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Enhancing the efficiency of education system through (TVET) technical and vocational education and training Programs

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Abstract

India has one of the leading technical manpower in the world. However, compared to its population it is not momentous and there is a terrific scope of improvement in this area. Education and social development are complimentary to each other. Vocational education is gaining tremendous importance in our country in recent years. The lack of employability as an outcome of the education system has given rise to the need for skill based education. The development and economic growth of India will be accelerated if the youth of our country get vocational education and acquire relevant skills. The Central and the State Government are emphasizing on building skilled human resources. In India, the emphasis has been on general education, with vocational education at the receiving end. This has resulted in large number of educated people remaining unemployed. This phenomenon has now been recognized by the planners and hence there is a greater thrust on vocationalisation of education. Another shortcoming in the area of technical and vocational education is that till now, the number of engineers graduating is more than the diploma holders. This is creating an imbalance, as more workforces are required at the lower level. Hence more polytechnics and Institute for Industrial Training (ITIs) is being opened now. Besides, various Ministries are trying to impart vocational courses through innovative institutions, specially launched for the purpose. In doing so, the government is trying to maintain quality of these courses. Education is a key to liberation and important tool to alleviate socio-economic problems. Skill and knowledge are the driving forces of economic growth and social development of any country. The economy becomes more productive innovative and competitive through the existence of more skilled human potential. As our world progresses gender remains to be a problem despite advancements in education and technology This paper represents the importance of TVET education huddles in different TVET programs ,and how skilled development helped in employability ,benefits of TVET education to society nation and advantage and drawback of TVET.

Keywords- Skill development, Technical and vocational programs, efficiency.

INTRODUCTION

The present day need of Indian society is not simply to acquire general education, but to increase productivity. Obviously, therefore, education should come into closer relationship with productivity. This function of education can be achieved by giving a strong vocational basis to secondary education and by giving more emphasis on agricultural and technological, job-oriented education at the University stage. Vocational training existed in some form or the other even in ancient India. People had to cut wood, wear cloth, prepare their furniture, repair their huts, work on the farm and do various other similar jobs. The son would learn the trade from his parents and gain mastery in the art and then, in turn pass his skill on to his son.

Vocational education (vocationalisation) means training in some vacation at the higher secondary level along with general education. Indian Education Commission observed, "We visualize the future trend of school education to be towards a fruitful mingling of general and vocational education-general education containing some elements of the pre-vocational and technical education, and vocational education, in turn, having an element of general education... "

India holds an important place in the global education industry. The country has more than 1.4 million schools with over 227 million students enrolled and more than 36,000 higher education institutes. India has one of the largest higher education systems in the world. However, there is still a lot of potential for further development in the education system India has become the second largest market for e-learning after the US. The sector is currently pegged at US$ 2-3 billion, and is expected to touch US$ 40 billion by 2017. The distance education market in India is expected to grow at a Compound Annual Growth Rate (CAGR) of around 34 per cent# during 2013-14 to 2017-18.

The education sector in India is poised to witness major growth in the years to come as India will have world's largest tertiary-age population and second largest graduate talent pipeline globally by the end of 2020. In FY 2015-16, the education market was worth about US$ 100 billion and is expected to reach US$ 116.4 billion in FY 2016-17. Currently, higher education contributes 59.7 per cent of the market size, school education 38.1 per cent, pre-school segment 1.6 per cent, and technologyandmulti-mediatheremaining0.6percent.Higher education system in India has undergone rapid expansion. Currently, India's higher education system is the largest in the world enrolling over 70 million students while in less than two decades, India has managed to create additional capacity for over 40 million students. At present, higher education sector witnesses spending of over Rs 46,200 crore (US$ 6.93 billion), and it is expected to grow at an average annual rate of over 18 per cent to reach Rs 232,500 crore (US$34.87billion)innext10years.Investment.The total amount of Foreign Direct Investments (FDI) inflow into the education sector in India stood at US$ 1,383.62 million from April 2000 to December 2016, according to data released by Department of Industrial Policy and Promotion (DIPP).The education and training sector in India has witnessed some major investments and developments in the recent past.

Skills

Training, as was stated earlier, is imparting skills to employees. A worker needs skills to operate machines, and use other equipments with least damage or scrap. This is a basic skill without which the operator will not be able to function. There is also the need for motor skills. Motor skills refer to

performance of specific physical activities. These skills involve training to move various parts of one's body in response to certain external and internal stimuli. Common motor skills include walking, riding a bicycle, tying a shoelace, throwing a ball and driving a car. Motor skills are needed for all employees – from the clerk to the general manager. Employees, particularly supervisors and executives, need interpersonal skills popular known as the people skills. Interpersonal skills are needed to understand one self and others better, and act accordingly.

Education

The purpose of education is to teach theoretical concepts and develop a sense of reasoning and judgment. That any training and development programme must contain an element of education is well understood by HR specialist. Any such programme has university professors as resource persons to enlighten participants about theoretical knowledge of the topic proposed to be discussed. In fact organizations depute or encourage employees to do courses on a part time basis. Chief Executive Officers (CEO's) are known to attend refresher courses conducted by business schools. Education is important for managers and executives than for lower-cadre workers.

Development

Another component of a training and development is development which is less skill oriented but stressed on knowledge. Knowledge about business environment, management principles and techniques, human relations, specific industry analysis and the like is useful for better management of the company.

HISTORY OF TVET IN INDIA

The efficient functioning of the colonial economy in the 19th century created the need for the first technical training centers. Supervisors were trained using British curricula to oversee the construction and maintenance of public buildings, roads, canals, and ports. The workers themselves were mostly illiterate so schools were established to give elementary lessons in reading, writing, arithmetic, geometry, and mechanics. The first known industrial school was established in Madras (now Chennai) in 1842, attached to the Gun Carriage Factory there. Since Independence in 1947, a network of technical and vocational training institutes and polytechnics have been established offering a wide range of TVET programmes at certificate and diploma level. At the same time, the growth of the Indian army, navy and air-force has included the development of substantial technical and vocational training facilities. These continue to be a quality source of TVET graduates, mostly for the military but also increasingly for civilian industries such as the aviation industry. Private sector delivery of TVET has increased markedly in recent years, responding to both student demand and industry needs.

The technical and vocational education and training system (TVET) in India develops human resource through a three-tier system:

- Graduate and post-graduate level specialists (e.g. IITs, NITs, engineering colleges) trained as engineers and technologists.
- Diploma level graduates who are trained at Polytechnics as technicians 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 semi-skilled and skilled workers

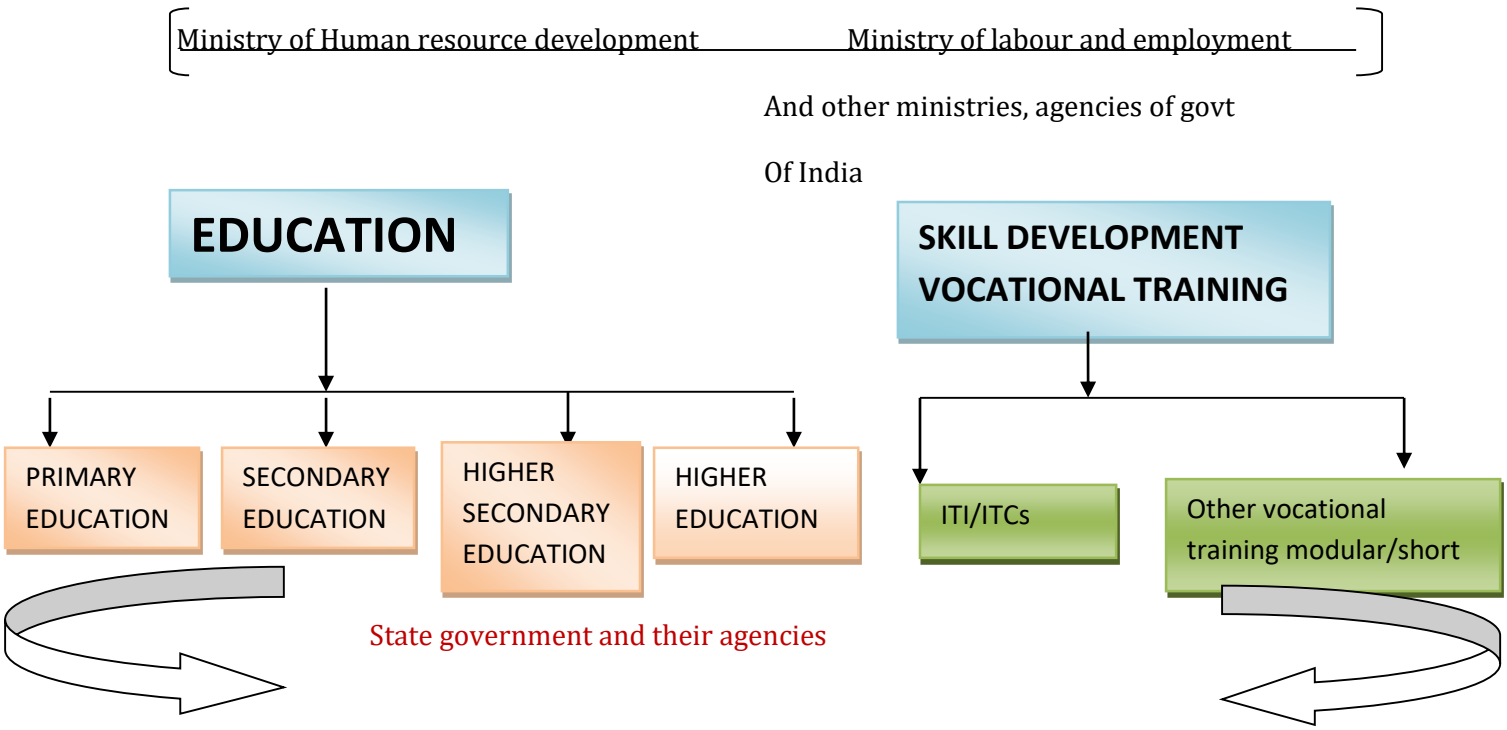
DEFINITIONS

Technical Education –
Refers to all types of engineering education but can also include Information Technology, Design, and Media & Communications. A full list is available of the AICTE's website.

Vocational Education –
Includes all trades training from mechanics to carpet makers to cooks. Also all handicrafts and other artisan courses like tailoring.

General Education –
All other education at tertiary level including medical.

Structure of education and skill development in India



TECHNICAL AND VOCATIONAL EDUCATION SYSTEM IN INDIA

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 Technical and Vocational Education plays a vital role in human resource development of the country by creating skilled manpower, enhancing industrial productivity and improving the quality of life. The term Technical Education and Vocational Training are sometimes used synonymously. The term VT refers to lower level education and training for the population of skilled or semi-skilled workers in various trades and it does not enhance their level with respect to general education. Vocational Education and Training

(VET) is an important element of nation's education initiative. For Vocational Education to play its part effectively in the changing global environment, it is imperative to redefine the objectives of vocational education and training and to make it flexible, contemporary, relevant, inclusive and creative.

- There are more than 17 Ministries/Departments of Govt of India providing or funding formal/non-formal VET programmes.
- About 90 per cent of employment opportunities require vocational skills
- Duration of training courses varies from 6 months to 3 years Eligibility qualifications - Classes 8 to 12 pass
- ITIs - financed and managed by state labour ministries.
- ITCs - owned, financed and managed by private organizations or NGOs. While the state governments have no direct control over the functioning of these institutions, they are accredited to either the NCVT or SCVT.

  Other training institutions that are privately owned or managed by NGOs but are not accredited to either the NCVT or an SCVT
- Apprenticeship Training, regulated under the Statutory Apprenticeship Training Scheme (SATS) has separate parts administered by MHRD and DGE&T.
- MHRD administers its responsibilities through four Boards of Apprenticeship Training (BATs).
- DGE&T administers its responsibilities through a Central Apprenticeship Council and six Regional Directorates.
- There are four types of apprentice – depending on their previous education and training.
- MHRD is responsible for three of these: engineers with degrees may enter the system as "Graduate" Apprentices; engineers with diplomas -"Technician"Apprentices; and vocational education graduates - "Technician (Vocational)"Apprentices.
- DGE&T is responsible for the fourth type of trainees--those who have either attained a National Trades Certificate or who can demonstrate they have achieved equivalent entry pre-requisites.
- The DGE&T trainees are simply termed Apprentices. The minimum age of an apprentice is 14 years, with entry pre-requisites varying from Grade 8 to Grade12 completion?
- Training lasts from 6 months to 4 years depending on the trade.
- The skill levels go from craftsmen to engineers, and the occupations include those in agriculture, business, commerce, health and paramedical, home science, humanities, and engineering.

Central Government

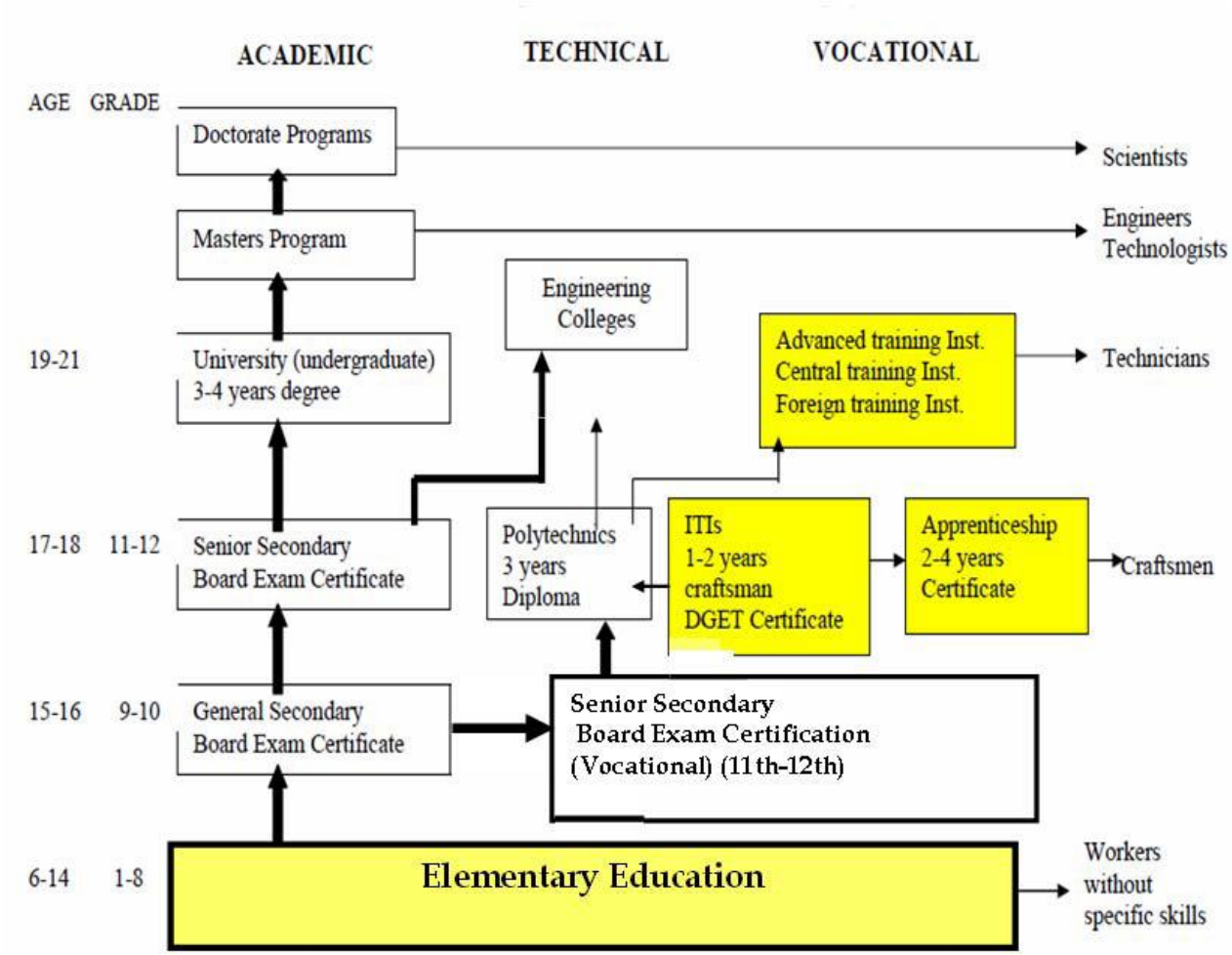
- National Skills Development Council
- Ministry of Human Resource Development
- Department of School Education and Literacy (for TVET programmes in Senior secondary schools)

- Department of Higher Education (for Technical Education)
- Ministry of Labour and Employment, Directorate General of Employment and Training (for Vocational Training)
- There are some other 20 Central Ministries and Departments which have Running some small TVET programmes.

State Government

- Directorate of Technical Education.
- Private Sector.
- NGOs.
- Councils for technical education

<u>The structure of current education system can be described as above by diagram.</u>



The need and importance of vocational education can be assessed, and is further high-lighted, by having a look at its various uses and advantages:

1. Vocational education aims at reducing unemployment among the educated youth and thus help solving the giant problem of unemployment.

2. It will entail many economic benefits. It means increased productivity which brings economic prosperity to the people and to the country at large

3. It suits individual aptitudes, and so, ensures better results

4. It instills among the youth a sense of security and usefulness, which goes a long way to make them better citizens.

5. Vocational schools impart direct skills that help largely to build a career. The students can apply for a job in the specific field as early as six months.

Disadvantages

1. The biggest drawback in choosing a vocational college is that the credits are not as prestigious as that of traditional colleges. Moreover, they may not be considered as prerequisites if a person desires to attend a regular college later.

2. Since vocational schools focus on hands on training and typically they have minimum academic work, the courses are not seen academically on par as compared with traditional colleges.

3. A disadvantage to vocational education is the low score when it comes to job competition against applicants having a traditional college degree.

4. Vocational college education students enter career fields faster compared to traditional college counterparts. However, many of these jobs are of lower-paying positions.

5. Despite the low costs associated with vocational schools, technical programs may have higher program-related costs. The students may need to spend huge amount of money on tools and equipment and also on workshops and materials during the program.

Key issues of TVET system in India

- Low employability of the workforce
- Access to formal and non-formal VET
- Quality of skill development
- Relevance of curriculum and skills
- Structural linkages
- Labour market information
- Lack of Mobility
- Skill development for the unorganized Sector
- Low priority for Vocational Education
- Shortage of trained teachers and trainers

- Inadequate linkages with Industries
- Absence of a National Competency Testing and Accreditation system.
- Lack of infrastructure – building, modern equipment and raw materials.
- Inadequate or non-coverage of trades in service sector which has higher Employment potential.
- Lack of equivalence for employment purposes.

Some hurdles in Vocational Education

• Employability and Demand and Supply matching.
• Informal Sector's requirement.
• Open and distance learning.
• Use of Technology.
• Linkage to local demand.
• Career guidance.
• Teacher's Training and Retention.
• National Vocational qualification system Skill requirement in – Curriculum, Assessment and Certification
• Emerging Sectors.
• Involvement of Industry and Civil Society.
• Equity (Girls, rural population, SC, ST, Minority and Disabled).
• Financing.
• State Government's Role

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.

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 directional.

Introducing relevant curriculum-. 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.

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

2) Improve public perception of VET: The use of media for sensitization 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.

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..

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

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.

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

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.

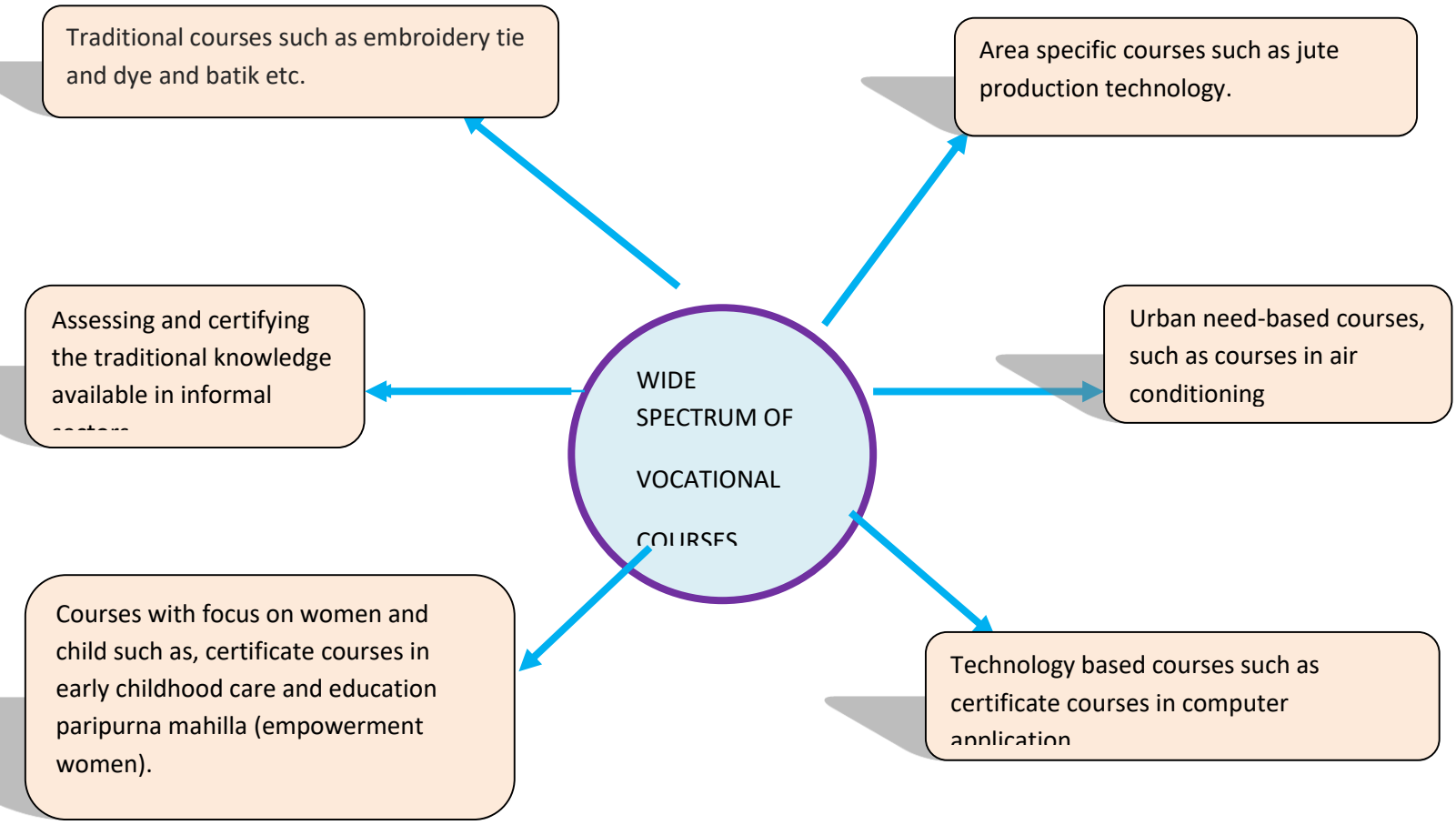
b) ***Updating curricula -*** As industry needs are constantly evolving; VET curricula must be dynamic enough to meet the different knowledge and skills requirements emerging.

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.

DIVERSITY IN VOCATIONAL EDUCATION



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.
Budget for Government of India for financial year 2016-17 is Rs.17, 000 crore. The MSDE has a budget of 3016 crore for skilling Other ministries running skill development schemes have their own budget for implementation of the schemes Funding and grant for skilling ecosystem– World Bank– ADB. So we can say that TVET is necessary for growing country like India. But it should provide in a better way so that utilization can done in right way.

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