

# SKILL DEVELOPMENT PRACTICES: AN INTERNATIONAL CONTEXT

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## Abstract

Globalization paves the way for skill development programs in nations all over the world. In order to compete in today's global market, countries require not only better-quality technological and professional capabilities, but also a flexible manpower capable of adapting to quick demand shifts. This is the reason why is skill development so important for a country's economic strengthening and competitiveness. Education systems, in specifically, must be geared toward developing adolescents with strong basic capabilities as well as job-specific abilities. There has been an increase in the demand for workforce with job-specific abilities around the world. Globally, businesses claim that a lack of excellence and supply of trained workers is a fundamental impediment to their expansion. Employers all over the world are requiring new workers to possess both technical and "soft" abilities. India has one of the least trained workforces among the top manufacturing nations as a result of years of underinvestment in skill development. Only 17% of people entering the workforce are skilled (including only 4% of those with a higher education or vocational education). Over 65% of Indian businesses have trouble filling job openings with adequately skilled workers. By 2025, the talent gap is predicted to widen to almost 100 million people. This could be a significant impediment to meeting the New Manufacturing policy's objectives. In this paper, an effort has been made to understand the insights in skill development training programmes that are currently being imparted in different developed nations, which will be fruitful lessons to be learned by developing countries like India.

**Key words:** Skill Development, TVET, Global Competitiveness, Employability, Social mobility, and Inclusion.

## Introduction:

Highly developed, supple and compatible skilled labour is a fundamental requirement of today's global economy so as to be more productive and competitive, as well as to trim down poverty and pick up well-being.

Economic growth and the future of any country depend on the knowledge and skills of human resources. They require advanced skill set training to be able to survive in the global era. In order to retain in global competition, countries have to invest in education systems that are pertinent to skills training, which make their workforce more flexible to meet the demand for a skilled workforce by imparting training in advanced technical and vocational skills. Many developed and developing countries in the world spend huge amounts of money on skill development training to train their workforce through short-term and long-term initiatives. In this global era imparting training in advanced technical and vocational education is a dire need for the countries to create employment opportunities for their growing workforce and also make them to compete in the competitive world. Table 1 presents the percentage of students enrolled in vocational education, labour force participation rate among aged between 15-64 years and unemployment rate among aged between 15-24 years in selected countries.

**Table.1: Students enrolled in vocational education, Labor force participation rate for aged between (15-64) and Unemployment rate in persons aged between (15-24) in selected countries till 2018.**

Country	Percentage of all students in secondary education enrolled in vocational programmes	Labor force participation rate for aged between (15-64)	Unemployment rate in persons aged between (15-24)
India	1.4%	52.1%	22.9%
Germany	19.2%	78.5%	6.2%
Australia	28.9%	78.1%	11.9%
UK	31.8%	77.7%	10.2%
China	18.9%	76%	10.3%
Japan	11.4%	79%	3.6%

**Source:** <https://genderdata.worldbank.org/>

The above table shows that India's glooming scenario of vocational education which results in low labour force participation rate and high unemployment rate when compared to some of the advanced countries across the globe even though it has a demographic advantage (where the proportion of youth population and working age population is more) compared to other countries. It shows that students enrolled in skill development training and vocational programmes is only 1.4 percent when compared to 31.8 percent in the UK, 19.2 percent in Germany, 11.4 percent in Japan, 28.8 percent in Australia, and 1.4 percent in China (18.9 percent). Despite increased unemployment (22.9 percent), India's productive class labour force participation rate remains at 52.1 percent, lower than rates in other countries such as Australia (78.1 percent with 11.9 percent unemployment), the United Kingdom (77.7% with 10.2 percent unemployment), Germany (78.5 percent with 6.2 percent unemployment), Japan (79 percent with 3.6 percent unemployment), and China (79 percent with 3.6 percent unemployment)

Gathering knowledge about existing and potential skill demands can help in encouraging improved matching of training and jobs in a dynamic and complicated labor market, which is critical for every country on the globe. Improved awareness of labour market demands and skill matching have risen to the top of many

countries' policy agendas in recent years, owing to both quick technological advancements and universal rivalry. Matching skills can also aid in the reduction of unemployment, particularly among young people. It improves employability, social mobility, and inclusion, all of which help people live better lives. In a dynamic and sophisticated labour market, gathering information on present and future skill demands can assist encourage better matching of training and jobs, which is vital for every country on the globe. Due to rapid technology improvements and global competition, increased awareness of labour market demands and skill matching has climbed to the top of many countries' policy agendas in recent years. The world today is constantly changing and unsure. Individuals, corporations, and skill development training providers must choose which learning and training methods will produce the best results. The skill development ecosystem consisting decision making bodies, enablers, implementing agencies and beneficiaries plays a significant role in choosing the best learning and training methods to produce skilled workforce in the nations. The National Skill Qualification Framework is a key aspect in the skill ecosystem which defines the road map for skill development in the respective countries. Table 2 presents country wise skill qualification frameworks and its leading agencies with its implementing ministries from the selected countries in world.

**Table.2: Country wise Qualifications frameworks and its leading agencies with its implementing ministries**

S.No.	Country	Qualification Framework	Lead Agency	Implementing Ministry
1.	India	NSQF	National Skill Development Corporation (NSDC)	Ministry of Skill Development and Entrepreneurship; GOI.
2.	Germany	German Qualifications Framework (DQR)	GOVET (the German Office of Vocational and Educational Training)	Federal Ministry of Education and Research (BMBF); Germany.
3.	Australia	Qualifications Framework (AQF)	Qualifications Framework Council	The Department of Education, Skills and Employment; Australia.
4.	United Kingdom	Frameworks for Higher Education Qualifications (FHEQ)	Quality Assurance Agency for Higher Education (QAA)	Ministry of state for skills and enterprise
5.	China	Educational qualification system and Occupational qualification system.	Ministry of Human Resources and Social Security	Ministry of Education

6.	Japan	NVQF (National Vocational framework)	National Institution for Academic Degrees and University Evaluation (NIAD-UE)	Minister of Education, Culture, Sports, Sciences and Technology (MEXT)
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**Source: Compiled from different websites**

Therefore in the global economy, any country to be more productive and competitive and to reduce the unemployment and poverty, imparting training through skill development and vocational education is inevitable. India with its huge young and working age population need to equip their workforce with the required skill sets to make them to compete in the competitive world. In this connection this paper aims to examine the skill development and vocational education practices in the selected countries across the world in comparison to India.

### 1. Germany:

Germany, the European country is considered one of the best in the world in imparting skill development and vocational training. In Germany, dual system of vocational education and training (VET) expects to play a key role in educating and evaluating young people from learning to working in order to assure a skilled workforce and high economic growth. This dual system tries to combine the benefits of vocational school education and on-the-job training in an analytical manner. With its joint arrangement of classroom and business, theory and practice, learning and working, Germany strictly built the dual system of vocational training, which is a world-recognized, highly easy, cost-effective, and inclusive model. The collaboration and coordination between private firms and public vocational schools, which is governed by law, is one of the key features of the dual system.

The term "dual system" refers to the collaboration between vocational schools and workplaces in enterprises to qualify apprentices for a certain occupation, with the federal government in charge of corporate vocational training and the federal states in charge of vocational schools. Similarly, this dual vocational training system integrates theory and practice, knowledge and skills, and learning and working in a very competent manner. After completing ten years of compulsory secondary schooling, students can enroll in the dual system, which can be viewed as a transition from education to work. Currently, the German vocational training system contains roughly 350 officially recognized occupational standards that are created by state law, with trade and industry having a significant influence on their formation. The theoretical part of the training is around 20–30% of the total training time and will be taught for 1-2 days per week at state-run vocational schools. The practical training part lasts 70–80 percent of the overall time and takes place in businesses and manufacturing processes. This is an enforced training curriculum that adjusts to the company's requirements and is supervised by the appropriate chambers by scheduling interim and final tests. This is an internal training

programme that is delivered and guided by licensed company trainer and is governed by a contract between the apprentices and the training provider, with the apprentices receiving remuneration.

**Features:**

- Students receive training from companies and part-time vocational schools;
- On successful completion of the training, the trainee is recognised as qualified for employment. Companies train the trainees according to their vocational training directives by fulfilling national standards of competence.
- During the training, around two third of instructions are related vocational education and one third of instructions related general education or knowledge applicable to a wide range of occupations.
- Under the dual system, business associations will monitor the quality of training offered by enterprises.

**Strengths:**

- The industry receives low-paid trainees in a fixed time frame;
- Employers receive qualified personnel for the future generation;
- Students receive job security through on-the-job training on updated industry infrastructure;
- In Germany, vocational training is funded by the Government and trainees gets payment from the industry.

**2. Australia:**

In Australia, the approach to training and skill development is often defined as a market approach. Off-the-job training was offered through state-owned and controlled “Tertiary And Further Education (TAFE)” institutes in the traditional system of “Vocational Education and Training (VET)”. The program "award restructuring" a national framework aims to recognize skills and qualifications ranging from basic level to university degrees, as well as prior learning, disburse increments tied to the completion of graded vocational qualifications and improved access to learning leading to a national scale accepted qualifications for all employees. A renewed “Vocational Education and Training (VET)” system was swamped by the rising casualization of work, the use of outsourcing and contract and agency employment and the general strengthening of work.

**Features:**

- Australia's vocational education and training arrangement is mostly after secondary education training and is delivered through recognized training institutions;
- The essential thought of the VET arrangement is "national recognition," whereby the registered trainee with a training organization is imparted training and assessment which ensures recognition in all other states and Union territories across the country.

- The training consists of theoretical and Apprenticeship. The content of the theoretical training is defined by the industry rather than Government or training providers. The duration of the theoretical training is generally two to three years. Apprenticeship of the trainees entails a legal agreement with the employer usually for a period of three to four years.

### **Strengths:**

- The Australian Vocational and Education and Training (VET) system empowers employees and employers to meet their training and skill needs by maintaining well-built relationships between Vocational Education Training and the labor market;
- Provision of transfer of credits for higher studies and other qualifications under national portability of qualifications and units of competency;
- Provision of Local autonomy and flexibility in the system
- Innovation to adapt learning and local conditions;
- Easy availability of information and research on vocational and education and training (VET) issues.

### **3. United Kingdom (UK):**

The “Technical and Vocational Education and Training (TVET)” sector in the United Kingdom is run by a number of different organisations, including colleges, companies, independent training providers, schools, and universities. Colleges are at the heart of the UK's TVET sector. TVET assists schools in providing a wide range of skills to students aged 14 and above. Learners aged between 14 to 18 years are provided with essential abilities and some vocational courses in schools. To the students aged above 18 years, universities teach academic and higher-level vocational and technical skills as well as core skills, enterprise skills and employability skills. Employers are assisted in managing their training by independent training providers, colleges, and employers working together to organize and review "on the job" training offered by their company and "off the job" training provided by the local college.

In England, by fostering a variety of new collaboration agreements between learning providers, TVET sector provides alternative learning environments for young people aged between 14–19 years. University Technical Colleges (UTCs), Career Colleges, National Colleges, and charities are examples of such institutions. On the other hand, University Technical Colleges (UTCs) provide students with the opportunity to study one specific industry at an institution that is specialized and equipped to a high quality, as well as a new thought in school-level qualification for the students aged between 14–19 years old. They are funded by universities and have direct linkages to industry in order to provide creative, technical, practical, and academic learning. Career Colleges are separate trusts sponsored by the Edge Foundation and Helping Hands that furnish youth with the abilities to enter a profession in a specialized manufacturing unit by providing a highly practical vocational and technical education. National Colleges provide high-tech training to people in crucial

manufacturing units such as high-speed rail, nuclear power, onshore oil and gas, digital skills, and the creative industries to ensure UK economic growth.

#### **Features:**

- The Department for Education and Skills which is a national government department is responsible for education and training in the country;
- Government created the National Vocational Qualifications (NVQs) to address the need for qualifications to be made flexible but rigorous
- Accreditation of Prior Experiential Learning (APEL) is created to provide formal recognition to the learning acquired from personal experience and learning gained in employment.
- A sector skill agreement drafted by the Sector specific councils through which employers and unions identify skills and productivity needs in their sectors and the actions required to be taken to address those needs.

#### **Strengths:**

- To impart vocational education and skill development training, the UK government has formulated several initiatives.
- The skills system in UK is largely outcome based. The training providers have the flexibility to plan a delivery system based on the requirements of the trainee.
- The apprenticeship schemes in the UK form a vocational ladder that starts at 14 years age and ends with higher education level with employment;
- The UK skills system aims at making the dropouts ready for employment who is aged between 16 and 24 years, of which 66% from school and 84% from higher education are agreeable to work and organizations invest in the training and development of their workforce;

#### **4. China:**

In China, education is a long-term strategy fundamentally emphasizing science (academic) education, vocational education, and skill development, which focuses on enhancing the eminence of education through enhanced training, performance-based payment, and rotation of teachers in remote areas, as well as increased supervision and provision of facilities. The education law of china mandates nine years of compulsory education to the child which includes three years of vocational training. The Chinese “Technical and Vocational Education and Training (TVET)” is intends to meet the needs of “Vocational Education and Training (VET)” at different levels, which can be alienated into a couple of institutional settings consisting of formal school-based vocational education, which is a theory-based training under the Ministry of Education (MOE). The other component, which is under the “Ministry of Human Resources and Social Security (MOHRSS)”, concentrates vocational, apprenticeship and on-the-job training. Both MOE and MOHRSS offer a noteworthy quantity of practical training to the candidates. After finishing senior secondary vocational

school, students should join three years in the vocational stream of education as practical training and the industry participation are also mandatory in this system.

In China, under the “Ministry of Education (MOE)”, the responsibility of Vocational Education and Training (VET) administration is separated between the Department of Higher Education and the Department of Vocational and Adult Education. Both are entrusted with the responsibility of VET colleges and institutes and VET schools respectively. Likewise, in the “Ministry of Human Resources and Social Security (MOHRSS)”, the “Department of Vocational and Occupational Capacity Building” is responsible for the management of “Technical and Vocational Education and Training (TVET)” programmes in technician colleges and skillful worker schools. While the Ministries are in-charge of strategic planning and policymaking, regional coordination, setting VET standards, and curriculum development, the local departments of education and labour is the in-charge of daily administration, including budget allocation and personnel management in state-run VET institutions. The government of China uses vocational training to promote equal opportunity for education through providing training for the unemployed, rural migrant workers, disabled people, farmers, and former soldiers.

#### **Features:**

- The Chinese government has made huge investments in providing quality infrastructure for vocational education and training which includes building and teacher tools for programmes.
- Students should spend the entire third year of their three-year vocational education stream at higher secondary level as interns in local industry in order to be involved in industry participation;
- For career progression and promotion, it is mandatory for teachers of vocational schools to undertake practical training for 30 days in one year or 60 days in two years in industry;
- Curriculum Design consists of one-third including general academic skills and another one-third including particular occupations nationally defined by the Ministry of Education. The remaining one-third consists of occupational fields at schools only;
- The Vocational Education Law insists on allocating 20 % of the annual education budget to “Vocational Education and Training (VET)”;
- Stipend for Vocational Students to encourage them to pick for the vocational stream in secondary high schools.

#### **Strengths:**

- Majority of the skill development programmes in China are highly decentralized run by the local governments. The local governments have given freedom in deciding the part of curriculum based on the local needs.
- In China, the industry participation in vocational education and training is ensured through 1996 vocational educational law. According to this each student should spend one year on workplace training during their upper secondary programme. The incorporation of industry and skill development;



- In China, efforts were made by the Governments to upgrade and extend the TVET system continuously according to growing manufacturing share;
- The practical training at the organizations equips teachers with advanced tools and growing manufacturing requirements;
- Stipend for vocational students to meet their needs, such as food and accommodation, making the tuition fee free of cost;

## 5. Japan:

Japan is renowned for having the world's most educated population. In secondary and higher education, the educational system is characterized by exceptionally high enrolment numbers. Around 80% of students begin tertiary education, and roughly 71% of youth in Japan enter the labor market with a tertiary degree diploma. High school graduates with a comprehensive general education are produced by the educational system. Companies are expected to provide training in occupational and vocational skills. In Japan, between the ages of 6 and 15 years, education is both obligatory and free. Education accounts for around 4–5 percent of Japan's GDP. A primary school educates children aged 6 to 12 (6 years). After that, there are three years of middle school (12–15). A regular high school or a vocational high school can be attended between the ages of 15 and 18 (3 years) as a preparation for university. A lower level of vocational education can also be chosen at the age of 15. When student turns 18, he has the option of attending two-year colleges or four-year universities.

### Features:

- Around 80% of students begin tertiary education, and roughly 71% of youth in Japan enter the labor market with a tertiary degree diploma;
- Across the world, Japan consists of uppermost educational contribution rate. More than 91% of youth workforce has completed a 14-year education;
- Entrance tests are required for all post-compulsory educational institutions, and a central examination system has been conducted for the past two decades;
- The division of age groups into capacity homogeneous parts all the way down the spectrum is an example of meritocratic selection;
- Direct relations between employers and universities and colleges.

### Strengths:

- A broad-based universal core curriculum that creates enduring and supportive people with range of skills;
- Maintaining the educational system's inclusion through reducing dropout rates at each transition point;
- Increased connections between education and the labour market;
- Increased quality of vocational education, particularly at the secondary level;
- Increased flexibility and individuality of youth by providing them with a larger range of choices.

## 6. India:

In India, the skill development ecosystem is complex, broad, and diverse, supplying a wide range of skills to a highly diverse population. In India, skill development is divided into two categories: education and vocational training. The Ministry of Human Resource Development oversees elementary, secondary, and higher education. All college education (Arts, Science, Commerce, and so on) falls under University and Higher Education, whereas engineering education and polytechnics fall under Technical Education. All India Council for Technical Education (AICTE) is the regulatory organisation for technical education in India while The University Grants Commission (UGC) is the central agency for managing funding, grants, and setting standards for teaching, examination, and research in technical education. In India, formal and informal methods are used to impart vocational education and skill development training programmes. Both the government and private sectors provide formal vocational training. The government-run Industrial Training Institutes (ITIs), privately operated Industrial Training Centres (ITCs), vocational schools, specialized institutes for technical training, and apprenticeship training by the industry are some of the key channels of formal vocation training. Although private sector engagement has increased recently, the public sector continues to dominate the sector. Informal training, on the other hand, refers to abilities gained through on-the-job experience in both formal and informal sector.

Ministry of Skill Development and Entrepreneurship (MSDE) with the coordination of sector skill councils, industry/trade associations, corporate companies, NGOs, Voluntary Organisations and other stake holders is implementing short term skill development training programmes matching to the needs of the industry in the country. The MSDE with coordination of all stakeholders strived to develop an appropriate skills development framework in the country which enables the elimination of the gap between demand and supply of skilled manpower, skill upgradation, the development of new skills, innovative thinking, and ensuring talent availability.

### Features:

- Vocational education lays emphasis on occupation and employment and prepares workers for crafts and careers and precise trades at various levels
- Vocational education in India is offered through Industrial Training Institutes (ITIs)/Industrial Training Centres, vocational schools and Polytechnics.
- Skill development programmes in India initiated for first time in 2009 and from then several programmes have been introducing by the governments cater to the needs of various industries
- MSDE announced the Skill India campaign on 15 July 2015 with an aim to train over 40 crore people in India in various skills by 2022 for which Government of India has launched various of skill development programmes aimed at skilling unemployed youth to make India the skill Capital of the world viz. Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) etc.

### Strengths:

- Robust skill development ecosystem consists of sound policy frame work; efficient decision making bodies and vibrant implementing agencies;

- Evolving skill development ecosystem based on the lessons learned by implementing several skill development initiatives over a period of time;
- Strengthening institutional arrangements for effective implementation of vocational education and skill development programmes;
- Increasing role of information technology in imparting vocational education and skill development programmes:

### Conclusion:

In India, the credibility of vocational education is low when compared to other countries as they considered that the vocational education is meant for those who fail to get admission in the formal system. Further the low reputation linked with vocational courses and also low compensation levels among people with such skills, prevents the students from taking vocational education as they do not aware of how vocational courses can improve their career prospects. Therefore in India only about 10% of the population between the ages of 15 and 24 has obtained some form of skill through vocational education as against 80% in Europe and 60% in East Asian Countries. Hence it is the time to consider the vocational education and skill development training is a viable alternative to formal education. To strengthen the vocational education and skill development in India, the government should encourage students to pursue vocational education from secondary schooling by providing stipend for rural students for boarding and lodging as well as making tuition free for all students.

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