CHAPTER-1
INTRODUCTION

1.1 THE STATE OF INDUSTRIAL TRAINING INSTITUTES IN INDIA

To achieve international competitiveness in the present era of globalization, businesses require a skilled workforce that is responsive to emerging market needs and is equipped with knowledge of advanced technologies. On the other hand, for the young population to get gainful employment, it is crucial to acquire skill sets with strong labour market linkages. Meeting these requirements critically depends on a country’s endeavour towards developing its skill-pool and bringing in modern technologies in the vocational training system of the country. As India integrates itself with the world economy, which is largely driven by knowledge and skills, there is an imperative need to take a re-look at the existing state of affairs in the skill imparting system of the country. The ability of Indian industry to benefit from globalization hinges on its success in benchmarking itself to the international standards in terms of price, quality, safety and productivity, which in turn is contingent upon the availability of a globally competent labour force. The employment statistics of the country also underscore the need to develop market driven skills amongst its potential labour pool. During 1994 to 2000, growth rate of employment in the country was less than the growth rate of labour force, indicating an increase in the rate of unemployment. Up-gradation of the technical education and skills development system of the country, which is the principal provider of technicians and skilled workers, should thus form the core of the human resource development strategy of the government, which in turn would help meet the twin targets of enhancing competitiveness of the Indian industry and creation of job opportunities for the youth of the country.

1.2 INDUSTRIAL TRAINING INSTITUTES (ITI'S)– THE ROAD TO A BETTER TOMORROW

India is developing and when we think of impressive infrastructure facilities coming up in the country then we think about the Golden Quadrilateral, Delhi Metro, technology parks, new airports and the engineering prowess that has gone into all this. It's true that these marvels have been conceptualized and supervised by qualified engineers, but there is an army

1 http://dget.nic.in/WorldBank/FICCIIPh/PPT9IndoRamaSynthetics.ppt by C.V. Khandelwal, COO (Polyester), Indo Rama Synthetics
of workers responsible for building these structures, brick by brick. In order to make structures truly world class, has the profile of numerous masons, plumbers, electricians, carpenters also scanned.

Do we for that matter, give a thought to the issue that to have a truly world class infrastructure we need a labour force that is properly trained. The present day economy demands new skills and hence demand a formal, state-of-the-art training infrastructure for workers exists in Industrial Training Institutes (ITIs). ITIs were conceptualized with the idea of providing people with the right set of skills to meet job requirements.

1.3 BRIEF ON THE VOCATIONAL TRAINING POLICY AND SYSTEM

Education and training of the Indian labour force Educational levels of the labour force in India are rather low. In 1999-2000, about 44 per cent of all workers were illiterate while 22.7 per cent completed primary school. About 33.2 per cent of the labour force graduated from the middle school. A share of the labour force that completed middle school is of course higher in the urban areas, being round 57.4 per cent; while for the workforce it was only 25.4 per cent (Figure 1.1)

![Figure 1.1: Literacy Levels of Indian workforce](image)

As far as vocational skills are concerned, the labour force in India compared unfavourably to other countries. Figure 1.2 below shows that only 5 per cent of the Indian labour force (aged 20-24), received formal vocational training, whereas this in industrialized countries varies between 60 and 80 per cent. In the Republic of Korea
as high at 96 per cent, while in Mexico, it is 24 per cent, still far higher than India. Although the level of educational attainment of the Indian workforce is low, the educated people constitute 69 per cent of the total unemployed.²

1.3.1 Overview of the Vocational Training System

The technical education and vocational training system in India produces a labour force through a three-tier system, as follows:

- Graduate and post-graduate level specialists (e.g. IITs, Engineering Colleges) train as engineers and technologists.
- Diploma-level graduates who are trained in polytechnics as technicians and supervisors.
- Certificate-level craft people trained in ITIs as well as through formal apprenticeships as semi-skilled and skilled workers.

There are some 17 ministries/departments which provide or finance vocational education and training programmes. Their total annual training capacity is estimated to be about 28 lakh (2,800,000) students. There is a lot of diversity between programmes in terms of duration, target group, entry qualifications, testing and certification, curriculum, etc. So some of the courses are conducted in formal institutions with uniform curriculum and prescribed examination standards while others are need-based courses.

² INDUSTRIAL TRAINING INSTITUTES OF INDIA: THE EFFICIENCY STUDY REPORT Regional Office for South Asia ILO, New Delhi in Focus Programme on Skills, Knowledge Employability (IFP/SKILLS) ILO, Geneva, 2003
There are six ministries/departments offering programmes that can fall into this category (table 1.1). Their total annual training capacity is about 12.71 lakh (1,271,000). DGE&T supervises the biggest training system accounting for more than half of this capacity. In terms of persons trained per annum, DGE & T’s share is more than 60 per cent, while the utilization of capacity of the “Vocationalization of Secondary Education” programme under Ministry of HRD is about 40 per cent.

<table>
<thead>
<tr>
<th>Ministry/Department</th>
<th>Estimated Training Capacity/Person trained (Annually)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M/o Health &amp; Family Welfare</td>
<td>0.20 lakh</td>
</tr>
<tr>
<td>M/o Human Resources Development</td>
<td>4.9 lakh (utilization is 40%)</td>
</tr>
<tr>
<td>Vocationalization of Secondary Education</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Training</td>
<td>0.19 lakh</td>
</tr>
<tr>
<td>National Open School</td>
<td>0.067 lakh</td>
</tr>
<tr>
<td>D/o Information Technology</td>
<td>0.75 lakh</td>
</tr>
<tr>
<td>DOEACC 'O' Level</td>
<td></td>
</tr>
<tr>
<td>M/o Labour (DGET)</td>
<td>About 5.0 lakh</td>
</tr>
<tr>
<td>Apprenticeship Training Scheme</td>
<td></td>
</tr>
<tr>
<td>Craftsmen Training Scheme</td>
<td>About 1.5 lakh</td>
</tr>
<tr>
<td>Other Long Term Training Programs</td>
<td>0.07 lakh</td>
</tr>
<tr>
<td>D/o Small Scale Industries</td>
<td>0.02 lakh</td>
</tr>
<tr>
<td>D/o Tourism (Food Crafts Institute)</td>
<td>0.011 lakh</td>
</tr>
<tr>
<td>Total</td>
<td>12.708 lakh</td>
</tr>
</tbody>
</table>

1.4 ITI’S FUNCTIONING

Vocational training in India is imparted through public Industrial Training Institutes (ITIs) as well as private Industrial Training Centres (ITCs). Industrial Training Institutes are under the administrative and financial control of State governments or Union Territories. A total of 5,114 ITI/ITCs (1896 ITI run by the government with a seating capacity of 0.4 million and 3218 ITCs run by private agencies with a seating capacity of 0.34 million offer vocational training in 107 trades. The eligibility for admission into these courses varies from Class 8 to Class 12 pass. After training, the trainees appear in the All India Trade Test to obtain the National Trade Certificate awarded by National Council of Vocational Training (NCVT).

It provides medium to long term institutional training to produce semi skilled/skilled workers for industrial employment. The purpose of ITI’s was to provide necessary skills to people so that they could pick up trades of their choice and earn a living. However,
somewhere in the process the objective was missed and created the large mismatch in the country. In spite of the presence of the ITIs across the country, a vast sea of potential manpower in the country is largely untrained and hence unemployable and the industry suffers because of shortage of trained manpower.

The government also welcomes Industry partnership in ITI upgradation with a commitment and a sound plan for the ITIs. The Industry needs to have a vision for the ITIs they take up, how they intend to manage the ITIs better, the kind of training to be provided to the teachers, how the number of students from disadvantaged section can be increased and what can be done to achieve the growth and sustainability of the ITI. As eventually, the ITIs will not only provide jobs to millions of our youth but will provide the Industry with a plethora of highly skilled and semi skilled workers that will immensely benefit the Industry in fueling its growth.

1.5 PRESENT APPROACH OF THE GOVERNMENT OF INDIA AND THE STATE GOVERNMENTS

In regard to Technical Education from diploma onwards the general approach of the Central Government can be held to be the same as adopted by the AICTE. The Government intends to give priority for the establishment of new Engineering Colleges and Polytechnics in the private sector in those districts where at present there is no Engineering College/Polytechnic. These institutions will be opened in the districts where industries are coming up and the Institutions propose to venture into the field of technical education in the emerging areas of technology as per the need of industries. But at the vocational level the Government of India has desired at last one ITI in each assembly segment and in consonance with this policy the State Government has decided that one ITI in all assembly segments of the State within the next 2—3 years where local youths could be provided training in different trades which are in demand in different sectors will be opened.

1.6 NO. OF INDIA’S INDUSTRIAL TRAINING INSTITUTES

ITIs (Industrial Training Institutes)

- Over 5000
- Capacity ~ 750,000 seats

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3 INDUSTRIAL TRAINING INSTITUTES OF INDIA: THE EFFICIENCY STUDY REPORT Sub Regional Office for South Asia ILO, New Delhi in Focus Programme on Skills, Knowledge and Employability (IFP/SKILLS) ILO, Geneva, 2003
- Most in southern and western region
- Uneven quality

Privately owned institutes
- Most fairly small (< 100 students)
- Few very good e.g. NTTF

Industrial Training Institute
Government ITIs

Run by the state governments

About 150-250 students

Craftsmen Training Scheme (CTS)

Craftsmen training are conducted in the ITIs, which are set up by the State Governments and private bodies⁴.

- Number of ITIs: 5114 (Govt.-1896 & Pvt.-3218)
- Seating Capacity: 772 thousand (402 in ITI, 370 in ITC)
- Number of trades for which training is conducted: 107
- Duration of the Courses: ½-3 years
- Entry Qualification: 8th to 12th Std.

TRADES UNDER CTS & ATS

Entry Qualification Wise

CTS: Total Trades 107

- 8th Class Pass: 19 Trades
- 10th Class Pass: 65 Trades
- 12th Class Pass: 23 Trades

ATS: Total Trades 153

- 8th Class Pass: 38 Trades
- 10th Class Pass: 103 Trades
- 12th Class Pass: 12 Trades

1.7 GROWTH OF PUBLIC AND PRIVATE TRAINING PROVISION

Under the Craftsmen Training Scheme (CTS), training provision is implemented by the ITIs that are established, administered and funded by the state governments. The ITI staff is civil servants and their assets are owned by respective state governments. As central

⁴ Vocational Training in India, Dr. Ashok Kolaskar, India Knowledge Commission
Government does not intervene, this tends to result in disparities between state capabilities and will to promote vocational training and tends to put at risk the equitable access to skills training in the states with poorer financial situations. Governments operate some 4,647 vocational training institutes, which have a total capacity of 678,000 training seats. Out of this, nearly 373,000 seats are in some 1,800 government-run institutes and the residual 305,000 are in 2,850 private Industrial Training Centres (ITCs). The number of industrial training institutes in India has shown a rapid increase with the current one-time increase, however, being mostly driven by the private providers (Figure 1.4).

Figure 1.3: Growth of ITI's

1.8 ROLE OF DGE&T (VOCATIONAL TRAINING SYSTEM IN INDIA)

1.8.1 Background of DGE&T

The Directorate General of Resettlement and Employment (DGR&E) now known as the Directorate General of Employment and Training (DGE&T) was set up in July 1956 with the purpose of resettling demobilized Defence Service personnel and discharged War Veterans to civilian life. After Independence, the Directorate General was also called upon to handle cases relating to displaced persons from Pakistan. Subsequently, the scope of the Direct

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5 Dr. Ashok Kolaskar, India Knowledge Commission, Vocational Training in India
extended to cover employment service to all categories of job seekers in early 1948, and training services to all civilians in 1950. In pursuance of the recommendations of the Training and Employment Service Committee (Shiva Rao Committee set up in 1952) the day-to-day administrative control of the Employment Exchanges and Industrial Training Institutes (ITIs) was transferred to the State Governments/Union Territory Administrations with effect from 01.11.1956 on cost sharing basis between Centre and States. Cost sharing by the Centre with the State Governments to the extent of 60% of the cost of the establishment was continued up to 31-03-1969 after which the scheme was discontinued, based on the decision taken by the National Development Council in May 1968. With each successive Five Year Plan, there has been considerable expansion of the activities of the Employment Service and Training Service in the Centre and the States. The total number of Employment Exchanges functioning at the end of March, 2009 was 968 (including 82 University Employment information and Guidance Bureaux); and the total number of Industrial Training Institutes (both Government and Private) was around 6906 with a seating capacity of around 9.5 lakh.

1.8.2 National Roles and Responsibilities of DGE&T

The vocational training system under the Ministry of Labour and Employment (MoLE) is one of the most comprehensive systems in the country. Under the system, the Craftsmen Training Scheme (CTS) and Apprenticeship Training Scheme (ATS) are two important schemes. The CTS provides structured institutional training while the ATS is a combination of institutional and on-the-job training in which the trainees are exposed to industrial environment. The schemes are interlinked and dovetailed to achieve more effective results. At present, there are 5,114 ITIs and Industrial Training Centers (ITCs) with a training capacity of 7,73,000; under ATS about 254,000 seats are located for training the apprentices (as of June 2006) in 20,800 enterprises.

DGE&T in the Ministry of Labour & Employment is the nodal agency responsible for conducting vocational training programs to meet the skilled manpower requirement of industry. Because vocational training is a concurrent subject the Central Government is responsible for laying down norms, standards, policies, conducting of trade tests, and award of certificates. Other major responsibilities include research in vocational training, development of instructional materials and affiliation of ITIs/ITCs, whereas State Governments/Union Territories are responsible for day-to-day administration of Employment
Exchanges and ITIs. Each State Government has a Directorate of Technical Training/Directorate of Employment & Training, which is responsible for:

(a) Carrying out the policy laid down by the National Council for Vocational Training (NCVT)
(b) Ensuring examinations are conducted by the State Board of Examinations
(c) Issuing the National Trade Certificates
(d) Arranging for inspection of training institutes/centers
(e) Affiliating trade units of training institutes/centers
(f) Conducting NCVT and non NCVT courses
(g) Implementing the provisions of Apprenticeship Act in respect of State Government/Private establishments and providing employment services.

Courses offered through DGE&T are available for school dropouts; ITI graduates, ITI instructors, industrial workers, technicians, junior and middle level executives, supervisors/foremen, women, physically disabled persons, SC/STs, ex-servicemen, retrenched workers, etc. It also conducts training-oriented research & development of instructional media packages for the use of trainees and instructors, etc. In addition to the programs conducted by the DGE&T, there are several programmes and training activities under the control of other Government departments and ministries. These include the programmes of Vocational Education of the Ministry of Human Resource Development (MHRD), Department of Women & Child Development, Ministry of Rural Areas & Employment, the Community Polytechnics Scheme of the MHRD, training activities of the Ministry of Industries and that of the Khadi & Village Industries Commission, etc. Their programmes largely cater to the need of the informal sector in a limited manner.

Two tripartite bodies- the Central Apprenticeship Council (a statutory body) and the National Council for Vocational Training (a non-statutory body)- advise the GOI on formulating policies and procedures, and prescribing standards and norms for vocational training schemes. Both bodies have representatives from the Central and State governments, employer’s organizations, worker’s organizations and vocational training experts. Correspondingly, State Councils advise the State governments in respect of vocational training at the State level.⁶

⁶ National Vocational Training Information Service (NVTIS) Ministry of Labour, Directorate General of Employment & Training) Govt. of India.
1.9 INSTITUTIONS OF IMPORTANCE RUN BY DGE&T

Central and State Governments have been active in expanding the vocational training system and enhancing its effectiveness. The important institutions are:

1.9.1 Advanced/Central Training Institutes (ATI / CTI)

Nine Advanced/Central Training Institutes (ATI/CTI) at Kolkata, Hyderabad, Kanpur, Chennai, Ludhiana, Mumbai and Dehradun (2 each at Hyderabad & Chennai), train crafts instructors of ITIs in 27 trades with an annual intake of 1099. The Instructors of private ITCs can also apply for Craft Instructor Courses in the Institutes conducting such programmes. Instructors are trained in developing the skills required for imparting practical skills and related instructions. They are also trained in the methods and applications of instruction (pedagogical knowledge) for effective teaching of trade skills together with techniques of evaluating the work of trainees.

1.9.2 Central Staff Training and Research Institute (CSTARI)

Activities of the Institute cover: (a) research and development of course curricula for new trades and revising and updating existing trades for use in ITIs/ITCs after approval by the NCVT; (b) conducting problem-oriented research studies on different aspects of vocational training to bring qualitative improvements in training and for effective implementation of the National Vocational Training System; (c) training the management personnel from State Directorates of training and training departments of industrial establishments, and (d) conducting special training programs in non-formal areas for instructors of Vocational Rehabilitation Centres for the Physically Handicapped.

1.9.3 Regional Directorates of Apprenticeship Training (RDAT)

Six Regional Directorates of Apprenticeship Training at Mumbai, Kanpur, Kolkata, Chennai, Hyderabad and Faridabad, implement the Apprenticeship Act 1961 in respect of trade apprentices in the Central Government Undertakings and departments in the regions allotted to them. They also survey Central Government agencies and departments for location of seats for apprenticeship training. They conduct joint inspections in ITI's/ITC's with State Directorates for affiliation under NCVT. The regions allotted to each RDAT are:

Chennai: Tamil Nadu, Pondicherry, Kerala, Lakshadweep
Faridabad: Haryana, Chandigarh, Punjab, Delhi, Rajasthan, Himachal Pradesh, Jammu & Kashmir

Hyderabad: Andhra Pradesh, Karnataka

Kanpur: Uttar Pradesh, Madhya Pradesh, Uttaranchal, Chhattisgarh

Kolkata: West Bengal, Bihar, Tripura, Assam, Nagaland, Orissa, Mizoram, Arunachal Pradesh, Andaman & Nicobar, Jharkhand

Mumbai: Maharashtra, Gujarat, Goa, Daman & Diu, Dadara & Nagar Haveli

1.9.4 National Vocational Training Institute for Women

The National Vocational Training Institute for Women (NVTI) is the pioneer Institute located in Noida. The Institute offers courses at three skill levels i.e. Basic, Advanced and Post Advanced. The courses include skill areas like Dress Making, Computers, Stenography, Electronics, etc. Besides regular courses, the institute also organizes short term/modular and specialized courses for women in skill areas related to the advanced courses.

1.9.5 Regional Vocational Training Institutes for Women

Ten Regional Vocational Training Institutes for Women at Mumbai, Bangalore, Thiruvananthapuram, Hissar, Kolkata, Tura, Indore, Allahabad, Vadodara and Jaipur. These institutes conduct courses similar to those offered by NVTI Noida.

1.9.6 Foremen Training Institutes (FTI)

Foremen Training Institutes (FTI) at Bangalore and Jamshedpur train existing and potential shop floor foremen and supervisors in technical and managerial skills through long-term and short-term courses. They also offer short-term and tailor made courses suiting to the needs of the Industry.

1.9.7 Model Industrial Training Institutes

Four Model Industrial Training Institutes have been set up at Haldwani (Uttaranchal), Calicut (Kerala), Choudwar (Orissa) and Jodhpur (Rajasthan). These institutes have been set up by the GOI to conduct restructured pattern of Craftsmen Training Programme on modular basis in the areas of Electrical and Electronics, Mechanical and Heat Engine group of trades.

7 National Vocational Training Information Service (NVTIS) Ministry of Labour, Directorate General of Employment & Training) Govt. of India.
One-year Broad Based Basic Training (B.B.B.T.) in different skill areas of the trade group is provided so that a broad foundation is laid at the end of first year of training. At the end of first year basic training an All India Trade Test is conducted by NCVT, with a “National Trade Certificate in Basic Training” being awarded to successful trainees. In the second year, trainees may opt for one of the employable modules.

1.9.8 National Instructional Media Institute (NIMI)

National Instructional Media Institute at Chennai is an autonomous institution, responsible for developing and disseminating instructional materials in the form of Instructional Media Packages (IMPs) for use of instructors and trainees of various trades under Craftsmen and Apprenticeship training. The Institute has developed more than 100 books under the CTS besides various charts.

IMPs comprising of books on Trade Theory, Trade Practical, Test/Assignment, Instructor’s guide, Visual aids, support material such as books on Workshop Calculation & Science, Reference text books, Table Books etc.

NIMI also undertakes Development of Question Banks to conduct All India Trade Test for Craftsmen Trainees and “Awareness Training Programme/ “multiplier Training Programme” for effective use of IMPs to the Instructors of ITI/ITC to enable effective implementation of Vocational Training.

The above instructional material developed is also used by the apprenticeship trainees while appearing for the All India Trade Test for Apprenticeship.

1.9.9 The Apex Hi-Tech Institute (AHI):

The Apex Hi-Tech Institute, Bangalore was set up in 1993 under Hi-tech training scheme implemented with the assistance from IDA. The institute has been conceptualized as DGE&T's core institute for high level demand driven training.

1.9.10 Vocational Rehabilitation Centres:

Twenty Vocational Rehabilitation Centres for Physically Handicapped persons have been functioning in the country. These centres evaluate the residual capacities of the handicapped and provide them with adjustment training, facilitating their early economic rehabilitation. An effort is also made to assist them to obtain other suitable rehabilitation services such as job placement, training for self-employment and in-plant training.
1.9.11 Coaching cum Guidance Centers for SC/ST

Twenty Coaching cum Guidance Centers for SC/ST have been set up to provide employment related coaching cum guidance to the educated SC/ST registrants. They also provide on job requirements and the type of tests/interviews the beneficiaries are likely to undergo when called by the employers.

1.9.12 Central Institutes for Research, Training & Employment Services

Central Institutes for Research, Training & Employment Services, Delhi is responsible for: (a) training officers of employment services; (b) undertaking research relating to activities of the employment service and (c) disseminating career literature useful to students, job seekers and parents.

1.9.13 V.V. Giri National Labour Institute

V.V. Giri National Labour Institute at Noida was established in 1974 as an autonomous institution of the Ministry of Labour, GOI. The Institute is a premier national institution involved with research, training, education, publication and consultancy on labour related issues. The core activities of the Institute are:

- Addressing the issues of transformation of the world of work in a global economy
- Projecting labour issues as a core concern of policy making
- Empowering the social actors with capacities to meet the challenge of change
- Highlighting the role of labour in shaping of modern India
- Preserving and disseminating information on labour matters.

1.10 PREVALENT TRAINING SCHEMES IN ITI'S

Vocational training in India is offered through public Industrial Training Institutes (ITIs) as well as private Industrial Training Centers (ITCs). Under the Constitution of India, vocational training is a concurrent subject of both Central and the State Governments. While the development of training schemes, evolution of policy, laying of training standards and norms, conducting of examinations, certification, etc. are the responsibilities of the Central Government, the implementation of the training schemes largely rests with the State Governments.
The Central Government is advised by the National Council for Vocational Training (NCVT), a tripartite body having representatives from employers, workers and Central/State Governments. Similar councils known as State Councils for Vocational Training (SCVT) are constituted for the same purpose by the respective State Governments at state level.

1.10.1 Principal Training Schemes

The principal training schemes operational under the Directorate General of Employment and Training, Government of India (DGE&T, GOI) for the Industrial Training Institutes and the Industrial Training Centers are the Craftsmen Training Scheme (CTS) and the Apprenticeship Training Scheme (ATS).

The CTS provides medium to long-term institutional training to produce semi-skilled/skilled workers for industrial employment, while the ATS is a combined training programme that offers both institutional and on-the-job training with the graduated apprentices being considered as skilled.

1.10.2 Craftsmen Training Scheme (CTS)

Craftsmen Training Scheme (CTS) was initiated in the year 1950 by the Directorate General of Employment & Training (DGE&T) with an aim to impart skills in various trades through the Industrial Training Institutes to meet the skilled manpower requirements for technology and industrial growth of the country. Presently 107 nationally recognized trades are offered through the CTS, with 36 new trades introduced in 2003.

The period of training for various trades under this scheme ranges from six months to three years and the entry qualification varies from 8th to 12th class pass, depending on the requirements of training in different trades. At the end of the programmes, trainees appear for the All India Trade Test (AITT) conducted by the Directorate General of Employment & Training (DGE&T) under the aegis of NCVT and successful students are awarded the National Trade Certificate (NTC), which recognizes them as semi-skilled craftsmen. A total of 7,73,000 seats are available under this scheme at ITIs with reservations for SC/ST/OBC students, as well as for women, disadvantaged persons, ex-servicemen, etc.
1.11 SCHEMES FOR SCHOOL LEAVERS

1.11.1 Craftsmen Training Scheme (CTS)

Craftsmen training are conducted in the ITIs, which are set up by the State Government and private bodies:

- Number of ITIs: 5114 (Govt.-1896 & Pvt.- 3218)
- Seating Capacity: 772 thousand (402 in ITI, 370 in ITC)
- Number of trades for which training is conducted: 107
- Duration of the Courses: ½- 3 years
- Entry Qualification: 8th to 12th Std.

Training is offered to persons within the age group 14-25 in 43 engineering and 24 non-engineering trades. The period of training varies from one to three years. In October 2002, the CTS was being delivered by state governments through some 4,647 public and private training institutes, with a total capacity of around 6,78,000 training seats. A new trend emerged in 2003 when some 36 new courses of 6 months’ duration mainly covering unorganized sector were added to the CTS. Educational qualifications for admission to ITIs under the CTS vary from 8 to 12 Grade, depending upon the trade. Table 2 indicates number of trades and their theoretical seating capacity. At the end of the programmes, trainees have to appear for the All India Trade Test conducted on behalf of the NCVT. Successful graduates are awarded the National Trade Certificate and are classified as semi-skilled craftsmen.

<table>
<thead>
<tr>
<th>Minimum Education Qualification</th>
<th>Number of Trades</th>
<th>Number of Seats (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8th Standard</td>
<td>15 (9 Engineering, 6 Non - engineering)</td>
<td>110</td>
</tr>
<tr>
<td>10th Standard</td>
<td>50 (35 Engineering, 15 Non - engineering)</td>
<td>546</td>
</tr>
<tr>
<td>12th Standard</td>
<td>2 Engineering</td>
<td>21</td>
</tr>
</tbody>
</table>
1.12 GROWTH OF PUBLIC AND PRIVATE TRAINING

Under the Craftsmen Training Scheme (CTS), training provision is implemented by the ITIs that are established, administered and funded by the state governments. The ITI staff are civil servants and their assets are owned by respective state governments. As central Government does not intervene, this tends to result in disparities between states in their capabilities and will to promote vocational training and tends to put at risk the policy of equitable access to skills training in the states with poorer financial situations. The state governments operate some 4,650 vocational training institutes, which have a total capacity of 6,78,000 training seats. Out of this, nearly 373,000 seats are in some 1,800 government ITIs, and the residual 3,05,000 are in 2,850 private Industrial Training Centres (ITCs). The number of industrial training institutes in India has shown a rapid increase with the current growth, however, being mostly driven by the private providers.

1.13 APPRENTICESHIP TRAINING SCHEME

1.13.1 Scheme for School Leavers

Apprenticeship Training Scheme (ATS) Apprenticeship Training Scheme (ATS)  
- Shop floor training in the industry is imparted under Apprentices Act, 1961 in 153 trades.
- Central Government is responsible for implementation of Apprentices Act, in respect of Central Government undertakings whereas State Governments in State Government undertakings and private sector.
- Establishments Covered: 20,700
- Seats Located: 2,53 thousand
- Duration of the Courses: 6 months - 4 years
- Entry Qualification: 8th-12th Std. & ITI pass

Recognizing the need to supplement the training imparted at the training institutes with training in actual workplace, the National Training Scheme was introduced in 1959 on a voluntary basis. Apprentices Act was enacted subsequently in 1961 and was implemented in the year 1962.
A total of 103 subject fields have been designated for the category of Graduate & Technician apprentices and 95 subject fields have been designated for the Category of Technician apprentices. Entry qualification for the apprenticeship training varies from standard 8th to 12th class pass, with the period of training varying from six months to four years depending upon the trade. The NCVT conducts All India Trade Tests (AITT) for trade apprentices and successful trainees are awarded the National Apprenticeship Certificate (NAC). Apprenticeship Training is offered to school-leavers and ITI graduates. They are taken care off by the MoLE as per the course curriculum through a network of 20,800 industrial establishments (with 2,54,000 training places) in designated trades. This scheme is implemented in the Central Government industrial establishments through 6 Regional Directorates of Apprenticeship Training located at Chennai, Faridabad, Hyderabad, Kanpur, Kolkata and Mumbai, and in the state government and private sector establishments by the Directorates of Technical Training/Directorates of Employment & Training of each State Government. All India Trade Tests (AITT) are conducted for the apprentices under the aegis of the NCVT twice a year, and the successful candidates are awarded National Apprenticeship Certificates (NACs).

### Table 1.1: Overall Apprenticeship Training in India (as on 31st March, 2004)

<table>
<thead>
<tr>
<th>Items</th>
<th>Total Trade Apprentices</th>
<th>Total Graduate, Tech. &amp; Tech. (Vocational) Apprentices*</th>
<th>Overall Apprentices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Intake capacity (No. of seats located)</td>
<td>2,46,137</td>
<td>92,115</td>
<td>3,38,252</td>
</tr>
<tr>
<td>2. No. of apprentices on roll (No. of seats utilized)</td>
<td>1,68,821</td>
<td>50,987</td>
<td>2,19,808</td>
</tr>
<tr>
<td>3. Percentage utilization</td>
<td>69%</td>
<td>55%</td>
<td>65%</td>
</tr>
<tr>
<td>4. Out of total seats utilized</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Scheduled Castes</td>
<td>20,599</td>
<td>4,348</td>
<td>24,947</td>
</tr>
<tr>
<td>ii) Scheduled Tribes</td>
<td>8,106</td>
<td>690</td>
<td>8,796</td>
</tr>
</tbody>
</table>

**Source:** - *Ministry of HRD*

### 1.14 BASIC VOCATIONAL TRAINING PROGRAMMES PROVIDED EXCLUSIVELY FOR WOMEN

There are presently 12 trades in which Basic, Advanced & Post Advanced courses are conducted. These trades are: Electronics, Dress Making, Computers, Stenography, Desk Top Publishing, Instrument Mechanic, Fruit & Vegetable Preservation, Fashion Technology,
Architecture Draughtsmanship, Hair & Skin Care, Practice of Teaching and Secretarial Practice offered through 883 ITIs with an intake capacity of 47,538. Additionally, basic, advanced and instructors’ skill training and short-term programmes are offered to 3,000 women candidates at the National Vocational Training Institute (NVTI) and 10 Regional Vocational Training Institutes (RVTI). All India Trade Tests are conducted under the aegis of the NCVT, with National Trade Certificate awarded to successful candidates.

1.15 TRAINING OF INDUSTRIAL WORKERS

In collaboration with the UNDP/ILO, DGE&T in 1977 initiated short-term/tailor made training programs at 6 ATIs and 16 ITIs for serving industry workers to update skills in their field of work. Tailor-made programmes to meet specific industry requirements are also offered. The duration of these courses ranges from one week to six weeks. The respective Institute issues the certificates to the participants on successful completion of the course.

1.16 CRAFTS INSTRUCTOR TRAINING

Crafts instructor training for potential and existing instructors of Training Institutes in 24 trades with annual intake capacity of 1,100 is offered at five Advanced Training Institutes and one Central Instructor Training Institute, Chennai. The objective of the course is to train instructors in the techniques of imparting industrial skills, who in turn would train semi-skilled/skilled manpower for the world of work.

1.17 ADVANCED TRAINING COURSES IN ELECTRONICS AND PROCESS INSTRUMENTATION

Advanced Training courses in Electronics and Process Instrumentation are being organized in the Advanced Training Institutes for Electronics and Process Instrumentation (ATI-EPI) established at Hyderabad and Dehradun. The objective of these courses is to train skilled personnel at technician level in the fields of Industrial, Medical and Domestic Electronics and Process Instrumentation by organizing short-term and long-term courses according to the needs of the industry and also to offer training for Instructors of ATIs, ITIs and other training institutes in the specialized fields of Electronics and Process Instrumentation. New courses in maintenance & operation of Cardiac equipment, Intensive care instruments, E.M.G, etc. have been offered in Consumer Electronics, courses on Maintenance and Servicing of Cable TV equipment and CD players have been started.
1.18 COURSES RUN BY FOREMEN TRAINING INSTITUTES (FTIS)

DGE&T established two Foremen Training Institutes (FTIs) at Bangalore and Jamshedpur in collaboration with technical and financial assistance from the State of Baden Wuerttemberg of Federal Republic of Germany for technological and behavioral upgradation of supervisory skills. The objective of the Institutes is to train existing and potential shopfloor foremen and supervisors in technical and managerial skills through long-term and short-term courses. The objectives include consciousness of better quality and productivity, ability for problem solving, cost reduction, and application of modern technology etc. The institutes, besides offering regular courses on Diploma and Post Diploma in Foremanship, offers short-term courses as well as tailor-made courses suiting to the needs of industry. Training courses are offered in areas like CAD, CNC technology, Welding, Engineering Instrumentation and Metrology, Pneumatics, Electro-pneumatic, Production Planning and Management, Quality Control, Basic Electronics and Supervisory Development etc. The courses are popular amongst public and private sector establishments and other Governmental Organizations, which have been availing the training facilities for the training of their supervisory personnel.8

1.19 RECENT INITIATIVES TO STRENGTHEN VOCATIONAL TRAINING SYSTEM

With the objective to upgrade the vocational training system in the country, the Directorate General of Employment & Training (DGE&T) in the recent past has taken a wide range of initiatives that focus on the qualitative improvement of the prevailing system as well as aims at integrating the country’s potential labour force into the system to a larger extent. Some of the steps taken are mentioned below—

1) Establishments of new ITIs in the North-Eastern states and Jammu & Kashmir.

2) Introduction of multi-skill courses in selected ITIs consisting of one-year broad based basic training followed by specialized modules as per the needs of local industry.

3) Opening of Vocational Training Centers (VTCs) at Block level in States/ Union Territories.

4) Ten new courses with strong industry linkage approved for introduction in the ITIs.

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8 National Vocational Training Information Service (NVTIS) Ministry of Labour, Directorate General of Employment & Training) Govt. of India
5) Up-gradation of ITIs into Centers of Excellence.

6) A trade in emerging area of Information Technology namely ‘Information Technology & Electronics System Maintenance’ (ITESM) introduced under the Craftsmen Training Scheme.

7) Introduction of externally aided projects for reforms and improvements in Vocational Training Services rendered by State Governments.

8) Special drive launched during 2004-05 to identify establishments in private sector which should have been covered under the ATS – 5414 new establishments were identified and brought to the notice of the concerned State Apprenticeship Advisors subsequently.  

1.20 CENTRE OF EXCELLENCE

Former Union Minister for Finance, P. Chidambaram, while presenting the Union Budget 2004-05, announced “In order to produce technicians of world standard, Government proposes to launch a programme in the Central sector to upgrade 500 ITIs over the next 5 years at the rate of 100 ITIs a year. Appropriate infrastructure and equipment will be provided, the syllabi will be upgraded and new trades will be introduced. This is an area where I welcome Chambers of Commerce and Industry to join hands with the Government and create a Public Private Partnership (model for designing and implementing the scheme.” Following the announcement made by the Finance Minister, the Directorate General of Employment & Training (DGE&T), initiated the consultative mechanism with Industry on efforts were that they were needed to be made for strengthening the vocational training system in India. It was decided that in the first phase 100 ITIs spread across the country would be taken up and converted in centers of excellence.

1.20.1 Criteria of Selection of ITI as Centre of Excellence

The identification of ITIs within a State/UT is to be done by the State/UT Government, keeping in view the following guidelines:

- A cluster of specific category of industry like automobile, electronics, chemical, Information Technology etc should preferably be available in the surrounding areas of the selected ITIs.

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9 Ministry of Labour & Employment Annual Report 2008-09, Page 208-217
• Academic, administrative, financial and management autonomy will have to be provided to the selected ITIs for upgradation as Centres of Excellence.

• The selected ITI should have constituted/constitute Institute Management Committees in order to create a public-private partnership model for implementing the scheme.

• The selected ITI should have proper surroundings, sufficient area for landscaping, well-constructed buildings with adequate space for additions/alterations and other infrastructural facilities. The institute should be well connected by road/railway station.

The quality of the Industrial Training Institutes (ITIs) in the country has been deteriorating in the last few years, with the industry increasingly reporting disconnect between the skills imparted in these institutions and the skills demanded in the market. With the view to strengthen the vocational training system in the country and align it with the demands of the industry, the government recently announced that 500 ITIs in the country would be converted into ‘centers of excellence’ with active participation from the industry. As part of this programme, 100 ITIs were identified to be taken up in the first phase. FICCI has been actively involved in the industry-government consultative mechanism for improving the health of the ITIs in the country. The present survey, conducted amongst the aforementioned 100 ITIs, is an attempt to capture the present state of affairs in these institutions so that the key areas that require focused attention of both the government and the industry can be brought out. The survey which saw participation from 69 out of a total of 100 ITIs to which the questionnaire was administered has brought forward several issues that need to be looked into if the ITIs of the country are to turned into institutions with the right and effective connectivities with the commercial world. The survey results show that while the situation with regard to physical infrastructure and availability of power supply in the country’s ITIs remains comfortable, it is factors like non-availability of computerized numerically controlled machines (CNC), inadequate supplies of raw material and lack of focus on staff training and development that are the key impediments in the way of strengthening these institutions. Further, the fact that nearly 77% of the budget of the ITIs is on average allocated for salaries when viewed in conjunction with the reported shortage of staff indicates that we have a difficult task at hand i.e. to control the budget spent on salaries so that additional funds are available for purchase of machinery, raw material and staff development as we go ahead and take steps to address the problem of staff shortage. Another area that deserves attention of the government is the under utilization of seats as reported by
51% of the participating institutions. FICCI believes that the trades presently being offered by the ITIs in the country need to be assessed in terms of the national and local industry requirements and that trades that limit the scope for job opportunities after completion of the course be replaced by those that are responsive to the emerging labour market needs.

1.21 PUBLIC PRIVATE PARTNERSHIP SCHEME IN ITI'S

1.21.1 Background

A vocational training is provided through a network of Industrial Training Institutes (ITIs) set up by the State Governments and private sector throughout the country. As on 01.09.2007, there are 5405 ITIs, 1913 in Government sector and 3552 in the private sector (called Industrial Training Centres (ITCs), with a total seating capacity of 7.49 lakh. The training is imparted in 110 trades, out of which 60 are engineering and 50 are non-engineering trades. The period of training varies from 6 months to 3 years, while the entry qualification varies from 8th class to 12th class pass, depending upon the trade. The age limit for admission in ITIs is 14 to 40 years.

Over the years, a number of weaknesses developed in the vocational training system in the country. The major deficiencies are rigid training structure, inadequate vocational instructors, lack of modern equipment and machinery and weak linkage with the industry.

These deficiencies created a mismatch between the trained manpower produced by the ITIs and those required by the industry. Therefore, a strong need was felt to upgrade the vocational training infrastructure in the country. As a first step, Central Government decided to take up upgradation of Government ITIs into centres of excellence.

1.21.2 Objective

In pursuance of the above announcement the Scheme “Upgradation of 1396 Government ITIs through Public Private Partnership” was framed after detailed discussions with the State Governments, Industry Associations and other stakeholders.

The main objective of the Scheme is to improve the quality of vocational training in the country and make it demand driven so as to ensure better employability of the graduates.
1.21.3 Salient Features

The salient features of the Scheme in brief, are as follows:-

- For each ITI to be taken up under the Scheme, an Industry Partner is associated to lead the process of upgradation.

- An Institute Management Committee (IMC), headed by the Industry Partner is constituted in the ITI and registered as a Society.

- Interest free loan of upto Rs.2.5 cr. is given by the Central Government directly to the IMC Society on the basis of Institute Development Plan (IDP) prepared by it.

- The IMC is given financial and academic autonomy by the State Governments to manage the affairs of the ITI. The IMC is allowed to determine upto 20% of the admissions in the ITI.

- A Memorandum of Agreement is signed among the Central Government, the State Government and the Industry Partner defining the roles and responsibilities of all the parties.

- The interest free loan is repayable by the IMC with a moratorium of 10 years and thereafter in equal annual installments over a period of 20 years.

- The Industry Partner may contribute financially and also machinery and equipment to the ITI. It shall arrange to provide training to instructors and on the job training to trainees.

- State Governments remain the owner of the ITIs and continue to regulate admissions and fees except 20% of the admissions which are allowed to be determined by the IMCs.

- National Implementation Cell and State Implementation Cells are set up at Central and State levels to implement the Scheme.

- The Scheme is monitored by National Steering Committee and State Steering Committees at Central and State levels having adequate representation from Industry Associations.
1.21.4 ITIs through Public Private Partnership for 2008-09

1.21.4.1 Himachal Pradesh ITI's under PPP

ITI, Bilaspur M/s. Gagal Cement Works
ITI, Poanta Sahib M/s. A Power Himalayas Ltd.
ITI, Nalagarh M/s. BBN Industries Association
ITI, Nehranupkhar M/s. Dateline Publication
ITI (W) Palampur M/s. Tea Planter & Social Worker
ITI (W), Dharamshala M/s. Kangra Herbs Pvt. Ltd.
ITI (W), Hamirpur M/s. WeP Peripheral Ltd.
ITI, Bhoranj, M/s. Transcore Industries
ITI (W), Kasauli M/s. Horological Components (P) LTD.

1.21.4.2 Harayana ITI's under PPP

ITI, Kaithal M/s. Educomp Solutions Limited
ITI, Bhiwani M/s. Educomp Solutions Limited
ITI, Kurukhetra M/s. Educomp Solutions Limited
ITI, Bahdurgarh M/s. Reliance Harayana SEZ Limited
ITI, Nagina M/s. Sona Koyo Steering Systems LTD.
ITI, Ferojepur Jhirka M/s. Career Launcher India LTD.
ITI, Hasangarh M/s. Carrer Launcher India LTD.
ITI, Meham M/s. Carrer Launcher India LTD.
ITI, Mahendergarh M/s. GRP. Industries LTD.
ITI, Narnaul M/s. GRP. Industries LTD.
ITI, Sadhuara M/s. Yamuna Power And Infrastructure LTD.
ITI, Ganaur M/s. Osram India PVT. LTD
ITI, Rewari (W) M/s. Rico Auto India LTD.

1.21.4.3 Punjab ITI’s under PPP

ITI, Ahmedgarh (W) M/s. Sunder Amarsheel Cheritable Trust New Delhi.

ITI, Ajnala M/s. Dashmesh Drug Pharma.


ITI, Ferozpur (W) M/s. Dev Raj Hi Tech Machines Ltd.

ITI, Gujjawal M/s. Jaimal Export Pvt. Ltd.


ITI, Malerkotla M/s. Sunder Amarsheel Charitable Trust New Delhi.

ITI, Moonak (W) M/s. Green Agro Industries.

ITI, Moga (W) M/s. Moonak Fertilizers.


ITI, Nakodar M/s. Rajhans International.

ITI, Nawanshahr (W) M/s. River Valley Clothing India Ltd.


ITI, Sarainaga M/s. Gill Agriculture Implements Pvt. Ltd.

ITI, Sirhind (W) M/s. Sunder Amarsheel Charitable Trust New Delhi.


ITI, Sunam (W) M/s. Saggu Agro Industries, Sunam.

ITI, Tanda Urmur M/s. Rajhans International.

1.22 ROLE OF AICTE IN INDUSTRY INSTITUTE PARTNERSHIP SCHEME

An educated society is vital for growth and development. This should not be confused with literacy. The issues relating to faculty, research and quality education constitute the core of an educational process. The competence and dedication of teachers, their constant upgradation, the pedagogy, the level and quality of inputs, performance levels are some of the basic determinants of education. Knowledge, imported or home spun, has signaled new challenges and improved the quality of life.
The educational reform of linking Technical Education with Industry has been amongst the most important educational innovations undertaken in this country. Interaction between Institute and the Industry is now widely recognized as an essential requirement to train and develop the right kind of technical manpower necessary to sustain and promote industrial and economic growth. Education planners in India have been engaged in the task of bringing about a proper match between technical education and the needs of the industry, and it is in this context that schemes such as practice school programmes, sandwich programmes and cooperative programmes have been introduced in the system of technical education. Some technical institutions have developed links with industries and improved the quality of their courses and pass outs to varying degrees of success. However, the vast majority of technical institutions in our country have limited interaction with industry.

The technical education system must respond to the rapidly changing technological needs by continuously evaluating and updating curricula, introducing new courses, training teachers, modernizing laboratories and workshops, and providing for a close interaction between technical institutions and the world of work. Graduates of technical institutions should be well versed with the field practices and technological advances apart from possessing skills necessary for decision making, communication, handling of workers, leadership and so on. Employers now look for technical manpower, which is both creative and innovative. They must be able to apply the newly acquired knowledge and skills and take up challenges in the face of current technological developments and information explosion.

The Government has initiated major economic reforms and changes in the Industrial Policy since July 1991. Liberalization and globalization of the Indian economy has necessitated the adoption of latest technologies and practices in various sectors. Quality and productivity have to be improved so that Indian products become competitive in the world market. These changes ultimately have to be carried out by people. In the face of these swift changes, human resource development assumes a central place in our scheme of things. On one hand, there are competitive pressures of quality, reduced response times, seeking and sustaining new markets, and on the other hand there is reduced government intervention. Technical manpower will have to meet these challenges effectively. This calls for collaboration between the technical education institutions and the Industry in programme design, their implementation, and evaluation.
Due to liberalization of the economic and industrial policy, industries are being compelled to export a part of their production and compete with multinationals for the internal market also. The emphasis is shifting to quality products and well trained manpower. There is now a greater need for industries to depend on technical institutions both for R & D work and for the supply of highly qualified and skilled manpower. Retraining of the workforce is becoming a major concern for all industries. Therefore, this is a good opportunity for institutions to establish strong links with industry.

There is unemployment in technically trained manpower in certain areas. Interaction with industry and employing organizations and reorientation of academic programmes may also help in overcoming this problem.

Improvement in the productivity of work force assumes particular significance in our economy where low productivity and low income of a large mass of employed persons is a problem of greater dimension than unemployment, measured conventionally in terms of involuntary idleness. The problems of unemployment/underemployment have been perceived as problems of mismatch between the skill requirements of employment opportunities and the skill base of the job seekers. It must be recognized that the demand for labour cannot always be created to suit the characteristics of labour supply. Shortages and surpluses are found to coexist in the labour market due to mismatch between skills and other requirements of new employment opportunities and the attributes of available workers. This mismatch is likely to become more acute in the process of rapid structural changes and modernization of the Indian economy. It is, therefore, essential to reorient educational and training system towards improving its capacity to supply the requisite skills in the medium and long-term and introduce greater flexibility in training system so as to respond to labour market changes in the short run. In order that the training and skill formation systems are closely aligned with the trends in labour demand, it would be essential that users, that is, the employers have a major role and involvement in planning and running them. To bridge the gap AICTE has launched a series of Schemes for technical institutions.

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11 Guidelines & format Scheme of Industry Institute Partnership cell (IIPC), All India Council for Technical Education (AICTE), New Delhi, Part-A, Page 1