that an individual is independent and ready to work in the competent environment. TVET is often offered at secondary and post-secondary levels [1-4].

India has one of the largest technical manpower in the world. But the Indian labour market is characterised by a high level of youth unemployment and widespread underemployment. At the same time, there is a scarcity of skilled workers to satisfy the growing needs of industry. The technical and vocational education and training (TVET) currently provided by Indian vocational institutes seldom matches the requirements of the private sector. One of the prime reasons for this is the lack of linkage between education and industry. Exposure to industry would enable students to acquire these skills as part of their natural learning process. In India such opportunities are quite limited for the students [5]. However the Indian Government is committed to addressing these challenges. TVET is not viewed as an end in itself, but as an essential prerequisite for socially balanced economic growth.

2. Need of Vocational Education

Technical education and vocational training is not just preparation for work, it is preparation for life. And this is why it is so important to make it accessible to all [4]. Skills are important for poverty reduction, economic growth and sustainable development. Countries with higher and better levels of skills adjust more effectively to the challenges and opportunities of world of work. As a consequence, policy attention to technical and vocational education and training (TVET) is increasing worldwide. TVET comprises formal, non-formal and informal learning for the world of work. Young people, women and men learn knowledge and skills from basic to advanced levels across a wide range of institutional and work settings and in diverse socio-economic contexts.

As well as thinking about the general levels of education in our workforce, it is also important to consider whether skills and qualifications match the particular needs of employers. A number of surveys have revealed concerns that there is a growing mismatch between skills supply and demand in some sectors of the economy. However, the latest Employer Skills Survey shows that more than a fifth of vacancies remain unfilled because of skills shortages. This is a more troubling statistic, as it suggests that skills shortages could be acting as a brake on growth in some sectors.

According to the Government of India survey, the vocational education stream is quite small enrolling less than three percent of students at the upper secondary level [2]. However vocational, or skills-based, education is becoming more and more popular now a day's because many employers are

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expecting new employees that have all the practical skills. Also for those who have to support their families immediately after basic formal education, vocational education is the best option. Since most of the youngsters from economically weaker section could not able to complete their higher studies, so these courses are one of the alternatives to complete their studies and develop themselves as a skilled personal in the professional competitive market. Vocational courses are typically more practical and skills-based than academic degrees, but they are often taught at universities as well as colleges and technical institutes. Vocational Education and Training (VET) is an important element of the nation's education system.

3. Technical and Vocational Education in India

As it is well known that for any country like India, education is the key to the task of nation-building. So for overall national progress and economic growth of any country, youth should be encouraged towards right knowledge and skills. The Indian education system recognizes the role of education and particularly Vocational Education [7].

In India vocational training is provided on a full-time as well as part-time basis. However both types of these courses are offered through ITIs and Polytechnics. The nodal agency for granting the recognition to the ITIs is NCVT, which is under the Ministry of Labour, Govt. of India and for polytechnics state technical education boards or universities grants diplomas.

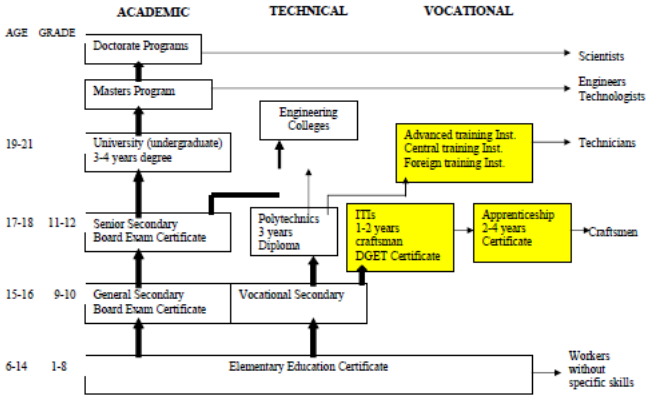

Figure 1: Academic, Technical & Vocational Education system in India

The technical and vocational education and training system (TVET) in India develops skilled human resource through a system as shown above (Figure 1):

- Graduate and post-graduate level specialists (e.g. IITs, NITs, and engineering colleges) trained as engineers and technologists.
- Diploma-level graduates who are trained at Polytechnics as technicians, junior engineers and supervisors.
- Certificate-level for higher secondary students in the vocational stream and craft people trained in ITIs as well as through formal apprenticeships as semiskilled and skilled workers.

National Skill Development Initiative taken by Government of India will empower all individuals through improved skills, knowledge, nationally and internationally recognized qualifications to gain access to decent employment and ensure India's competitiveness in the global market. Therefore University Grants Commission (UGC) is also taking initiatives and has invited proposals from universities and colleges to start courses on skill development. The need of the hour is to focus upon skill based education as a part of higher education [8].

4. National Skill Development Corporation (NSDC)

The National Skill Development Corporation is a non-profit company under the Companies Act 1956 with an appropriate governance structure. The head of the Corporation is a person of eminence/reputed professional in the field of Skill Development [3]. NSDC was set up as part of a national skill development mission to fulfil the growing need in India for skilled manpower across sectors and narrow the existing gap between the demand and supply of skills.

The Corporation would constitute Sector Skills Councils with following functions:

a) Identification of skill development needs including preparing a catalogue of types of skills, range and depth of skills to facilitate individuals to choose from them.
b) Development of a sector skill development plan and maintain skill inventory.
c) Determining skills/competency standards and qualifications.
d) Standardization of affiliation and accreditation process.
e) Participation in Affiliation, accreditation, examination and certification.
f) Plan and execute Training of Trainers.
g) Promotion of academies of excellence.
h) Establishment of a well structured sector specific Labour Market Information System (LMIS) to assist planning and delivery of training.

Its mission is to upgrade skills to international standards through significant industry involvement and develop necessary frameworks for standards, curriculum and quality assurance. Also enhance, support and coordinate private sector initiatives for skill development through appropriate Public-Private Partnership (PPP) models; strive for significant operational and financial involvement from the private sector. NSDC is playing the role of a "market-maker" by bringing financing, particularly in sectors where market mechanisms are ineffective or missing.

5. National Council for Vocational Training (NCVT)

The National Council for Vocational Training, an advisory body, was set up by the Government of India in 1956 (as National Council of Training in Vocational Trades—NCTVT). The Council has been entrusted with the responsibilities of prescribing standards and curricula for craftsmen training, advising the Government of India on the

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overall policy and programmes, conducting All India Trade Tests and awarding National Trade Certificates [3].

The Council functions as a central agency to advise the Government of India in framing the training policy and coordinating vocational training throughout India.

The name of the Council shall be National Council for Vocational Training (NCVT), will be strengthened and re-engineered with a broader mandate and representation. The main functions include:

i. Design & Development and maintenance of NVQF which inter alia includes:

- Setting up a framework for competency standards, structure of courses, credit structure, accumulation and certification.
- Setting up a framework for affiliation and accreditation of institutions.
- Quality control mechanism.

ii. Labour market information system and dissemination of information at the national level.

iii. Monitoring and evaluation on the effectiveness and efficiency of national skill development efforts through appropriate reporting and communication mechanism.

The functions of the Council shall be to establish and award National Trade Certificates in engineering, building, textile and leather trades and such other trades as may be brought within its scope by the Government of India. Prescribe standards for syllabi, equipment, and scale of space, duration of courses and methods of training. Recognise training institutions run by government or by private agencies for purposes of the grant of National Trade Certificates and lay down conditions for such recognition. Prescribe qualifications for the technical staff of training institutions. Perform such functions as are assigned by or under the Apprentices Act, 1961

6. National Vocational Qualifications Framework (NVQF)

To stimulate and support reforms in skills development and to facilitate nationally standardized and acceptable, international comparability of qualifications, a "National Vocational Qualifications Framework" is being established by the Central Government. Central Advisory Board of Education (CABE) has resolved to set up an inter-ministerial group which would also include representatives of State Governments to develop guidelines for such a National Framework.

National Vocational Qualification Framework (NVQF) will be created with an open/flexible system which will permit individuals to accumulate their knowledge and skills, and convert them through testing and certification into higher diplomas and degrees. NVQF will provide quality assured various learning pathways having standards, comparable with any international qualification framework because it is based on nationally recognized occupational standards which include all major activities that a worker must perform in the occupation or competency standards. NVQF will support lifelong learning, continuous up-gradation of skills and knowledge [3].

The National Skill Development Policy 2009 has proposed the following features for the framework:-

a) Competency based qualifications and certification on the basis of nationally agreed standards and criteria;
b) Certification for learning achievement and qualification;
c) A range of national qualification levels – based on criteria with respect to responsibility, complexity of activities, and transferability of competencies;
d) The avoidance of duplication and overlapping of qualifications while assuring the inclusion of all training needs;
e) Modular character where achievement can be made in small steps and accumulated for gaining recognizable qualification;
f) Quality Assurance regime that would promote the portability of skills and labour market mobility;
g) Lifelong learning through an improved skill recognition system; recognition of prior learning whether in formal, non-formal or informal arrangements;
h) Open and flexible system which will permit competent individuals to accumulate their knowledge and skill through testing & certification into higher diploma and degree;
i) Different learning pathways – academic and vocational – that integrate formal and non-formal learning, notably learning in the workplace, and that offer vertical mobility from vocational to academic learning;
j) Guidance for individuals in their choice of training and career planning;
k) Comparability of general educational and vocational qualifications at appropriate levels;
l) Nationally agreed framework of affiliation and accreditation of institutions;
m) Multiple certification agencies/institutions will be encouraged within NVQF.

7. Conclusion

Technical & Vocational Education could play an important and vital role in the development of human resource by creating skilled manpower, enhancing the quality and quantity of industrial production. This also improves the quality of life and hence the overall development of an individual.

Acknowledgment

We take this opportunity to express our profound sense of sincere and deep gratitude to the initiatives taken by Government of India in order to promote skill based learning techniques. Authors also want to thank all those people, who motivate them to share the information regarding skill based learning and TVET system in the country for sustainable development.

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