ITI makes low-cost aerosol box, face shields—Vocational Education in India

The government-run Industrial Training Institute (ITI) in Odisha’s Berhampur has prepared low-cost ‘aerosol box’ and ‘face shields’ for the medical staff involved in the treatment of COVID-19 patients.

At the request of the Ganjam district administration, ITI-Berhampur successfully created cost-effective ‘aerosol box’ and ‘face shields’. The market price of an ‘aerosol box’ is ₹10,000, whereas the ITI-Berhampur has made it at a cost of ₹3,000. Each ‘face shield’ is sold for ₹200, while its production cost at ITI-Berhampur is just ₹11.

**Aerosol box**

- An ‘aerosol box’ is a transparent box with holes to enter gloved hands, which is put over the head of a COVID-19 patient placed on ventilator in ICU during the intubation process.
- The ‘aerosol box’ serves as a barrier to check possible transmission of COVID-19 droplets from the patient to the treating doctors during intubation.
- The ‘aerosol box’ is made of 4 mm transparent acrylic sheets cut by a laser cutting machine to make the joints completely airtight.
- These are reusable after sanitisation.

**Face shields**

- A face shield, an item of personal protective equipment (PPE), aims to protect the wearer’s entire face (or part of it) from hazards such as flying objects and road debris, chemical splashes (in laboratories or in industry), or potentially infectious materials (in medical and laboratory environments).

**What are Industrial Training Institutes (ITIs)?**

- Industrial Training Institutes and Industrial Training Centers are post-secondary schools in India constituted under Directorate General of Employment & Training (DGET), Ministry of Skill Development and Entrepreneurship, Union Government to provide training in various trades.
- The ITIs were initiated in the 1950s.
- In a span of 60 years, until 2007, around 1,896 public and 2,000 private ITIs were set up.
- However, in a 10-year period from 2007, more than 9,000 additional private ITIs were accredited.

**Vocational Education in India**

Standing Committee on Labour under the chairmanship of Krit Soumiya had submitted its Report on the “Industrial Training Institutes (ITIs) and Skill Development Initiative
Vocational training

Vocational Education can be defined as the education that is based on occupation and employment. Vocational Education is also known as career and technical education (CTE) or technical and vocational education and training (TVET).

Vocational Training in India

- The Indian education system recognizes the role of education and particularly Vocational Education. Vocational training in India is provided on a full-time as well as part-time basis.
- Full-time programs are generally offered through Industrial training institutes (ITI). The nodal agency for granting the recognition to the I.T.I is NCVT, which is under the Ministry of Labour, Govt. of India.
- Part-time programs are offered through state technical education boards or universities who also offer full-time courses.

Brief History of Vocational Education and training

1. 1945: Directorate General of Employment and Training (DGE&T), was set up for re-settling demobilized defence service personnel and discharged war workers in civilian life after World War II
2. 1950: Under the Craftsmen Training Scheme, Industrial Training Institutes (ITIs) were established
3. 1964: vocationalise secondary education recommended by Kothari committee
5. 2013: National Skill Certification and Monetary Reward Scheme (STAR)
6. 2015: Skill India Mission
7. 2015: The part of DGE&T dealing with Craftsman Training Scheme (CTS) and Apprenticeship Training Scheme (ATS) was transferred to the newly created Ministry of Skill Development and Entrepreneurship (MSDE) and is now known as Directorate General of Training.

Skill India mission

Skill India is a campaign launched by Prime Minister Narendra Modi on 15 July 2015 which aim to train over 40 crore people in India in different skills by 2022. It includes various initiatives of the government like:

1. National Skill Development Mission
3. Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
4. Skill Loan scheme

Need for focus on vocational training
UPSC "PT" DNA (Daily News Analysis)

- Demographic Dividend: India has 65% of its youth in the working age group. Efficient utilization of these population would promote saving and investment rate
- Meet employer need of skills: The latest India skill Report indicates that only about 47% coming out of educational institutions are employable.
- Prepare workers for a decent livelihood: this improves India’s ranking in HDI
- Boost to Small Medium Enterprises
- World class productivity and quality
- For Make in India – It give big opportunity for MNCs to come to India
- Export of skilled workforce to aging developing countries

The study titled ‘Global Talent Crunch’ highlighted that India would have a talent surplus of around 245.3 million workers by 2030 at a time when the Asia-Pacific region itself would face a talent deficit of 47 million workers.

**Issues with Vocational training**

1. There is lack of coordination between MSDE and MHRD. In India vocational training is under MSDE while vocational education is under MHRD. The different institutions impact the whole process of vocational education and training
2. Absence of a sound National Vocational Education and Training (VET) System and standard
3. Irrelevance of courses leading to a mismatch between the labour market needs and the training skills.
4. Absence of an integrated in-plant Apprenticeship Training
5. There is a high drop-out rate at Secondary level. Vocational Education is presently offered at Grade 11, 12th
6. Private and Industry Participation is lacking.
7. Less number of Vocational Institutes in the country
8. Inadequate financing of VET system.
9. Shortage of qualified trainers
10. Issues with Recognition of Prior Learning (RPL)
11. Absence of ownership of National Standards: Ministry of Skill Development and Entrepreneurship is the nodal Ministry for Skill Development. However, in addition to MSDE, there are 17 other Ministries/Departments which are doing vocational training.
12. In India vocational training is always about entry level jobs and never counted as aspirational
13. Most of the it is are running only engineering courses while 60% of the GDP is contributed by the services sector
14. Lack of social acceptability

**Way Ahead**

- Government should incorporate the recommendation of Sharda Prasad committee and Parliamentary Standing committee
- Adequate infrastructure should be provided in schools, and schools also should be properly equipped for teaching and learning.
- Adequate enlightenment campaigns should be carried out in order to educate the society
about the importance of technical and vocational education.

- There should be industrial participation in vocational schools and also there should be an arrangement for students to visit the industrial areas.
- Contemporary instructional materials should be provided. Vocational subjects should be taught by using up-to-date modules.