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## Challenges of Vocational Education System in India

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### Abstract

Education and social development are complimentary to each other. Education improves functional and analytical ability and thus opens up opportunities for individuals to achieve greater access to skills and livelihoods. Skilled workforce is an essential factor to become a developed economy. In fact, Skills and knowledge are the two pillars of economic growth and industrial development of any country. Vocational education and training is the branch of education which leads to work, which in turn provides skilled manpower that contributes to the national progress.

Technical and Vocational Education (TVET) play an essential role in promoting sustainable economic growth and the socioeconomic development of countries, with benefits for individuals, their families, local communities, and in turn, the whole society. Present scenario of Vocational educational system in India, its challenges and the solutions to overcome re discussed in this paper.

**Keywords:** Vocational Education, Training, Technical Education, Curriculum, Challenges

### Introduction

The role of education in social and economic progress of a nation is well recognized today. Education improves functional and analytical ability and thus opens up opportunities for individuals to achieve greater access to skills and livelihoods. Skilled workforce is an essential element to become a developed economy. In the present time the job skills needed are professional, managerial, operational, behavioural, and inter personal skills <sup>[1]</sup>.

For a country to achieve its development goals, it is vital to provide effective training and education, technical and vocational education to people. Good quality Vocational Education and Training will increase the performance, productivity and capability of the youth, which translate into a good investment. Vocational education and training (later termed as VET) is a widely recognised approach to overcoming poverty and the social exclusion. It leads to work, which in turn results to income and hence development of the country and society <sup>[2]</sup>.

Vocational education and training, (VET) has been described as a tool for national economic and technological development. The World Bank has also identified it as a means to improve technological advancement, innovation and sustainable development for developing nations <sup>[3]</sup>.

### Vocational education and training (VET) in India

Vocational education and training plays an important role to promote sustainable economic growth and the socioeconomic development of countries, with benefits for individuals, their families, local communities, and in turn, the whole society <sup>[4]</sup>.

Today, India has emerged among the fastest growing economies of the world. It is expected that India's GDP will grow at about 8% annually till 2022, and in the next decade, India's economy is likely to create over 500 million jobs, 75% of which will be skill-based <sup>[5]</sup>. India has one of the largest manpower in the world. However, compared to its population, there are a large number of educated people remaining unemployed.

This scenario will produce a strong need of effective vocational training system. In such a scenario, increasing capacity, improving utilization and enhancing the quality of VET is essential to enhance employability of the youth. TVET has started getting more attention today. A Google search for 'Vocational Education and Training in India' provides About 28,90,000 results in 0.47 seconds indicating the importance of VET today <sup>[6]</sup>.

Policy planners have recognized now the importance and capacity of VET and there is a greater thrust on vocationalization of education today. Indian Govt. Has started opening more polytechnics and Institute for Industrial Training (ITIs) now. Under the XIth 5 year Plan, vocationalization of education has received a boost with more funds being allocated for the purpose <sup>[7]</sup>. Besides, it is also being ensured that the marginalised sections of the society, including women, SC/ ST and OBC, get adequate representation in these courses. It is clear that TVET will play a significant role in improving the economic as well as social scenario of India.

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### **Regulatory Framework of Vocational Education system in India**

The main agencies involved in, planning VET policy formulation and its implementation in India are Government agencies. These include the following bodies:

#### **Central Government Agencies**

- Ministry of Human Resource Development
- Department of School Education and Literacy (Responsible for running VET programmes in senior secondary schools)
- Ministry of Labour and Employment, Directorate General of Employment and Training (for Vocational Training)
- National Skills Development Council

#### **State Government Agencies**

- Directorate of Technical Education
- Private Sector
- Councils for technical education
- Non-Government Organizations

### **Present Scenario of Vocational Education in India**

The National Policy on Education of India (NPE) 1986 (as modified in 1992) has stated that the education system should be able to fulfil the needs of the skilled manpower requirement for the development of the country, as result Government has given high importance to vocational education and training. It has been realized that Education develops manpower for different strata and needs of the economy. So NPE has emphasised on introduction of systematic, well-planned implementation of vocational education programmes, to enhance skills and employability, to reduce the mismatch between demand and supply of skilled manpower. Efforts were made to introduce vocational courses of several occupational fields at school.

Vocational Education covers education and skill development from post primary to tertiary education levels through formal and non-formal modes. It develops knowledge and skills for any occupation and prepares students for the world of work, and self-employment. Today about 150 jobs oriented courses are being provided in the areas of agriculture, business & commerce, engineering and technology, home science, health and paramedical, social sciences, humanities etc. at secondary educational level.

Following formal and informal agencies are responsible for technical education-

**Industrial training institutes (ITIs) and industrial training centres (ITCs)-** These are governed by the directorate general of employment and training (DGE&T) under the ministry of labour, government of India. About 50 ITIs were opened in 1950 for imparting skills in various vocational trades to meet the skilled manpower requirements for technology and industrial growth of the country. Vocational Training includes certificate/ diploma level training for students completing 8-12 class. These programmes under the Craftsman Training Scheme are operated by Industrial Training Institutes (ITIs) and Industrial Training Centres (ITCs). A number of engineering and non-engineering trades are offered approved by the National Council for training in Vocational Trades like Electrician, Plumber, Carpentry, Auto-technician, Painters, Multipurpose Technicians, Masonary, etc. The duration of these programme are 1-2 years or of 2 – 3 months.

**Polytechnic Institutes-** Polytechnic education in India contributes significantly to its economic development. Most

of the polytechnics in the country offer three year diploma courses in conventional disciplines like Electrical, Civil and Mechanical Engineering. During recent years several polytechnics have started new courses in disciplines like electronics, medical Lab technology, fashion design, hospital management, footwear design, Computer Science, tissue culture, architectural assistantship etc. Polytechnics provide skills after class 10<sup>th</sup> by offering 3 years diploma programmes, with the aim of to prepare a pool of skilled manpower as a middle level link between technicians and engineers. New polytechnics and ITIs are being opened under Multisectoral scheme of central Govt.

**University Grants Commission-** The University Grants Commission has scheme of career oriented programme/ courses with the objective to ensure that the graduates passing out after completing these courses have knowledge, skills and aptitude for better employment and self-employment. These courses run simultaneous to the conventional degree programmes. The successful students are awarded certificate/diploma/advanced diploma under this programme.

**National Institute of Open Schooling (NIOS)-** NIOS is the apex body of the in open schooling system in India and provides education through open and distance mode from Primary to Senior Secondary level. NIOS offers vocational education and training programmes to society and deprived groups like Scheduled Castes scheduled Tribes, women, rural people, neo-literates, and disabled and of the society etc. through a network of its study-cum-training centres known as Accredited Institutes (AIs). The NIOS has a network of 11 Regional Centres and about 2067 study centres. There are about 1063 accredited vocational institutes (AIs).

**Jan Shikshan Sansthan (JSS) -** These were launched as an Adult Education program of MHRD, aimed to improve the vocational skills and quality of life of workers and their family members. The programme of JSS initially focuses on adults and young people living in urban and industrial areas and those who had migrated from the rural areas. JSS has acted as a district level resource to organise vocational training and skill development programs. At present around 220 JSS are functioning in different states of India.

**Other Informal Sector Training Agencies-** Some of the other non-formal training agencies includes The Ministry of Rural Development which helps to secure a minimum level of employment for the rural poor by its different schemes like Employment Assurance Scheme, the Integrated Rural Development Programme (IRDP), Kaushal Vriddhi Yojana, Jawahar Rozgar Yojana (JRY), the Programme for Development of Women and Children in Rural Areas (DWCRA), and the Training of Rural Youth for Self-employment (TRYSEM).

Recently a National Policy on Skill Development has been formed by the Ministry of Labour and Employment with objective to produce an improved skills workforce, with knowledge and recognized qualifications to ensure country's competitiveness in the Global Labour market. It has an aim to increase productivity of workforce in the organized as well as in the unorganized sectors, including participation of youth, women, disabled and other disadvantaged sections of society and to synergize efforts of various sectors and reform the present TVET system <sup>[1]</sup>.

### Problems of Vocational Education system in India

The present TVET system in India is facing some serious problems including outdated courses and curricula, low funding and multiple levels of policy planning and governing. Some of the major problems of the Indian TVET system are listed below-

#### 1. Multiplicity of regulations, certifications and curriculum-

Curriculum is main pillar of VET training system. If VET provisions are implemented by different departments, ministries, agencies and organizations, whether Government or private, with a multiplicity of certification, standards and curricula it will result in overlapping of courses and institutions as well as creating confusion for students and employers<sup>[13]</sup>.

**2. The demand supply mismatch of job market -** The current VET programs are largely supply-driven and still lack of relevant training for available jobs. There is a need to improve links between schools and the industry to minimize this mismatch. A divergence between the skills that the population possesses and skills required by industry is a major cause of low employability among Indian youth. India has predominantly been an agricultural economy and much of its population is still dependant on traditional activities, Over 90% of the labour force of India still works in the informal sector, with low productivity and skills. With low skills and experience limited to the unorganized sector, these workers remain unemployable in industry. The current public VET system offers only a few training courses and covers around 100 skills. Out of these, several skills like stenography have becoming outdated due to the emergence of new technologies. This increases the gap between industry need and manpower supply<sup>[5]</sup>.

**3. Poor perception and public mindset-** Many Indian parents want their children to pursue a clerical job or be an office assistant, not realizing that a technician can earn more than these jobs. In countries like India VET has always been considered by the public and parents as the career choice for the less academically-qualified with the impression that VET is for school drop-outs, rather than as an important strategy to train skilled workers. Too much attention and resources is given to 'academic' rather than vocational education<sup>[14]</sup>.

**4. Lack of coordination among Government Agencies and regulatory bodies** –Different ministries manage their employability initiatives independently in India and there is a wide range of VET providers such as social businesses, non profits and corporate. Coordination between all these players is required to create an enabling environment that enhances the capacity, quality and utilization of VET.

**5. Inadequate academia-industry linkage-** This results in low rates of employment due to the reason that what job providers are seeking for, are not communicated with the training sector. Besides it also affects the placement.

**6. Lack of updated curriculum-** An updated curriculum which is relevant to present day need of the industry is a major requirement. The curriculum should be relevant to the need of the industry.

**7. Shortage of qualified teachers-** Availability of good quality trained and qualified teachers and trainers is an important problem. Poor recruitment process of Governments is responsible for this.

**8. Lack of proper infrastructure** – building, modern equipment and raw materials is a hurdle in learning during training. This can be attributed to improper release of funds.

**9. Lack of autonomy-** Lack of administrative and financial autonomy and accountability is another pitfall in the way. If these institute are given good deal of autonomy, they will be better able to change and adjust them in changing scenario of the present day market needs<sup>[15]</sup>.

It is clear from the above points that there are a lot of challenges in the field of VET education in India and to achieve the targets there is a strong need of substantial expansion of quality technical and vocational education and training system.

### Solutions for the problems of VET sector

There are several suggestions and implications to overcome the challenges and problems of vocational education sector in India and for the overall improvement of the VET sector and skill development programme in India. Below are some of the main suggestions, given under the following heads<sup>[16]</sup>:

#### 1) Rejuvenating Vocational Education at Schools level:

This can be possible by Improving Provision of VET in Schooling system and by strengthening and establishing new Vocational Schools. In schools, focusing on areas like curriculum building and enrolling quality teachers to improve the existing vocational education courses is need of the time. The following steps can be useful in this direction-

**a. Introducing relevant curriculum-** A strong curriculum to engages students and develop their interest in vocational education is a pre-requisite to successful learning. Improving the existing curriculum to incorporate experiential learning into vocational education courses, will attract more students to vocational education in secondary school. Introducing a range of vocational skills and a well oriented curriculum better oriented towards skills development in mainstream schools would be a successful step. Introducing trades like carpentry and clay modelling etc. as a part of the curriculum can provide students a better understanding of VET opportunities<sup>[5]</sup>.

**b. Engaging quality teachers-** Qualified teachers with a strong background in a particular skill or trade are needed for practical skills involved in TVET. Using local experts in various trades to impart skills training in schools will be good. These local resources persons can be given basic training in curriculum and pedagogy in their respective trades, and students can learn skills directly from these experts who conduct school-based sessions once a week.

**2) Improve public perception of VET:** the polytechnics and vocational institutions should rebrand their vocational courses as equivalent of conventional courses. The use of media for sensitisation as well as enlightening of the society is necessary in order to dispel the myth crated around VET.

**3) Collaboration of the private sector, international development partners and other stakeholders:** The policymakers in the VET system should emphasize the collaboration with the private sector, international development partners and other stakeholders to support government's efforts to ensure effective implementation of VET. This collaboration should take care of advocacy to change public perception of VET, access to funds, training of VET instructors and provision of infrastructural learning

resources. Reinforcing links with the labour market and involving the private sector for skill development initiatives in the country will be great moves: Germany has one of the strongest VET systems in the world because it is led by the private sector. In Germany, only 16 percent of total financing for training and skill development is borne by the government, and rest by the private sector. While in India the ratio of government- private sector contribution in the skill development sector is about the reverse. If India has to benefit from its demographic dividend, involving the private sector to take a responsible position in the skill development sector is necessary <sup>[15]</sup>.

**4. Ensuring proper funding:** The Ministry of Education should persuade the Federal Government to earmark adequate funding for VET in the face of the daunting challenges highlighted above. Other funding sources like World Bank-Step-B intervention fund, and Commonwealth assistance should be explored.

**5) Establishment of good Relationship with industry:** For proper results of mainstreaming VET with the needs of the industry, it is required raining to form strong relationships between the training institutes and industry. This would be beneficial in two ways. Firstly, institutes would get access to facilities of practical exposure to students during industrial tours, Industrial attachment and internship. Secondly, a it would encourage the private sector to direct their corporate social responsibility initiatives towards fortification of TVET in the polytechnics, like the steps taken by Microsoft Inc., NBC, CISCO, NIKE in the middle-East, India and other developing countries <sup>[3]</sup>.

**6) Bringing skill development programmes under one roof:** The entire national skill development system should be put under the single ministry or governing body, rather than running them under the leadership of several other Ministries. This will lead to better focus and coordination between different initiatives.

**7) Revisiting the Apprenticeship Act:** the government formed the Apprenticeship Act in 1961 to connect job seekers and industrial units. It made obligatory for employers in specified industries to provide basic skills and job training according to prescribed standards. There is a need for improvements in the 1961 Act according to the present times, circumstances and challenges faced by youth, which are different from those existed in India at the time of formulation of the act. The employment scenario has changes and different types of skills are required to meet the present industrial demand.

**8) Upgrading and expanding of the craftsmen training scheme:** The main craftsmen training scheme in India are Industrial Training Institutes (ITIs) and private Industrial Training centres (ITCs). ITIs have been criticized for offering out dated and not relevant trades for the present day employment requirements. There has been a steady need of expansion of ITIs in the country as reflected in figure 1, however further expansion is needed mainly in the 'backward' regions of the country. Besides the expansion, it is equally crucial to build basic infrastructure especially in remote areas, making ITIs more accessible, particularly for women.

**9) Govt. And regulatory agencies should ensure that there is uniformity in the curricula of VET adopted by government-owned and private-technical and vocational institutes.** This move is necessary to empower learners with relevant skills as per the needs of the labour market. Provision of multiple-entry, multiple exit and flexibility in delivery will be a useful step.

**10) Capacity Building of VET system:** Different groups among India's youth require help with skill building including students currently in the educational system, those who have completed their education but could not get a job, and those already working in low-paying jobs in the informal sector. For building the capacity of VET to meet the needs of youth and industry the following actions will be proved worthy:

**a) Introducing Multi-skilling pattern in VET-** Offering a package of inter-related skills is an effective way to build the abilities of VET graduates to take on multi-disciplinary job roles as well as have move between job roles. This will diversify each VET graduate's opportunities and provide flexibility to respond towards the changing demands of a competitive economy. For example, bundling two or more construction-related skills such as bar-bending, masonry and plumbing into one course can increase the productivity and mobility of an individual entering or already engaged in the construction sector.

**b) Updating curricula -** As industry needs are constantly evolving; VET curricula must be dynamic enough to meet the different knowledge and skills requirements emerging. Practical experience is an indispensable element; German and Australian experiences demonstrate that building practical experience such as apprenticeships into the curriculum enhances skill development. An experience-based curriculum is an effective tool to engage all stakeholders in skills development particularly industry, whose involvement is vital to ensuring that relevant and up-to-date skills are taught. This must be backed by government to ensure standardization and non profit involvement to contextualize curricula to different populations. In addition, modular courses are essential for poorer populations since they are of shorter duration and hence reduce expense and opportunity cost. Courses should be designed so that each corresponds to a skill level and can be taught at frequent non-consecutive intervals, enabling constant upgrading of skills for VET. Development of competency based modular Vocational courses of varying duration is a desirable move.

**c) Enhancing soft skills-** Interpersonal skills, effective communication and English language proficiency are essential for VET graduates to secure jobs as well as enhance their on-the-job effectiveness, job performance and career prospects. Bundling soft skills with TVET courses will help create a better-rounded workforce that meets the needs of industry.

**d) Improving teacher and trainer quality-** The quality of skilled graduates is directly related to the quality of teachers and instruction in general education as well as in VET. High performing teachers always increase student learning. Quality can be improved in several ways: setting standards for the quality of instruction, augmenting teacher training, improving the quality of teachers, encouraging industry participation in training teachers, and using local practitioners of trades to impart skills in demand in that particular area will be helpful.

e) **Providing financial support-** Governments in association with corporate sector can provide of financial support to mobilize and incentivize youth to build skills, seek employment and move out of poverty.

**11) Providing Accessible and affordable training:** With poor infrastructure, accessibility continues to be a major problem. It is crucial to build and fund modern institutes of training, which are made easily accessible by building additional infrastructure. To enable and encourage individuals belonging to low income groups to join vocational training programmes, it is important to provide quality training at an affordable cost with the option of availing loans and scholarships.

**12) Ensuring training according to market:** One of the main criticisms of skill development and training programmes is their inability to match up to the acceptable market standards in terms of the quality and type of skills required. The government ITIs need to be upgraded as centres of excellence. A decentralization of decision making in the ITI system and participation of employers in decision making processes, will help in the absorption of trainees and make the training more responsive to the needs of local industry. Industry also needs to participate in designing of the curriculum for training in different institutes. Besides the already existing apprenticeship system, provision of internship in different industrial sectors is equally important.

**13) Support services after training:** Enrolment in training and providing employment opportunities alone would not be sufficient. Providing support to trainees after the completion of training will go a long way in assuring sustainable livelihood options and economic independence. This can be done using the following steps-

a) **Monitoring and Evaluation-** It is crucial to evaluate the progress and the quality of training provided in order to check discrepancies, whether it is between the needs of the trainees and the nature of training provided, or between the kind of skill being imparted and the demand from the local industry. A proper monitoring and evaluation system would help in informing corrections needed in time and assure quality of training for sustainable skill development <sup>[15]</sup>.

b) **Establishing Employment Exchanges-** Employment Exchanges are a crucial link between trained manpower and employment opportunities. India's state-run public employment exchanges provide services like registration, placement, vocational guidance and career counselling <sup>[5]</sup>. However, low placement rates of applicants are a concern. These exchanges are located in urban areas mostly, which is a barrier for rural areas people. Filling this gap by providing effective employment exchange services to youth is necessary. These services can include:

- Preparing youth for job opportunities
- Inviting industry for placements
- Placing youth in the appropriate industry
- Post-placement follow up
- Career guidance

**14) Introducing Local Market-based Training and Placement:** Providing Training for youth in skills demanded by the local industry through locally available resources and local industry's staffing requirements ensures the availability of a skilled workforce for the development of that region. This

intervention is typically required in rural areas where youth are deterred from moving to urban areas by the challenges associated with finding adequate living space and jobs in cities. Training rural youth in skills required by local employers and linking them to wage earning opportunities in and around the same geographical area is a good model. For example in Moradabad of Uttar Pradesh the brass industry is developed and training local youth in related trades to brass industry will be very useful for their employment.

**15) Constituting committees for governance, monitoring and Implementation of the National Vocational Qualification Framework.**

**16) Setting up of Central Board and State boards of Vocational Education (CBVE) and (SBVE) for accreditation/affiliation, examination certification and equivalence of vocational education programmes.**

**17) Bridging the gap between VET and higher education:** One of the biggest problems for VET in South Asian countries including India is the poor quality and low status of sector among potential students. Curricula should be relevant to today's job market, with direct linkages to employment skills and market, are needed today. For this the development of VET sector skills councils—having collaboration of industry and government may be useful linking skills training with job prospects. Specialised technical skills and a high degree of co-ordination of the government, the public sector and other stakeholders will be required to go forward.

## Conclusion

Today VET has been identified as a proven requirement of any country for its development. It is of much importance in countries like India where the share of youth in total population is going to increase and to make this much population with skills will bring India in the list of countries of highly skilled manpower, which is quite necessary factor for country' development.

A mismatch between the skills of youth and the skills required by industry is a main cause of low employability among Indian youth. Over 90% of India's workforce still remains in the informal/unorganised sector, with low levels of productivity due to inadequate skills, despite a significant shift towards service sector. This increases unemployment in industry, where the job potential exists. The poor quality of mainstream education, limited access and capacity of current VET, lack of focus on skills required for the current job market, and poor enabling environment are major challenges of the sector. These factors need to be addressed.

For enhancing employability of the youth, action is needed on three fronts of VET named capacity building, quality improvement and enhancing utilization. If necessary steps are taken like introducing VET-related career guidance in mainstream education, it will put a high impact on enhancing skills and employability.

Different stakeholders—the government, corporate sector, social businesses and non-profit organizations and NGOs—need to operate in a collaborative ecosystem to overcome the challenges of capacity, quality and utilization across VET. Enhancing employability by improving VET is a complex issue involving demographic trends, economic and labour market reform, education systems, industry participation and upward mobility for backward social groups.

Non-profit organizations, NGOs and Voluntary organizations have to play a crucial role in strengthening VET, using innovative approaches. Skills development needs to be addressed in a market-focused way to achieve the required level.

Establishing employment exchanges or improving provision of VET in public institutions is high-impact interventions. The impact of working together to produce a more skilled and employable workforce will drive national growth and will be also helpful to break the cycle of poverty.

Investing in youth employability has enormous social and economic return that will ensure the growth and prosperity of India. For effective VET it is require ensuring that India's growing population can be placed in the skills-based jobs that will be created over the next decade and will require vocational training. A proper coordination of Training sector and industry along with good after training support by employment exchanges are scalable and high-impact interventions to enhance youth employability.

Partnerships among non-profit organizations/ NGOs/ Voluntary organizations with industry can also function more like employment exchanges by connecting youth with job opportunities. Furthermore, industry partnerships often result in cost effective sustainable interventions where non-profits function as outsourced training and placement agencies.

In fact, the challenges in developing VET sector require that the different stakeholders (government, private sector, non-profits organizations) operate in a well-structured, cohesive ecosystem in complementary roles. Only this can overcome challenges related to capacity, quality and utilization of Vocational Education and Training across the country.

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