

## Skill Development in India Challenges and Way Forward

Mr. M.B. Risaldar \*  
Dr. Poornima M. Charantimath \*\*

### Abstract

*Skilled workforce is the one of the major element of economic growth and social development of any country. In 21st century it becomes even more important due to increasing pace of globalization and rapid technological changes taking place around the world. India is heading towards becoming a Knowledge economy. It becomes essential for education and training institutes to create and nurture a skill development system. This paper presents skill development models of various countries, where it is implemented successfully. The paper also provides the framework of skill development programmes in India. The government of India had initiated ambitious skill development programme to effectively turn the demographic dividend into a skilled workforce. This paper highlights the challenges for skill development in India through literature review and provide possible solutions.*

**Keywords:** Skill, workforce, demographic dividend, knowledge economy, globalization.

### Introduction

Skill development is important for the overall development of a student. It is necessary to equip workforce with employable skills. In this rapid changing economy, only those will survive who have required skills. Therefore, it is essential to provide required skills to the workforce according to market and industry requirement. This paper provides the skill development models in various countries, where it is successful and also skill development model in India.

India is one of the fastest growing country around the world with having ample resources infrastructure potential, advantages geographic location working population, demographic dividend. In today's competitive business world skilled labours are the most valuable asset. That's the reason government of India has launch an ambitious programme for skill development to efficiently utilize the demographic dividend and to fill the growing industrial demand. The government of India in its National Policy on skills (2009), through its initiatives provides holistic sustenance in the form of infrastructure, financial support, and policy support.

Skill development in India is critical for both economic and demographic point of view. To augment the growth rate a multi faced and highly efficient skill development system is imperative, further India has the potential to become one of the few contributor country to the global workforce. India has a population of 1.25 billion and nearly 65 percent of the population is working age of 15-59 years.

India has the advantage of youngest population with an average working age of 29 years as against to America 45 years, China 37 years (FICCI 2014) globalization has changed the conventional ways of doing business with improved and advanced communication facilities, logistic support, information resources, international bilateral agreements and rapid increasing digital presence offer India a unique position to increase its share further in the international market.

Hence such a scenario entails skill development for the workforce. It is important for skill development programme to review the skill development models of successful countries such as Norway, Finland, Switzerland, Germany and China. It is also important to determine the current skill capacity, major challenges in the way of skill development programme along with their possible solutions.

\* Research Scholar, Rani Channamma University, Belagavi, risaldarshafi@gmail.com

\*\* Professor, KLS' IMER, Belagavi.

Thus, the objectives of the research paper are to study the skill development models of different countries along with Indian skill development programme and to know the challenges and way forwards for the success of skill development initiatives in India.

## Objectives

- 1) To review the skill development system adopted by different countries like Norway, Finland, Switzerland, Germany and China.
- 2) To study the skill development system in India.
- 3) To know the challenges for skill development in India.
- 4) To suggest possible solutions and way forward for skill development in India.

## Literature Review

Rowden (2002) Suggest training plays an important role for job satisfaction as it will increase the performance level of the workers and ultimately leads to appreciation and reward from the top management.

Chenet al (2004) those workers who feel themselves to be unable to perform a task with the standard and expected levels of performance often decide to quit the firm otherwise their stay at firm or sector will not add productivity

Ganon (2005)Switzerland VET has become more important due to escalating intellectual demand and closer link between initial VET and tertiary education.

Hocckel field and grubb (2009) the OECD countries review 2009 concluded that Swiss VET is one of the best in the world and it has many strength

Kaptan (2014) the study revealed the essential role and dearth of skill development and capacity building programme as the main purpose of education. The paper also discussed about the appropriateness of education to meet the prerequisite of industry and labour market and suggested the robust active participation of educational institute to accomplish skill development programme successfully.

Misra (2015) conducted a study a 'skill development a way to leverage the demographic dividend in India' India to reap the benefits of the demographic dividend by providing trained manpower to fulfil the global and domestic need for skilled manpower. Government of India initiated skill development programme however there are lots of challenges in the way of achieving the target, such as quality of training, standardization of curriculum, recognition of course globally.

Shrivastav and Jatav (2017) Conducted study of skilling India. The study discovers the overall situation of skill capacity available, skill requirement, skill gap and measures taken by government of India for skill development, existing skill development policy in India requires an urgent treatment. The institutional structure needs simplification with larger investment in training infrastructure.

Prasad and Purohit (2017) the study suggest that India also requires grey collar knowledge employees which also include ICT skills problem solving, analytical, creative and communication skills.

Singh and Kaur (2018) conducted a study 'Astudy on skill development of paint and coating industry the study identifies the elements for skills shortage and to determine how to deal with it. The study indicate that training has a positive and significant effect on performance of workforce, the results shows that painter lacks formal training they lacks sufficient knowledge and skills results in poor quality work.

Ansari and Khan (2018) conducted a study on role of education and skill development to raise employment rate in India. They suggest that it is a significant tool for reducing poverty, increasing competitiveness and employability.

Deka and Batra (2019) the study revealed how Make in India can create massive job opportunities in Indian market with new industrial skill requirements. The study also indicates skill capacity available and measures taken by Government of India for skill development.

The Human Capital Index ranks 130 countries on ranking of skill development education system in the world. According to Human Capital Report 2017, the global top ten countries on developing their human capital on a scale from 0 to 100 across four parameters: capacity, deployment, development and know how is furnished in Table 1 below.

**Table 1. Global Top Ten on Human Capital Index**

Ranking	Name of the Country
1	Norway
2	Finland
3	Switzerland
4	United state
5	Denmark
6	Germany
7	New Zealand
8	Sweden
9	Slovenia
10	Austria

*Source: Global Human Capital Report 2017, World Economic Forum*

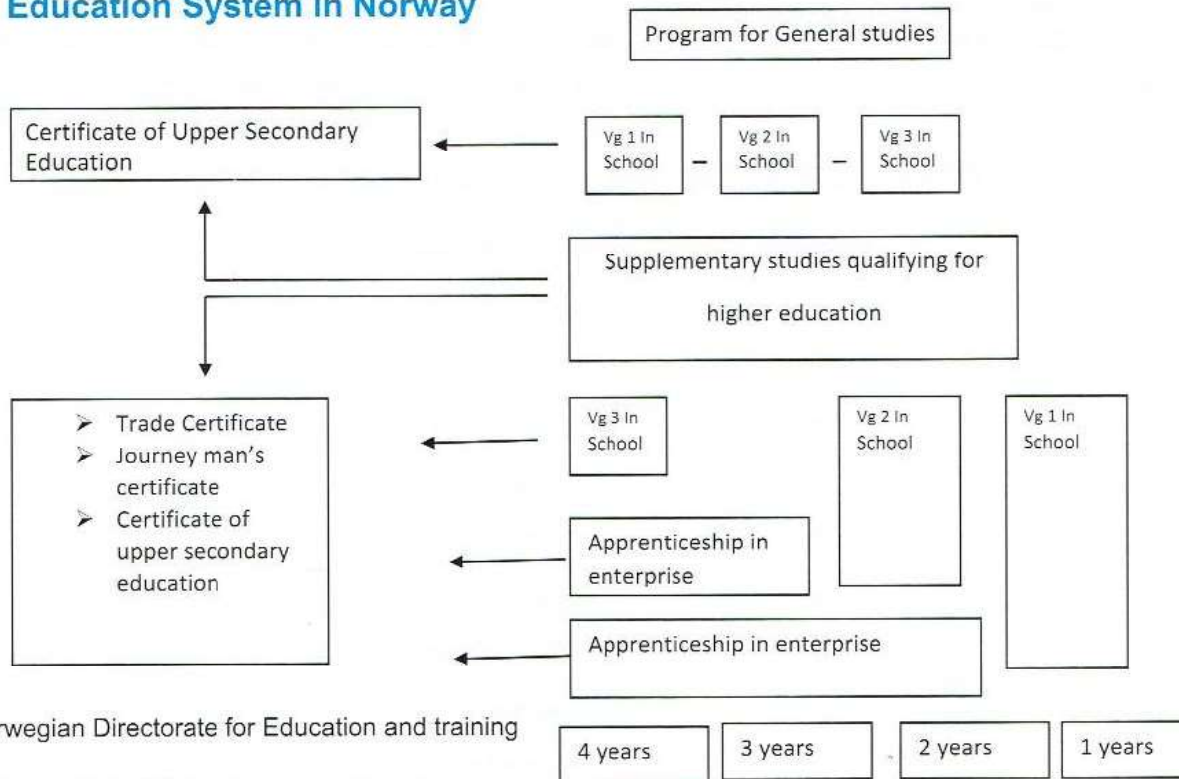
## International Skill Development Models

**Norway model:** In Norway education is mandatory for all aged 6-16 year. They have divided school system in three parts elementary, lower secondary and upper secondary school. VET is provided at lower secondary level through elective programme. This enables 8-10th year students to try out different subjects including VET. After completing lower secondary education students can pursue vocational education.

The standard upper secondary level VET model is seldom referred as 2+2 model. After completing first year upper secondary level in one of the nine vocational education programme, students can select specialization in year 12 which lead to further specialization in year 13 when the profession is selected. VET subjects are classified into common core subjects, standard program subjects and in-depth study project.

Upper secondary VET includes two years at institute with practical training in institutes workshop and short placement in industry followed by two-year apprenticeship training in industry. Students may find an apprenticeship placement by himself or get help from the authorities. Adult can obtain formal VET qualification either as adult apprentices or through experience-based trade certificate programme called practice candidate. The adult with occupational skills, that they have developed through work experience of minimum five years have opportunity to register for a theoretical and practical trade examination under practical candidate scheme. Those who pass the trade examination would get same formal qualifications as those who follow the standard route. It reduces the social inequalities and increases employment. The Norway's educational system is furnished in Figure 1.

Figure 1. Education System in Norway



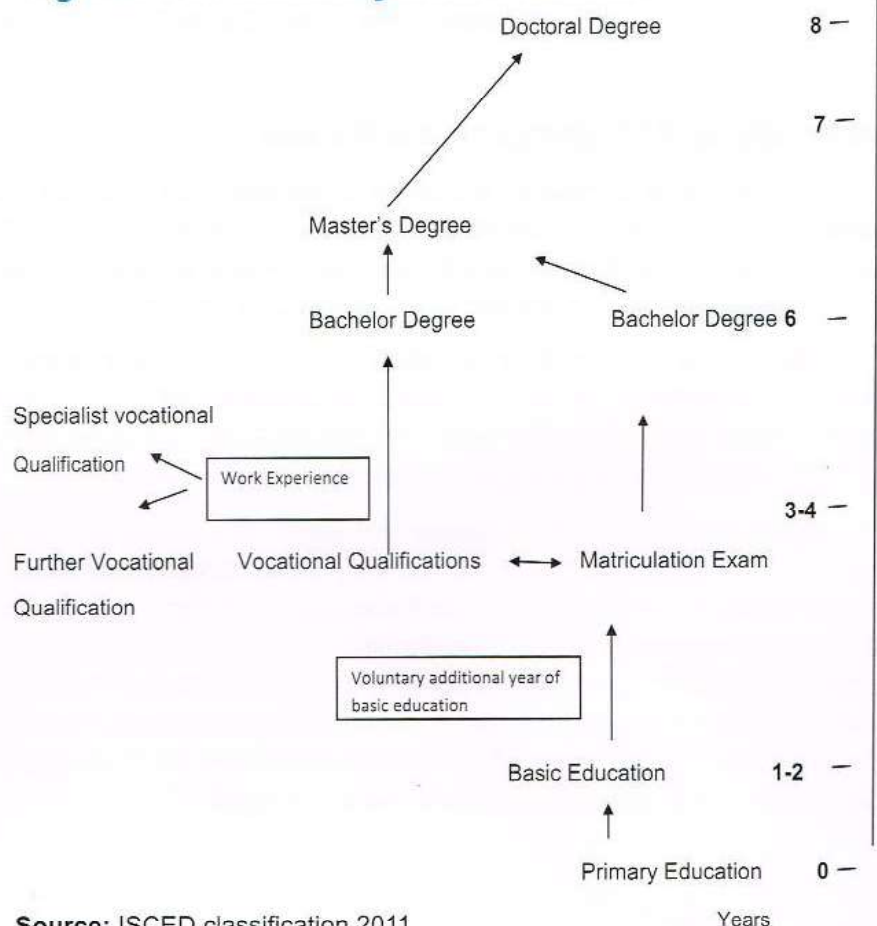
Source: Norwegian Directorate for Education and training

Finland model: Finland's educational model is the one the finest model around the world and is given in Figure 2. They had reformed vocational education in the most extensive way for many decades. Vocational qualifications are no longer specified by the length of curriculum but by the learning outcome. Education in Finland is entirely free both upper secondary school and vocational education they have nine years of elementary education in comprehensive school at the age of 16 students may decide to pursue their secondary education in an academic track or vocational track after getting qualification either from academic track or vocational track students can continue tertiary education.

The tertiary education in Finland further divided into University and Polytechnic university awards licentiate and doctoral level degrees, prior to Bologna process only university graduate could obtain post graduate. Since the implementation of Bologna process all bachelor's degree holder are now eligible for further academic studies.

0 Primary Education, 1 Primary Education, 2-Basic Education 3-4, Matriculation, 6 Bachelor Degree, 7 Master Degree 8 Doctoral Degree.

Figure 2. Education System in Finland



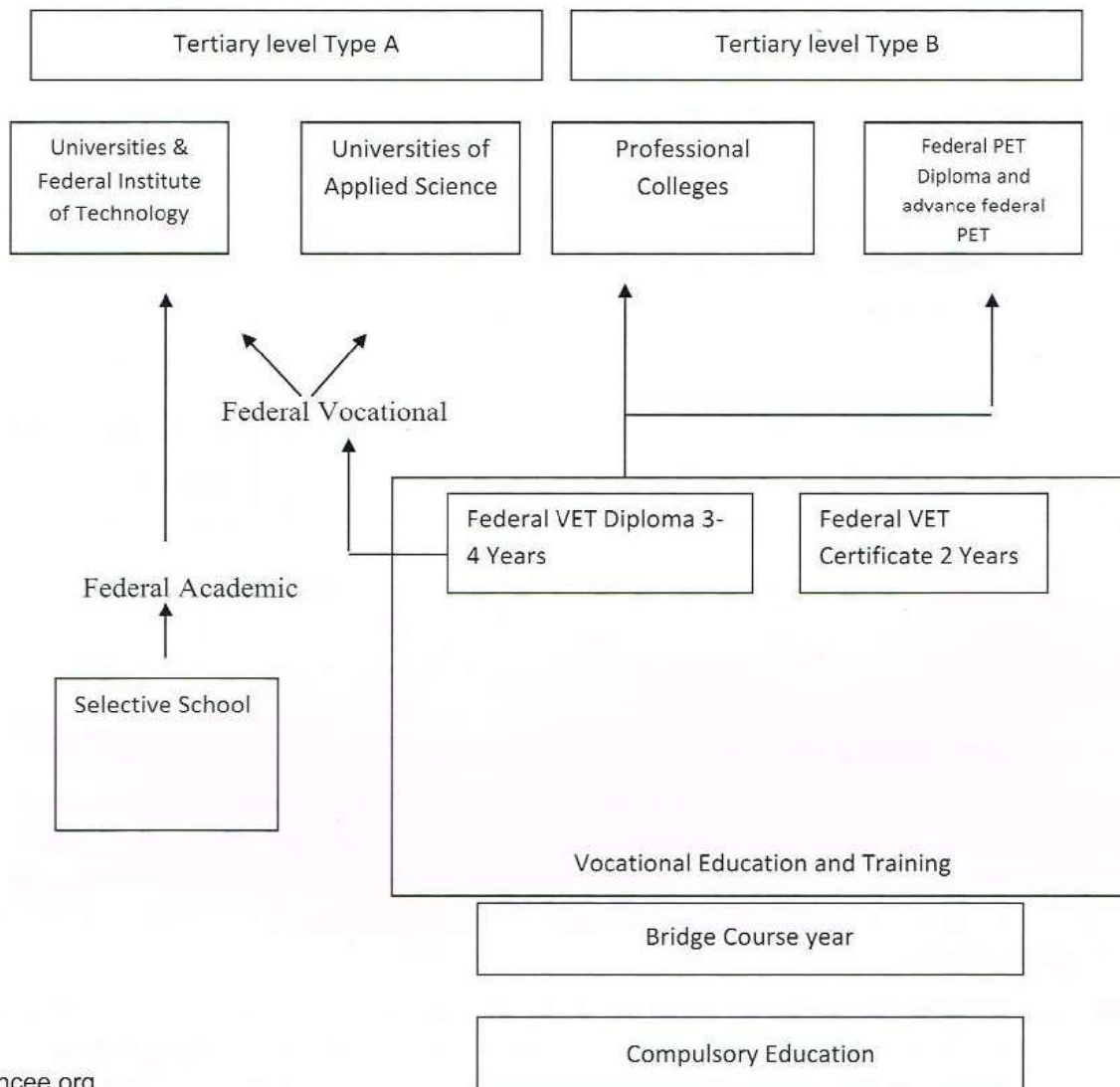
Source: ISCED classification 2011

Education is highly valued in Finland and they believe it is the primary driver for the country's success. Education and training model centrally focus to address the challenges created by globalization. Teaching is the highly valued and respected profession in Finland teacher have more autonomy they have freedom to choose their teaching methods and learning materials in the classroom.

Switzerland Model: The Swiss vocational education and training system is consider as the strongest in the Europe it is one of the best dual- vocational education systems around the world in which students combines learning in school and workplace nearly 70 percent of students join in VET system in Switzerland. Apprenticeship rotates between vocational school, workplace and industry training centres where they learn and develop complementary particle skills. Rotation may be organized in different ways either by allocating entire week to one place or by switching places during week. During the initial period of the apprenticeship programme they spend most of the time in school education and then gradually increase the share of time in industry. They get paid during this programme nearly 70 percent of young Swiss take vocational route and only 25 percent proceeds for academic version of upper secondary education. Two years vocational education and training programme with the federal VET certificate for poor performer adults is available. Switzerland distinguishes between upper secondary level education and professional education and training at tertiary level B. In 2007 half of the population aged 25-64 years had completed VET or PET qualification as their highest level of education.

Vocational education at tertiary level is offered by universities of applied sciences. This pathway allows students to shift from one part of the education system to another. Figure 3 provides the education system in Switzerland.

**Figure 3. Education System in Switzerland**

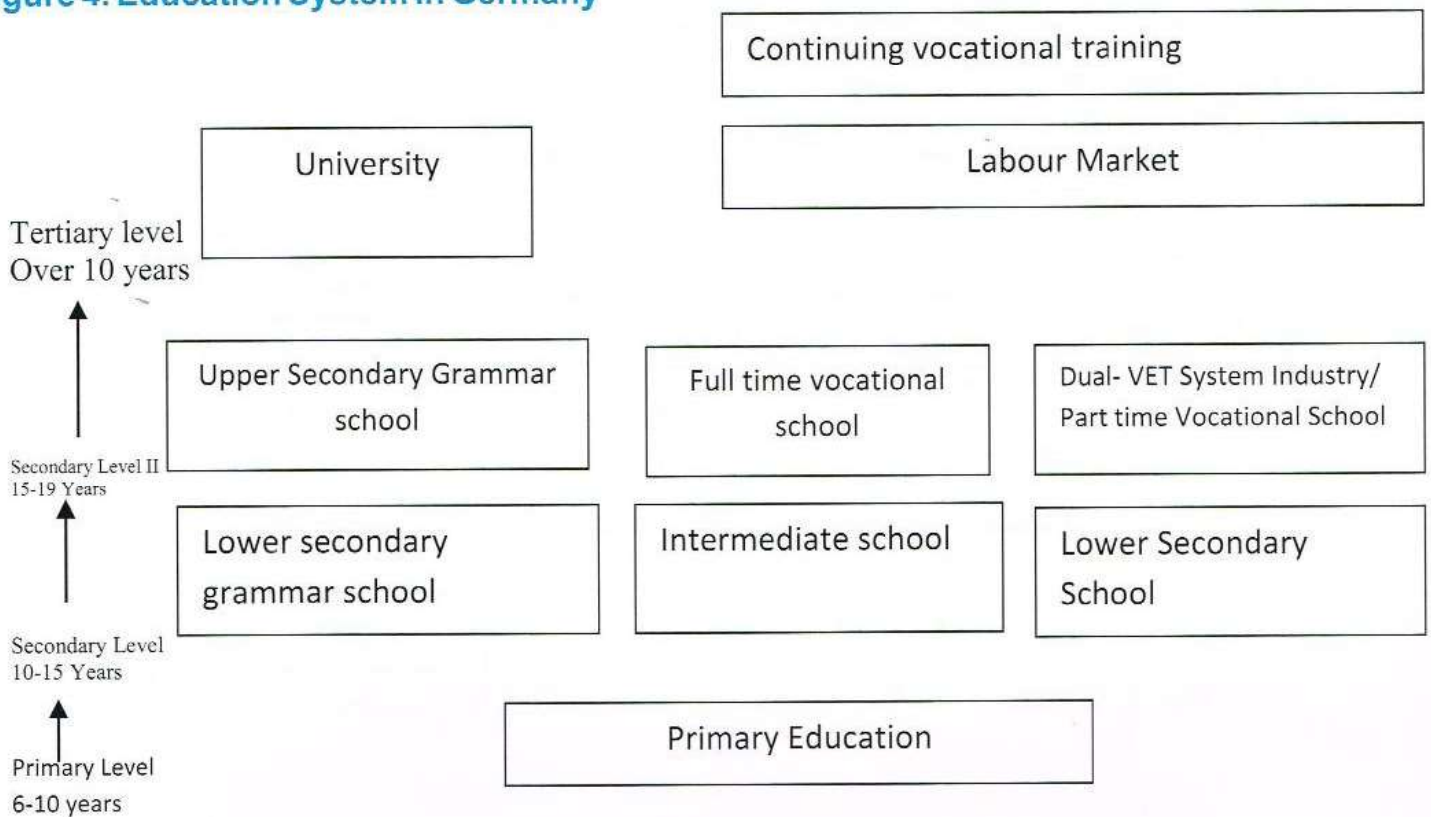


Source: www.ncee.org

**German Model:** In Germany, vocational education is been provided at secondary level (between 15 to 19 years) through the dual vocational education system. The term 'Dual- system 'refers to an institutional framework including legal terms and training arrangements which is determined by the partnership of two learning sites, the firm providing the apprenticeship and the vocational part time school.

The dual-system of vocational training makes allowances for learning to take place in a vocational training school and in an enterprise concurrently. The dual-system promotes the linkage of vocational training to the world of work. Through linking up entry level training with workplaces the dual- training systems have the advantage that they are capable of preparing skills required by the world of works. For the young people of Germany, the dual- system is the main pathway from school to working life. TVET in Germany is guided not only by the requirement of the labour market but also by the need of the individual to acquire technical skills knowledge and competencies which enable them successfully to establish themselves on the labour market. Training programmes are designed on the principle that they must be as broad as possible as specific as necessary, in dual system on the job training is provided by the employers and off- the job training by the training providers (VET providers) this is carried out in coordination between the components of the systems, the state, the employers and the union. After having required qualification trainees may find job in the sectors, they have been trained. Figure 4 provides education system in Germany.

**Figure 4. Education System in Germany**



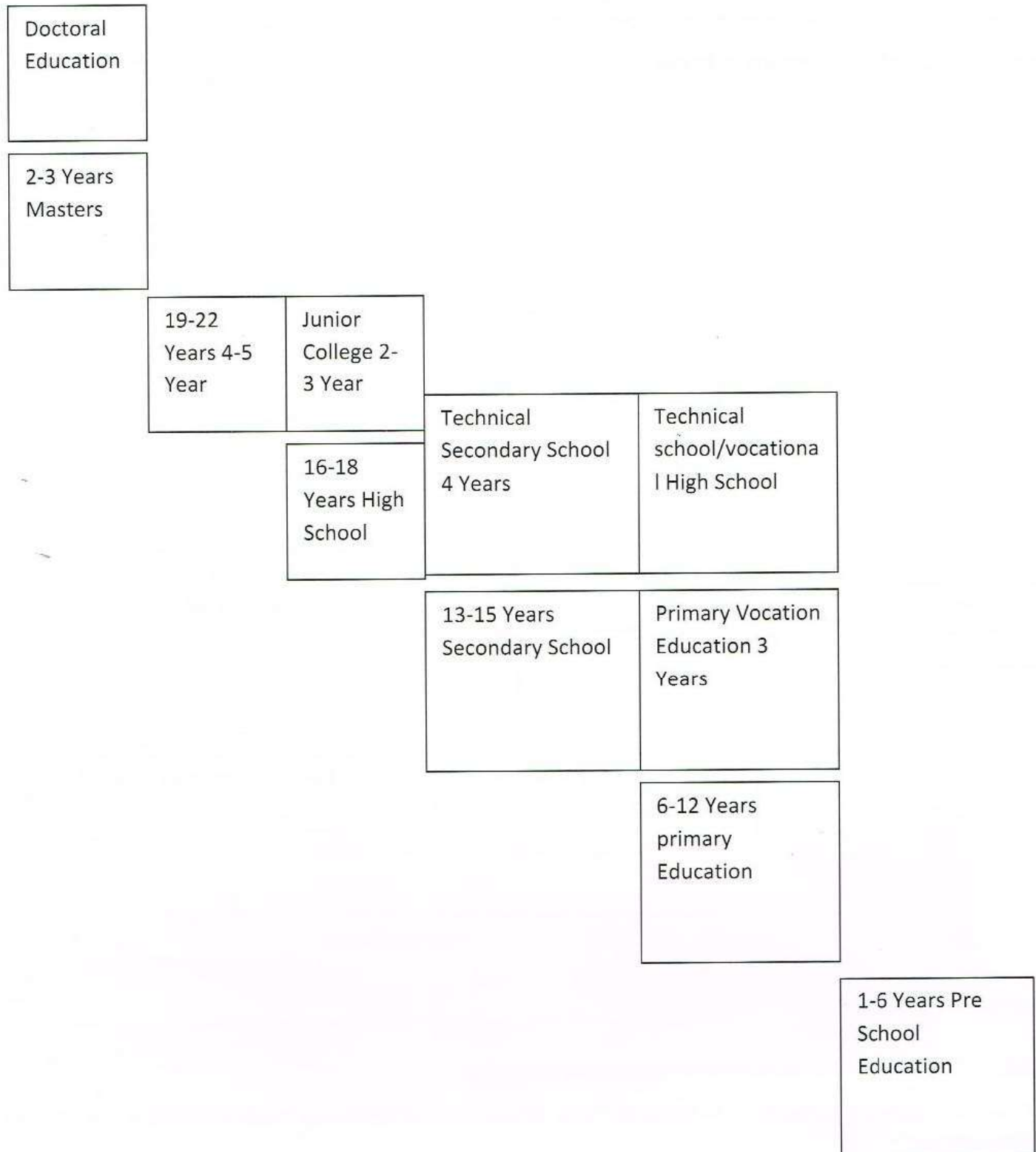
**Source:** Vocational Training Act, Germany; Accreditation and Quality Assurance in VET

**China Model:** China's vocational and technical education has produced a large quantity of shop floor technical workers, low managerial professionals and skilled workers. TVET of china is classified into two institutional setting, one of it focuses on education in schools while other aims at provide vocational training. The vocational education forms a vital part of the educational programs of china. Which mandates through education law 1986, nine years of compulsory education including three years of vocational training.

The law also discusses the role and responsibilities of the local government, industry/private participation and the vocational training institute in skill development in the country. It shows that the country is highly focussed on skill development and makes it mandatory from the school level itself. The industries in china also support the skill

development to a great extent. The occupational standards are clearly mentioned and there is robust integration with the education and economy in china the vocational educational law ensures the optimum participation from the industry in vocational education and training. Figure 5, provides education system in China.

**Figure 5. Education System in China**

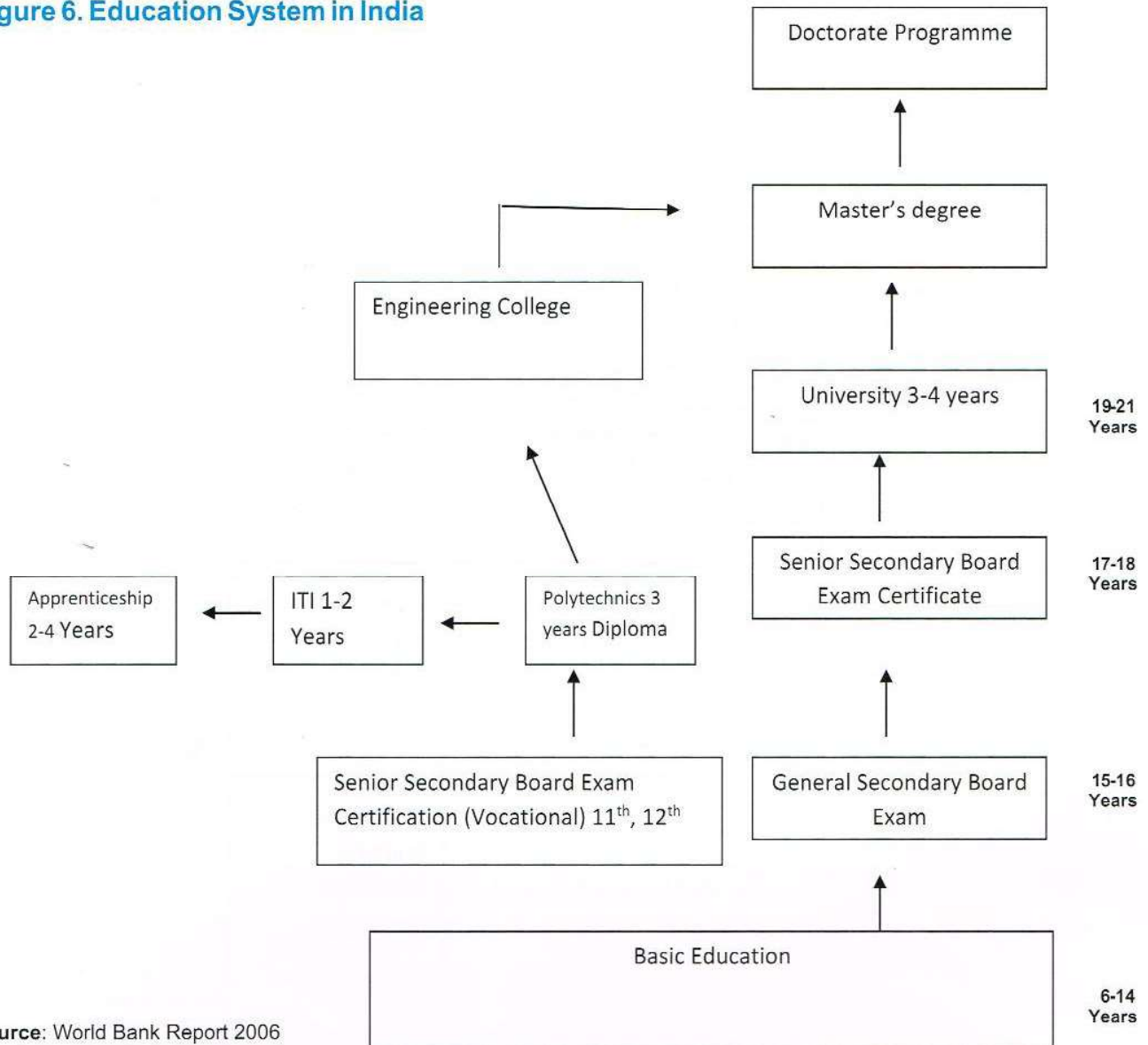


**Source:** Development and reforming trends for Chinese Vocational and Technical Education and Training by CheWeimin, Chinese Service Center.

### Skill Development in India

The skill development in India is divided into two categories. They are skill education and the skill base vocational training. The ministry of Human Resource Development governs the educational and vocational training in India. It also governs the primary, secondary and tertiary education. The University of higher education Centres focuses on college education. The technical education is offered through the engineering colleges, polytechnics and ITIs. All India council for technical education regulates all the technical institute. Figure 6 provides education system in India.

**Figure 6. Education System in India**



Source: World Bank Report 2006

### Challenges to the skill development system in India

From the review of literature, it is found that skill development in India has many challenges few of them are mentioned below:

- 1) Lack of infrastructure and inadequate capital investment from government and private industries for skill development remains a challenge.

- 2) In India still education is based on traditional concept educational institute does not provide skills required for the job, school education needs to be matched with government efforts in the area of skill development is remained a challenging task.
- 3) Enrolment of the students for vocational education and training has become an extremely challenging task because the technical trade positions are associated with low salary, lack of recognition and migration which leads to low mobility towards vocational education
- 4) Only 5 percent of Indian workforce has received skills through formal vocational training nearly 433 million workers are in unorganised sector. It's a major challenge that the organised sector training approaches and pedagogy to easily carry over into the unorganised sector. Research would be needed in several issues such as suitable training, appropriate pedagogy to suit the characteristic of the unorganised sector.
- 5) The private enterprises are not actively participating in training process like in Germany the private enterprises played a vital role in training. Chines government enacted stringent laws for training in industries. Government needs to motivate industry people and bring stringent laws for the private sector to develop a robust training system. Industries are looking for short term profit not long term strategic human resource development, it is a challenging task to motivate them and to bring constitution amendments.

### Way Forward

Despite of implementing skill development programme there is a still a long way to bridge the skill gap. Following are some of the possible solutions.

- 1) Government needs to fund more on creating educational infrastructure projects.
- 2) Institute needs to update the curriculum on regular basis as per the industrial requirements.
- 3) India needs to introduce a standardised National assessment of apprentice's like Norway model
- 4) Like Finland, India can provide education policy based on values, quality and learning outcome.
- 5) Trainer's training on regular basis is imperative like in China model as they depute trainer to industries so that they can learn and understand the latest skill set required in the industry.
- 6) We can develop a dual education system like the German model where the theoretical knowledge is imparted in institute and industries provided the practical training and institutes and industries works together for the success of the dual vocational education model.
- 7) To get the funding government must motivate the industry people because they are the final beneficiaries of skilled workers joint funding on education and training allows the model to be feasible.
- 8) Indian VET system should provide more autonomy for teachers like Switzerland's VET model. So that teacher can apply their innovative methods of teaching.

### Conclusion

In this paper successful skill development models from countries such as: Norway, Finland, Switzerland, Germany and China are studied. The present skill development model in India is also studied. The limitations of skill development model and various challenges faced in implementation of skill development model in India is analysed by literature review. Suggestions are given to embrace the best practices from skill development model from other countries in India.

India is the fastest growing economy with having huge population of 1.25 billion and has got the demographic dividend and it is important and challenging task to transform this demographic dividend into skilled workforce for this government of India has launched ambitious skill development programme. It is facing some challenges like lack of infrastructure, funding, poorly trained trainers, lack of awareness of vocational education etc. The skill development programme needs some initiatives to deal with these challenges and to make this programme successful.

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