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International Centre
for Technical and Vocational
Education and Training



TVET Country Profile

INDIA



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Compiled in collaboration with the Pandit Sunderlal Sharma
Central Institute of Vocational Education (PSSCIVE), India.

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TVETipedia Glossary

In case of further clarification and definitions of terms contained herein, please refer to UNESCO-UNEVOC's online TVETipedia Glossary, which provides definitions and background information from various trustworthy sources on terms commonly used in the area of technical and vocational education and training. Find out more at www.unevoc.unesco.org/l/68.

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UNESCO-UNEVOC TVET Country Profiles

To find similar information on other countries, please visit the UNESCO-UNEVOC World TVET Database at www.unevoc.unesco.org/l/589.

Statistics¹

General information

Category	Indicator	Statistics (2015)
Demographic	Total population (thousands)	1,311,051
	Population growth	1.2%
	Median age of population ²	26.6
	Population aged 15-24 years (thousands)	241,540

Socio-economic	GDP growth (annual %)	7.6%
	GDP per capita (current US\$)	6,089
	Unemployment rate (%) ³	3.5%
	Youth literacy rate, population 15-24 years, both sexes (%)	89.7%

Participation in education by level and by programme orientation (2015)

Category		Gross enrolment ration (%)		Percentage of students who are female (%)	
Primary education (ISCED 1)		108.6%		50.1%	
Secondary education, all programmes	Lower secondary (ISCED 2)	74.0%	87.5%	47.6%	48.7%
	Upper secondary (ISCED 3)		63.6%		46.5%
Tertiary education, all programmes (ISCED 5-8)		26.9%		47.2%	

Category		Percentage of students enrolled in vocational programmes, both sexes (%)		Percentage of students in vocational education who are female (%)	
Secondary education, all programmes	Lower secondary (ISCED 2)	1.4%	-	16.5%	-
	Upper secondary (ISCED 3)		2.8%		16.5%

Indicator	Both sexes (%)	Percentage of students who are female (%)
Percentage of students in tertiary education enrolled in short cycle education (ISCED 5)	-	-

Education finance

Category	Indicator	Statistics (2013)
Expenditure	Government expenditure on education as % of total government expenditure (%)	14.1%
	Expenditure on secondary and post-secondary non-tertiary vocational education as % of total government expenditure (%)	0.02%

Type of institutions⁴

Type of institution	Education level	Ministry responsible	Number of institutions
Schools	Secondary and Senior Secondary	Ministry of Human Resource Development	252,176 ⁵
Polytechnics	Diploma	Ministry of Human Resource Development	3867 ⁶
Industrial Training Institutes	National Trade Certificate	Ministry of Skill Development and Entrepreneurship	14312 ⁷

¹ Unless otherwise indicated, all statistics have been gathered from the UNESCO Institute for Statistics (UIS). <http://uis.unesco.org/>

² UN DESA. World Population Prospects. <https://esa.un.org/unpd/wpp/Download/Standard/Population/>

³ International Labour Organization. ILOSTAT - ILO database of labour statistics. www.ilo.org/ilostat

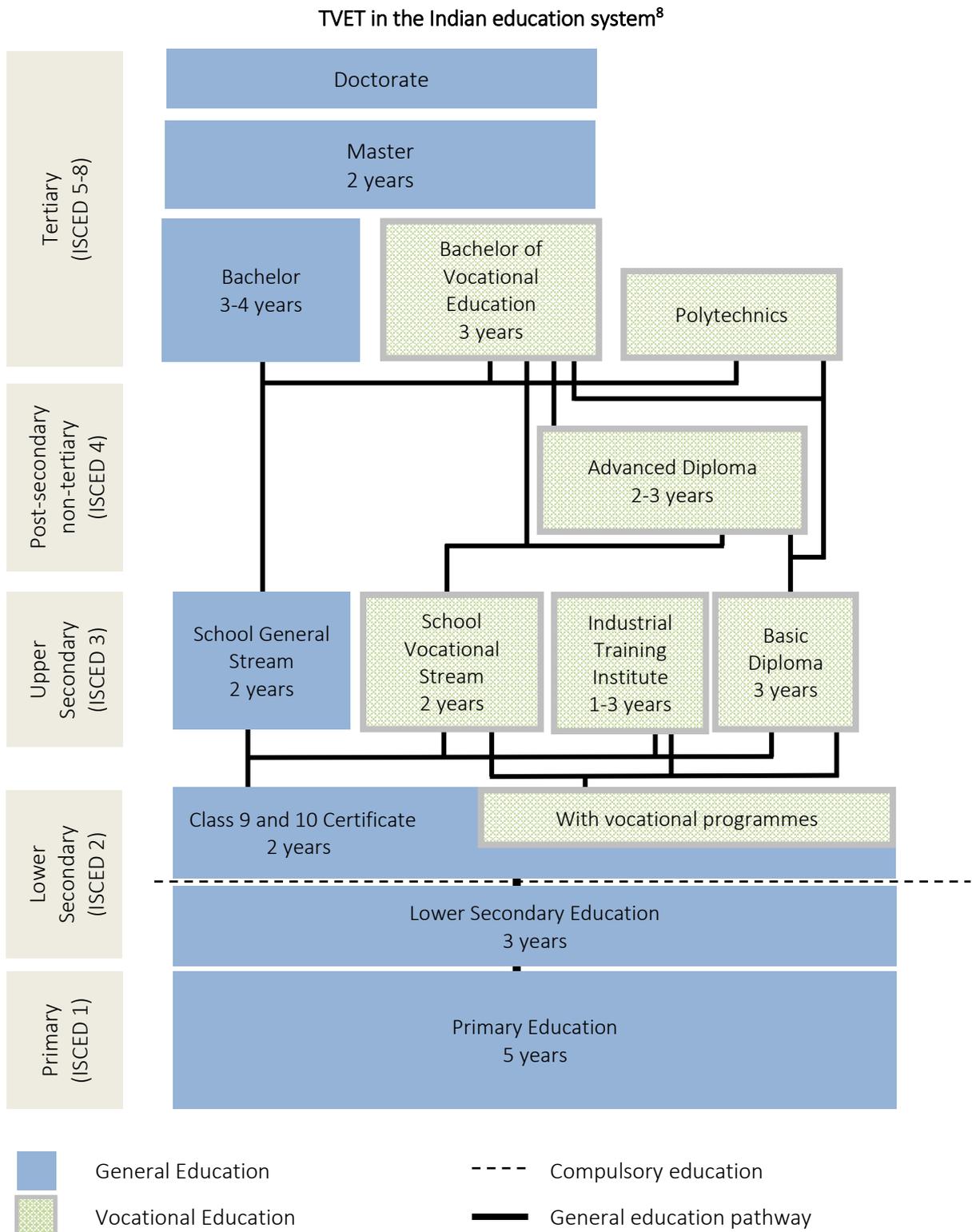
⁴ Compiled by the Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE)

⁵ Department of School Education and Literacy, Ministry of Human Resource Development, Government of India.

⁶ http://mhrd.gov.in/sites/upload_files/mhrd/files/statistics/ESG2016_0.pdf

⁷ Ministry of Skills Development, India. <https://www.msde.gov.in/assets/images/annual%20report/Annual%20Report%202016-2017%20-%20English.pdf>

1. TVET systems



⁸ Compiled by UNESCO-UNEVOC International Centre.

Formal TVET system

The formal TVET system in India is structured as follows:

(Optional) Vocational programmes are offered in 9 and 10 Classes at the lower secondary level (ISCED 2).	
Duration:	1 year
Admission requirements:	Pass lower general secondary education (ISCED 2)
Taught in:	Secondary and senior secondary schools under Ministry of Human Resource Development
Graduates are able to enrol in TVET in the upper secondary vocational stream, and Basic Diploma and Industrial Training Institute programmes at the upper secondary level (ISCED 3).	

Upper secondary vocational stream programmes are offered at the upper secondary level (ISCED 3).	
Duration:	2 years
Admission requirements:	Pass year 10 of general education, or completed lower secondary TVET programme
Taught in:	Senior secondary schools under Ministry of Human Resource Development
Graduates from upper secondary vocational stream programmes are able to enrol in programmes at the post-secondary non-tertiary level (ISCED 4) or the Bachelor of Vocational Education (ISCED 6).	

Basic Diploma programme is offered at the lower secondary level (ISCED 3).	
Duration:	3 years
Admission requirements:	Pass year 10 of general education, or completed lower secondary TVET programme
Taught in:	Polytechnics
Graduates from Basic Diploma programmes are able to enrol in programmes at the post-secondary non-tertiary level (ISCED 4), at Polytechnics, or pursue a Bachelor of Vocational Education (ISCED 6).	

Vocational training programmes are offered at the lower secondary level (ISCED 3).	
Duration:	1-3 years
Admission requirements:	Completed lower secondary TVET programme
Taught in:	Industrial Training Institutes
Graduates from vocational training programmes receive National Trade Certificates that enable them to seek gainful employment.	

Advanced Diploma programmes are offered at the post-secondary non-tertiary level (ISCED 4).	
Duration:	2-3 years
Admission requirements:	Upper secondary vocational stream or Basic Diploma graduates (ISCED 3)
Taught in:	Polytechnics
Graduates from Advanced Diploma programmes are able to proceed to diploma courses, the Bachelor of Vocational Education (ISCED 6), or seek gainful employment.	

The Bachelor of Vocational Education is offered at the tertiary level (ISCED 6).	
Duration:	3 years
Admission requirements:	Grade 12 of general education or Advanced Diploma graduates at the post-secondary non-tertiary education level (ISCED 4)
Taught in:	Colleges and universities under the Ministry of Human Resource Development

Technical education is offered at the tertiary level (ISCED 6).	
Duration:	Varies
Admission requirements:	Grade 12 of general education or Advanced Diploma graduates at the postsecondary non-tertiary education level (ISCED 4)
Taught in:	Polytechnics and specialized institutions

Non-formal and informal TVET systems

The Ministry of Skill Development and Entrepreneurship and other national and private institutions offer non-formal TVET programmes. Some examples include:

Programme:	Deen Dayal Upadhyaya Grameen Kaushalya Yojana
Ministry/organization responsible:	Ministry of Rural Development
Target audience:	Young people from poor communities. The training programme is provided based on market demand and potential market opportunities, giving young people from poor communities an opportunity to upgrade their skills and enter the skilled work force in growing sectors of the economy
Admission requirements:	Must be between the age of 15 to 35 years
Qualifications received:	Graduates receive a certificate from an assessment agency under the National Council for Vocational Training or Sector Skill Council. With this qualification,

graduates are able to seek employment in the private sector or start their own enterprise.

Programme:	Integrated Skill Development Scheme
Ministry/organization responsible:	Ministry of Textiles
Target audience:	Individuals/Institutions that provide training and skill development programmes in the textile and apparel sectors.
Admission requirements:	Must have completed secondary education (ISCED 3)
Qualifications received:	Graduates receive a certificate from an assessment agency under the National Council for Vocational Training or Sector Skill Council. With this qualification, graduates are able to seek employment in the private sector or start their own enterprise.

Programme:	Employment through Skill Training and Placement
Ministry/organization responsible:	Ministry of Housing and Urban Poverty Alleviation
Target audience:	Unskilled urban poor
Admission requirements:	Must not have undergone skill development training in any other trade during the last 3 years
Qualifications received:	Graduates receive a certificate from an assessment agency under the State Urban Livelihoods Mission. With this qualification, graduates are able to seek employment in the private sector or start their own enterprise.

The Recognition of Prior Learning (RPL) framework is an outcome-based qualification framework linked to the National Skill Qualification Framework (NSQF) against which prior learning through formal and informal channels is assessed and certified. The RPL process includes pre-assessment, skills gap training and final assessment leading to a certificate.

2. TVET strategy and key policy documents

Technical and vocational education and training (TVET) in India is known as vocational education and training (VET) and aims to provide lifelong learning opportunities, develop a healthy attitude among students towards work and life, enhance student employability, and reduce the mismatch between the demand and supply of skilled labour.

The following key documents help guide the development of VET in India.

Name of document	National Policy on Skill Development and Entrepreneurship 2015
Date entered into force	July 2015
Website link	http://t1p.de/8j7f
Key points and objectives	

The policy aims to lay the foundations for the development of a VET system that meets the challenge of skilling the labour force, focusing on speed, quality, and sustainability. It provides an umbrella framework to all skilling activities in India, seeks to align them to common standards and to link them with demand. The policy has a number of aims and objectives, including:

- Make VET more attractive to youth and employers;
- Ensure vertical and horizontal pathways by integrating VET in the formal education system;
- Increase the capacity and quality of training infrastructure and trainers to ensure equitable and quality education and training;
- Establish an information system for aggregating the demand and supply of the workforce which can help match skills development to the needs of the economy;
- Promote national standards by involving the private sector in setup of occupational standards, support the development of curricula, provide apprenticeship opportunities, and participate in assessments;
- Promote on-the-job training models, and in particular make apprenticeships in work an integral part of the skills development system;
- Promote increased participation of women in the workforce.

The policy also establishes an framework to coordinate and strengthen factors that promote entrepreneurship in India, especially among women.

3. Governance and financing

Governance

The **Ministry of Human Resource Development** and **Ministry of Skill Development and Entrepreneurship** are responsible for the development of VET policies.

The VET system is governed in a decentralized manner through various institutions and departments, including:

- The National Skill Development Agency (NSDA) is an autonomous body that coordinates and harmonizes skills development activities. It is responsible for, amongst other things, the coordination and implementation of the National Skill Qualifications Framework (NSQF) under the Ministry of Skill Development and Entrepreneurship.
- The National Skill Development Corporation India (NSDC) is a public-private partnership non-profit company set up by the Ministry of Finance. The NSDC incentivizes skill development programmes by providing financing, either as loans or equity, to selected private sector initiatives including for-profit private, non-profit industry associations, or non-profit NGOs. The NSDC's finances come from the National Skill Development Fund. The NSDC supports the development of curriculum, faculty training standards, quality assurance, technology platforms, student placement, and setting up standards and accreditation systems in partnership with industry associations.

- The All India Council for Technical Education (AICTE) is responsible for the planning, formulation and maintenance of norms and standards. It upholds quality assurance through accreditation, funding in priority areas, monitoring and evaluation, maintaining parity of certification and awards and ensuring coordinated and integrated development and management of technical education in India.

Financing

The Ministry of Skill Development and Entrepreneurship is responsible for allocating the financing in VET.

Funds are collected from: (i) general tax revenues used to fund public and private vocational training providers; (ii) in-firm financing and provision of training by and for a firm conducting VET; (iii) Corporate Social Responsibility funds spent on VET; and (iv) a levy on firms by the government held in a special fund, resources from which are earmarked for VET.

The National Skill Development Fund, set up in 2009 by the Government of India, aims to raise funds from government and non-government sectors for skill development. A public trust set up by the government is the custodian of the fund. The trust accepts donations and contributions in cash or kind from the contributors.

VET in India is not legally free and the government and private providers decide the fee.

4. TVET teachers and trainers

VET teaching and training staff follow different educational pathways for their respective fields.

VET teachers teach subjects that equip students in vocational training institutions with generic and occupational skills. They are expected to plan and coordinate their activities with other stakeholders by liaising with external institutions and industries. VET teachers in schools are considered subject specialists and are not required to have pedagogical qualifications. However, teachers generally undergo pedagogical training during employment. VET teachers are expected to have at least one year of industry experience, but there is no legal requirement.

The activities and definition of VET trainers vary from sector to sector.

The Pandit Sundarlal Sharma Central Institute of Vocational Education (PSSCIVE) in Bhopal and four National Institutes of Technical Teachers Training and Research (NITTTR) offer in-service TVET teacher and trainer training. The PSSCIVE is involved in providing academic and technical support in research, the development of curricula, and organizing in-service training programmes for the VET teachers in schools. The NITTTRs develop technical education in polytechnics, engineering colleges and management institutions through long and short-term training activities and need-based programmes.

5. Qualification System and Quality Assurance

National Qualifications Framework (NQF)

The NQF in India has ten levels and is coordinated and monitored by the National Skill Development Agency under the Ministry of Skill Development and Entrepreneurship.

	Academic Qualification	TVET Qualification
10	PhD	
9	Postgraduate	
8	Postgraduate Diploma/Degree	
7	Degree	
6	Diploma	Advance Diploma
5	Diploma	Diploma
4	Class 12	Certificate
3	Class 11	
2	Class 10	Certificate
1	Class 9	

Quality assurance

The All India Council for Technical Education is a national-level apex advisory body that has the statutory authority for planning, formulation, and maintenance of norms and standards in technical education. It is responsible for quality assurance through accreditation, and maintains parity of certification and awards.

The National Skill Development Agency and the Directorate General of Training under the Ministry of Skill Development and Entrepreneurship are the apex organizations for quality assurance of programmes relating to formal vocational education and training.

Vocational training programmes (at the ISCED 3 level) are offered through a network of 13,350 government and private-owned Industrial Training Institutes. The National Council for Vocational Training (NCVT) is responsible for establishing guidelines for the formation / creation / setup of new institutes and trades. In the meantime, Industrial Training Institutes are under the administrative and financial control of state governments or union territory administrations.

Curriculum

The PSS Central Institute of Vocational Education under the Ministry of Human Resource Development is responsible for the development, updating and quality of the VET curriculum in schools. The institute organizes working group meetings of experts for the development of outcome-based curricula, student textbooks, and teacher handbooks for the vocational subjects offered in schools. It involves academia, industry experts, and representatives from Sector Skill Councils in the development of the course materials. Industry validation of the course materials is done through the involvement of the National Skill Development Corporation and the Sector Skill Councils.

National Occupation Standards (NOS) are used to develop curriculum and assessment instruments and tools for the assessment and certification of learners. They specify the standard of performance an individual must achieve when carrying out a function in the workplace, combined with the knowledge and understanding required to meet that standard

consistently. Each NOS, defined by Industry and the Sector Skill Councils, identifies one key function in a job role. Each NOS must be a concise and readable document, usually consisting of a few pages.

6. Current reforms and policy discussion

Current reform and policy discussions in India regarding VET focus on:

- More effectively promote national standards in skilling through active involvement of employers;
- Make vocational education and training aspirational for youth;
- Ensure both vertical and horizontal pathways for skilled persons;
- Enhance the employability and livelihood of individuals;
- Increase the capacity and quality of training infrastructure and trainers;
- Align demand and supply of skilled workers with sectoral requirements and reduce mismatch;
- Make provisions to meet the skilling needs of socially and geographically disadvantaged people;
- Leverage modern technology to ensure scale, access, and outreach;
- Recognize the value of on-the-job and apprenticeship training.

Challenges

According to the PSSCIVE, India is facing the following challenges to the VET system:

Strengthen institutional capacity to provide skilling opportunities in a wide variety of courses

Harnessing the demographic dividend through appropriate skill development efforts will require an expansion and qualitative improvement of skill development programmes and institutions in India. Only about 2.5 million places are available in vocational training courses, though about 12.8 million persons enter the labour market every year. Institution-based skills development in industrial training institutes, vocational schools, technical schools, polytechnics and professional colleges alone cannot cater to the huge demand of skilling 300 million people by 2020.

On the other side, many students leave these institutions without a degree because they are not able to cope up with the demands of the general education. Non-formal and informal training sites have to be recognized and accredited as authorized training centres. The National Skills Qualification Framework (NSQF) should be implemented in two modes; one in the form of 'vocalization' of education (including VET courses in general education), and the other as a separate VET stream. Schemes and guidelines need to be formulated to expand such skilling opportunities beyond formal institutions. Diversified vocational courses will have to be introduced to expand learning opportunities in skills development programmes and to cater to the diverse employment

opportunities in the world of work. Continuing VET opportunities through distance learning and blended learning modes have to be provided to teachers and students for professional development.

Improve the quality of vocational teachers and trainers

The institution-based VET system has been slow to respond to the changing skills needs of the industries. The major reasons for this have been the outdated curricula, infrastructure and lack of trained VET teachers and trainers. The continuous development of VET teachers and trainers should be encouraged through mandatory on-the-job training programmes. This requires the collaboration with industry and organizations with state-of-the-art equipment and trained faculties. Moreover, the shortage of trained VET teachers and trainers is a major obstacle to the growth of skills development activities. Specialized institutions in various sectors should introduce pre-service training programmes to develop master teachers and trainers for VET in the field.

Develop a database of TVET institutions and figures

Determining the supply and demand of skilled human resources in the labour market is a major challenge. The National Skill Development Agency has launched a platform to aggregate supply and demand trends in the Indian skill development ecosystem, referred to as the National Labour Market Information System (LMIS). The LMIS will become an authoritative source of information on the state of VET in India, and this database needs to be developed to provide key information on TVET institutions, enrolment rates and employment by occupation.

Enhance the employability of trainees

Increasing the employability of people will help them to get entry-level jobs, innovate and adopt new technologies. It will promote labour adaptability to changing skill needs, new tasks and job roles, improve productivity, and labour mobility in search of new avenues and opportunities.

Leverage technology in teaching and training of TVET courses

Teachers and students in the majority of VET institutions still rely on traditional teaching-learning methods and textbooks. Considering the diversity of skill requirements across various levels, there is a need to enhance the outreach of VET to remote areas and a wide variety of target groups. This can be achieved by leveraging technology in teaching and training of TVET courses. Technology based innovations and online tools can be used for transacting curricula in the classroom and can be useful in improving students' learning. Leveraging technology in skill development activities will help to improve the ability of VET teachers to enhance engagement, personalised learning experience and equal access to all.

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