

Skill Development and Training

INTRODUCTION

5.1. Skills and knowledge are the driving forces of economic growth and social development of any country. They have become even more important given the increasing pace of globalization and technological changes provide both challenges that is taking place in the world. Countries with higher and better levels of skills adjust more effectively to the challenges and opportunities of globalization.

5.2. As India moves progressively towards becoming a 'Knowledge economy' it becomes increasingly important that the Eleventh Plan should focus on advancement of skills and these skills have to be relevant to the emerging economic environment. In old economy, skill development largely meant development of shop floor or manual skills. Even in this area there are major deficiencies in our workforce which need to be rectified. In new or knowledge economy the skill sets can range from professional, conceptual, managerial, operational behavioural to interpersonal skills and inter-domain skills. In the 21st century as science progresses towards a better understanding of the miniscule, that is, genes, nano-particles, bits and bytes and neurons, knowledge domains and skill domains also multiply and become more and more complex. To cope with this level of complexity the Eleventh Plan has given a very high priority to Higher Education (See Volume II, Chapter 1). Initiatives such as establishing 30 new Central universities, 5 new IISERs, 8 IITs, 7 IIMs, 20 IIITs, etc. are aimed at meeting that part of the challenge of skill development. In this Chapter, however, it is proposed to focus on mass-scale skill development in different trades through specially developed training modules delivered by ITIs,

Polytechnics, vocational schools, etc. The Eleventh Plan aims at launching a National Skill Development Mission which will bring about a paradigm change in handling of 'Skill Development' programmes and initiatives.

5.3. The NSS 61st Round results show that among persons of age 15–29 years, only about 2% are reported to have received formal vocational training and another 8% reported to have received non-formal vocational training indicating that very few young persons actually enter the world of work with any kind of formal vocational training. This proportion of trained youth is one of the lowest in the world. The corresponding figures for industrialized countries are much higher, varying between 60% and 96% of the youth in the age group of 20–24 years. One reason for this poor performance is the near exclusive reliance upon a few training courses with long duration (2 to 3 years) covering around 100 skills. In China, for example, there exist about 4000 short duration modular courses which provide skills more closely tailored to employment requirement.

REVIEW OF THE EXISTING VOCATIONAL TRAINING SYSTEM

5.4. In India, skill acquisition takes place through two basic structural streams—a small formal one and a large informal one. The formal structure includes: (i) higher technical education imparted through professional colleges, (ii) vocational education in schools at the post-secondary stage, (iii) technical training in specialized institutions, and (iv) apprenticeship training. A number of agencies impart vocational education/training a various levels. Higher professional and technical education, primarily in the areas

of agriculture, education, engineering and technology, and medicine, is imparted through various professional institutions.

5.5. There are seventeen ministries and departments of GoI which are imparting vocational training to about 3.1 million persons every year. Most of these are national-level efforts and individually they are able to reach a very small part of the new entrants to the labour force. Even collectively, they provide training to about 20% of the number of annual additions to the labour force. Each ministry/department in charge of subject sets up training establishments in its field of specialization. The attempt to meet training needs through multiple authorities—labour, handlooms, handicrafts, small industry, education, health, women and child development, social welfare, tourism, etc. leads to redundancy at some locations. While each of the training initiatives has a definite area of specialization, there is need for coordination amongst these ministries/departments.

5.6. Vocational training being a concurrent subject, Central Government and the State Governments share responsibilities. At the national level, Director General of Employment & Training (DGE&T), Ministry of Labour is the nodal department for formulating policies, laying down standards, conducting trade testing and certification, etc. in the field of vocational training. At the State level, the State Government departments are responsible for vocational training programmes.

5.7. There are 1244 polytechnics under the aegis of the Ministry of Human Resource Development with a capacity of over 2.95 lakh offering three-year diploma courses in various branches of engineering with an entry qualification of 10th pass. Besides, there are 415 institutions for diploma in pharmacy, 63 for hotel management, and 25 for architecture.

5.8. There are about 5114 Industrial Training Institutes (ITIs) imparting training in 57 engineering and 50 non-engineering trades. Of these, 1896 are State Government-run ITIs while 3218 are private. The total seating capacity in these ITIs is 7.42 lakh (4 lakh seats in government ITIs and the remaining 3.42 lakh in private ITIs). These courses are open to those who have passed either Class 8 or 10 depending on the trade and are of 1 or 2 years duration, which varies from course to course. In addition to ITIs, there are six Advanced Training

Institutes (ATI) run by the Central Government which provide training for instructors in ATIs for electronics and process instrumentation, offering long and short courses for training of skilled personnel at technician level in the fields of industrial, medical, and consumer electronics and process instrumentation.

5.9. In order to provide sufficient autonomy in academics, administration, finance, management, improved physical infrastructure (building, equipments) etc., the government launched a scheme for upgradation of 100 ITIs into Centres of Excellence, with effect from the year 2004–2005.

5.10. The Apprentices Act, 1961, as amended from time to time, regulates the training of apprentices. The Act serves a dual purpose—first, it regulates the programme of training apprentices in industry so as to conform to the prescribed syllabi, period of training, etc. prescribed by the Central Apprenticeship Council and second, to utilize fully the facilities available in industry for workers. As on 30.06.2006, over 20800 public/private sector establishments were covered under the Act and number of seats allocated were 2.30 lakh, out of which about 1.72 lakh seats were utilized.

5.11. Skill building activity was also initiated under the 10+2 level of school education. A scheme of pre-vocational education at lower secondary level was started from 1993–94 to impart training in simple marketable skills and to develop vocational interests. There are now about 9583 schools offering about 150 educational courses of two years duration in the broad areas of agriculture, business and commerce, engineering and technology, health and paramedical, home science and science and technology at +2 stage covering about one million students. Under the aegis of the Ministry of Rural Development, banks and Non-Governmental Organizations, through 2500 Rural Development and Self-Employment Training Institutes (RUDSETI), have undertaken entrepreneurship and skill building of the rural youth for self-employment in areas with a pre-existing market for the goods/services produced, with a reported success rate of 70%. The Entrepreneurship Development Initiative (EDI) and other programmes of the Ministry of Micro, Small and Medium Enterprises train about one lakh persons a year.

5.12. The unorganized sector which constitutes about 93% of the workforce is not supported by any structural

system of acquiring or upgrading skills. By and large, skill formation takes place through informal channels like family occupations, on the job training under master craftsmen with no linkages to the formal education training and certification. Training needs in this sector are highly diverse and multi skill-oriented. Many efforts for imparting training through Swarnjayanti Gram Swarajgar Yojana (SGSY), PMRY, KVIC, Krishi Vigyan Kendra (KVK) and Jan Shiksha Sansthan (JSS) are in place but the outcome is not encouraging.

5.13. The quantitative dimension of the Skill Development challenge can be estimated by the following:

- 80% of new entrants to workforce have no opportunity for skill training. Against 12.8 million per annum new entrants to the workforce the existing training capacity is 3.1 million per annum.
- about 2% of existing workforce has skill training against 96% in Korea, 75% in Germany, 80% in Japan, and 68% in the United Kingdom.

THE QUANTITATIVE ASPECT OF THE SKILL SHORTAGE

5.14. The NSS 61st Round Survey on Employment and Unemployment indicates (Annexures 5.1.1. to 5.1.4) that educational institutions attendance rates (5–14 years) drop by nearly half in the age group 15–19 years and by 86% after the age 15 years. Labour force participation rates rise sharply after the age of 14 years and reach close to 100% at the age of 25–29 years. The said results also reflect that 38.8% of the Indian labour force is illiterate, 24.9% of the labour force has had schooling up to the primary level and the balance 36.3% has had schooling up to the middle and higher level. They also reveal that about 80% of the workforce in rural and urban areas do not possess any identifiable marketable skills.

THE QUALITATIVE ASPECT OF DEFICIENCIES

5.15. A basic problem with the skill development system is that the system is non-responsive to labour market, due to a demand—supply mismatch on several counts: numbers, quality and skill types. It is also seen that the inflexibilities in the course/curriculum set-up, lead to over supply in some trades and shortages in others. Of the trained candidates, the labour market outcomes as seen from placement/ absorption rates are reportedly very low. The institutional spread in the VET system shows acute regional disparity with over half of the ITIs/ITCs located

in the southern States, both in terms of number of institutions as well as the number of seats.

5.16. The quality of the training system is also a matter of concern, as the infrastructural facilities, tool/kits, faculty, curriculum are reportedly substandard. The existing institutions also lack financial and administrative autonomy. The testing, certification and accreditation system is reportedly weak, and since the deliverables are not precisely defined, there is no effort at evaluating outcomes and tracking placements. The problem is further complicated with lack of industry–faculty interaction on course curricula and other factors.

5.17. The training system for capital-intensive sectors and hi-tech areas has always received a highly preferential treatment in contrast to those working in the informal sector. Further there is no certification system for a large chunk of workers, who do not have any formal education but have acquired proficiency on their own or through family tradition/long experience. In the absence of a proper certificate, these classes of workers in the informal sector are subjected to exploitation and they do not get any avenues for better employment in the market and their mobility is very restricted.

5.18. The private sector-run Industrial Training Centres (ITCs) do not seem to be any better than the ITIs, and the low-paying capacity of learners and consequently low fee structure and absence of quality consciousness are said to be major reasons for the current state of affairs.

5.19. The Planning Commission held extensive consultations with the industry, various Central ministries running training programmes, State Governments. The discussions have revealed that the present system of skill formation has certain critical gaps in that the curricula are inflexible and outmoded. There is an inadequate fitness-testing mechanism of the institutions with a mismatched fee structure and admission criteria. The capacities of the trainers are also not in consonance with the current requirement of various sectors due to various restrictions of the affiliating agencies.

5.20. The private sector does undertake in-house training programmes and to a very limited extent, trains ‘outsiders’. However, such programmes are limited to catering to their own felt needs, in the nature of captive skill development. Low-paying capacity of learners and reluctance of

industries to train workers for fear of losing them to competition has resulted in chronic deficiency in private investment in this area. All these deficiencies mentioned in the above five paras will need to be rectified during the Eleventh Plan.

SKILL DEVELOPMENT AND SELF-EMPLOYMENT

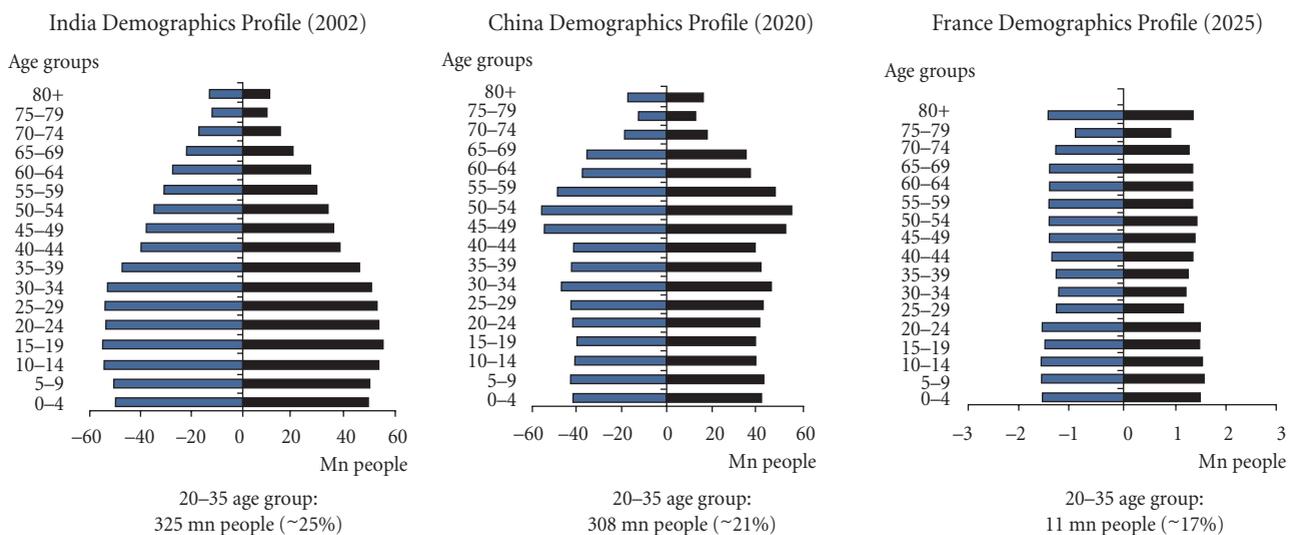
5.21. NSSO 61st Round data also reveals that the proportion of persons (15–29 years) who received formal vocational training was around 3% for the employed, 11% for the unemployed and 2% for persons not in the labour force. In order to link skills developed into actual productive use thereof including self-employment, steps will be taken in the Eleventh Five Year Plan by providing adequate incentives, not necessarily monetary but in terms of skill and entrepreneurship development and forward and backward linkages to finance, marketing and human resource management, to those who are or seek to be self-employed to enhance their productivity and value addition, making it an attractive option, rather than be an option *faute de mieux* as at present.

DEMOGRAPHIC DIVIDEND

5.22. The decline in the rate of growth of population in the past few decades implies that in the coming years fewer people will join the labour force than in preceding years and a working person would have fewer dependents, children or parents. Modernization and new social processes have also led to more women entering the work force further lowering the dependency ratio. This decline

in the dependency ratio (ratio of dependent to working age population) from 0.8 in 1991 to 0.73 in 2001 is expected to further decline sharply to 0.59 by 2011 as per the Technical Group on Population Projections. This decline sharply contrasts with the demographic trend in the industrialized countries and also in China, where the dependency ratio is rising. Low dependency ratio gives India a comparative cost advantage and a progressively lowering dependency ratio will result in improving our competitiveness.

5.23. The unprecedented opportunity for Skill Development arises from a unique 25-year window of opportunity, called India’s demographic dividend. The Demographic dividend consists of three elements of demographic trends fortuitously coinciding at a time when the economy is growing at 9% plus: (i) a declining birth rate means fewer people will be joining the workforce in coming years, than in previous years, (ii) a very slow improvement in life-expectancy around 63/64 years of age means an ageing population surviving fewer years after superannuation than in other countries, (iii) the baby-boomers generation having now crossed the age of 20, the demographic bulge is occurring at the age bracket of 15–29. All these trends combine to result in India having world’s youngest workforce with a median age way below China and OECD countries. Figure 5.1 brings out this point very effectively. This would mean that dependency ratio, that is, the ratio of non-working population to working population will continue to be low, giving India



Source: CII Conference 2002 CSFB Report: UN Population Division: BCG.

FIGURE 5.1: Demographic Profile of Select Countries

a comparative cost advantage over others, for another 25–30 years. By that time the demographic bulge in India would be also reaching the age of superannuation, and India will also be joining the league of ageing economies.

5.24. It is expected that the ageing economy phenomenon will globally create a skilled manpower shortage of approximately 56.5 million by 2020 and if we can get our skill development act right, we could have a skilled manpower surplus of approximately 47 million (Annexure 5.2). In an increasingly connected world, where national frontiers are yielding to cross-border outsourcing, it is not inconceivable that within a decade we can become a global reservoir of skilled person power. As it is we account for 28% of graduate talent pool among 28 of the world's lowest cost economies. (Figure 5.2)

5.25. The criticality of Skill Development in our overall strategy is that if we get our skill development act right, we will be harnessing 'demographic dividend'; if we do not get there, we could be facing a 'demographic nightmare'. The Eleventh Plan takes cognizance of these and endeavours to take a slew of measures which will bring about a paradigm change in our Vocational Education System (VES).

5.26. India has the youngest population in the world; its median age in 2000 was less than 24 compared 38 for Europe and 41 for Japan. Even China had a median age of 30. It means that India has a unique opportunity to complement what an ageing rest of the world

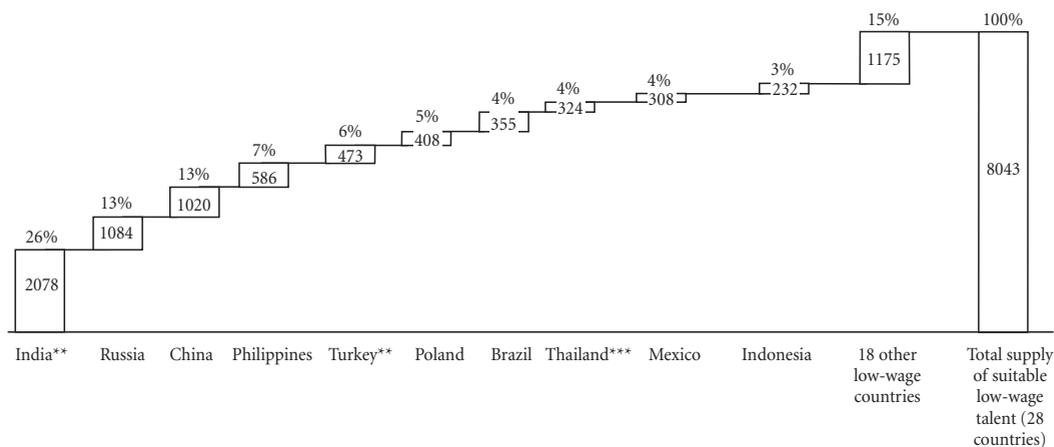
needs most. The demographic structure of India, in comparison with that of the competing nations, would work to the advantage to the extent our youth can acquire skills and seize the global employment opportunities in the future. This involves co-ordination, dialogue and discussions with the State Governments, private partners and other stakeholders, arriving at estimates of number of skilled personnel required across the sectors, aligning them with the career objectives of the youth drawing up different sector-specific modules of varying duration thereby.

ELEVENTH PLAN STRATEGIES

5.27. In the Eleventh Five Year Plan, the thrust will be on creating a pool of skilled personnel in appropriate numbers with adequate skills, in line with the requirements of the ultimate users such as the industry, trade, and service sectors. Such an effort is necessary to support the employment expansion envisaged as a result of inclusive growth, including in particular the shift of surplus labour from agriculture to non-agriculture. This can only take place if this part of the labour force is sufficiently skilled. During the Eleventh Plan it is proposed to launch a major 'Skill Development Mission' (SDM) with an outlay of Rs 22800 crores.

SKILL DEVELOPMENT MISSION

5.28. In order to create a pool of skilled personnel in appropriate numbers with adequate skills in line with the employment requirements across the entire economy



Note: * Graduate with skills for direct employment (does not consider willingness and accessibility of talent); ** Number derived via extrapolation; *** As of 2007.

Source: McKinsey Global Institute.

FIGURE 5.2: Aggregate Suitable* Graduate Talent Pool for Offshore IT and BPO Industries

with particular emphasis on the twenty high growth high employment sectors, the government will set up an SDM consisting of an agglomeration of programmes and appropriate structures aimed at enhancing training opportunities of new entrants to the labour force from the existing 2.5 million in the non-agricultural sector to 10 million per year.

MISSION GOAL

5.29. To provide within a five- to eight-year timeframe, a pool of trained and skilled workforce, sufficient to meet the domestic requirements of a rapidly growing economy, with surpluses to cater to the skill deficits in other ageing economies, thereby effectively leveraging India's competitive advantage and harnessing India's demographic dividend (On demographic dividend, see Annexure 5.2).

5.30. The Skill Development Mission (SDM) will have to ensure that our supply-side responses are perpetually in sync with the demand side impulses both from domestic as well as global economies. The mission will, therefore, have to involve both public and private sectors in a symbiotic relationship, with initiatives arising from both sides with reciprocal support. Thus public sector initiatives to repurpose, reorient and expand existing infrastructure, will need involvement of private sector for management and running of Skill Development Programmes, ending with placement of candidates. Similarly Private Sector Initiatives will need to be supplemented by government by one-time capital grants to private institutions and by stipends providing fee supplementation to SC/ST/OBC/Minorities/other BPL candidates. Thus the core strategy would consist of a two-track approach, of a public arm of amplified action through ministries and State Governments and a private arm of specific and focused actions for creating skills by the market through private sector-led action.

5.31. In case of government-led initiatives the concerned Ministries will conceptualize the initiatives for either expanding and improving existing institutions and providing them enlarged budgets and improved action plans or they will set up new generation institutions with budgetary support. For industry or service sector-specific private initiatives the entire strategic thinking and plan of action will emerge from industry associations and ministries will be involved in structuring government response and providing budgetary support. The SDM will oversee and facilitate entire process of collaborative action.

MISSION OBJECTIVES AND FUNCTIONS

5.32. Articulate a vision and framework to meet India's VET needs:

- Assess skill deficits sector wise and region wise and meet the gaps by planned action in a finite time frame.
- Orchestrate Public Sector/Private Sector Initiatives in a framework of a collaborative action.
- Realign and reposition existing public sector infrastructure ITIs, polytechnics and VET in school to get into PPP mode and to smoothen their transition into institutions managed and run by private enterprise or industry associations. Give them functional and governance autonomy.
- Establish a 'Credible accreditation system' and a 'guidance framework' for all accrediting agencies, set up by various ministries and or by industry associations. Get them to move progressively away from regulation to performance measurement and rating/ranking of institutions. Rate institutions on standardized outcomes, for example, percentage graduates placed, pre and post course wage differentials, dropout rates, etc.
- Encourage and support industry associations and other specialized bodies/councils and private enterprise to create their own sectoral skill development plans in 20 High Growth Sectors (Annexure 5.3.)
- Establish a 'National Skill Inventory' and another 'National Database for Skill Deficiency Mapping' on a national Web portal—for exchange of information between employers and employment seekers.
- Establish a Trainee Placement and Tracking System for effective evaluation and future policy planning.
- Reposition 'Employment Exchanges as Outreach points of the Mission' for storing and providing information on employment and skill development. Enable employment exchanges to function as career counseling centres.
- Enlarge the 50000 Skill Development Centres (SDCs) programme eventually into a 'Virtual Skill Development Resource Network' for Web-based learning.

MISSION STRATEGIES

5.33. The strategies of the Mission will be to bring about a paradigm change in the architecture of the existing VET System, by doing things differently.

- Encourage Ministries to expand existing Public Sector Skill Development infrastructure and its utilization by a factor of five. This will take the VET capacity from

3.1 million to 15 million. This will be sufficient to meet the Annual workforce accretion, which is of the order of 12.8 million. In fact, the surplus capacity could be used to train those in the existing labour force as only 2% thereof are skilled. This infrastructure should be shifted to private management over the next 2–3 years. States must be guided as incentivizer to manage this transition.

- Enlarge the coverage of skill spectrum from the existing level. Skill Development programmes should be delivered in modules of 6 weeks to 12 weeks; with an end of module examination/certification. For calibrating manual skills a 4–6 level certification system must be established based on increasing order of dexterity of the craftsman.
- Make a distinction between structural, interventional and last mile unemployability and correspondingly set up programmes for 24 months, 12 months and 6 months duration. Encourage ‘Finishing Schools’ to take care of last mile unemployability.
- Establish a National Qualifications Framework, which establishes equivalence and provides for horizontal mobility between various VET, Technical and Academic streams at more than one career points. Expand VET to cover more classes and move progressively from post matric to cover 9th class dropouts and then 7th class dropouts.
- Encourage ‘Accreditation Agencies’ in different domains to move away from regulation to performance measurement and rating and ranking of institutions.
- Encourage institutional autonomy coupled with self-regulation and stake-holder accountability. Institutions must have freedom of action in governance, as also on the financial management.
- For standard setting and curriculum setting, establish or notify at least one ‘standard setting/quality audit institution’ in each vertical domain.
- Move from a system of funding training institutes to funding the candidates. Institutional funding could be limited to an upfront capital grant. Recurring funding requirement could be met by appropriate disbursement to the institute at the end of successful certification. Candidates from SC/ST/ OBC/ Minorities/ BPL, etc. could be funded in two parts—
 - (i) Stipend (monthly) to be paid to trainee
 - (ii) Fee subsidization at the end of the programme to be given to the institute after placement.

5.34. The Mission will encompass the efforts of several ministries of the Central Government, State Governments

and the activity of the private arm, supported by the following institutions: (i) Prime Minister’s National Council on Skill Development, (ii) National Skill Development Coordination Board, and (iii) National Skill Development Corporation/Trust. The Central ministries which have skill development programmes will continue to be funded as at present. However the spectrum of skill development efforts will be reviewed periodically for policy directions by the Prime Minister’s Council on Skill Development. The Council will be supported by a National Skill Development Coordination Board, which will be charged with the coordination and harmonization of the governments’ initiatives for skill development spread across the seventeen Central ministries and State Governments with the initiatives of the National Skill Development Corporation/Trust. State governments will be encouraged to set up State-level Skill Development Missions. A non-profit National Skill Development Corporation may be set up as a Company under Section 25 of the Companies Act, and/or a National Skill Development Trust under the Societies Act may be set up, to encourage private sector arm of the Mission.

ACTION PLAN FOR COMPONENT— GOVERNMENT INITIATIVE IN PPP MODE

5.35. Over the years some 20 odd ministries have created an infrastructure for skill development. There are 1896 ITIs (under State Governments), 1244 Polytechnics, 669 Community Polytechnics, 9583 Secondary Schools with VET Stream and 3218 ITCs (in private sector). Besides Ministries of Rural Development (RD), MSME, Health, Tourism and several others have their own establishments. All these need to be restructured and repositioned in collaboration with private enterprises. Furthermore, new capacities are being created by the ministries. These need to be brought in PPP mode.

(i) ACTION PLAN FOR ITIs

Action: Ministry of Labour and Employment

- Complete Upgradation of 500 ITIs by investing Rs 2.0–3.5 crore in each into institutions of excellence.
- Upgrade remaining 1396 ITIs in PPP mode by providing interest free loan up to Rs 2.5 crore each.
- Facilitate 1000 new ITIs in under-served regions –to be set up in PPP mode so that largely unskilled workforce of these backward areas could acquire skills and mainstream with workforce in progressive regions.

- Set up 500 new ITIs—in Industrial Clusters/SEZs on a demand-led basis—also in PPP mode.
- Quadruple ITI capacity by encouraging them to run two shifts or more. Introduce short term modules in 2nd Shift.
- Intensive Faculty Training Programme
- MoUs with States and ITIs defining outcomes and reforms and imposing obligation to transfer autonomy to the PPP.

(ii) ACTION PLAN FOR POLYTECHNICS

Action: Ministry of Human Resources Development (HRD)

- Upgrade 400 government polytechnics.
- Set up 125 new polytechnics in PPP mode in hitherto unserved districts.
- Run all polytechnics in two shifts to double the capacity utilization.
- Encourage much larger initiative in private sector since the demand for junior engineers is enormous and absorption and placements are nearly guaranteed.
- State governments may be encouraged to let their engineering colleges start polytechnics in evening shift to turnout junior engineers.

(iii) ACTION PLAN FOR VOCATIONAL EDUCATION

Action: Ministry of HRD

- Expand VE from 9500 senior secondary schools to 20000 schools. Intake capacity to go up from 1.0 million to 2.5 million
- All VE schools must get into partnership with employers, for providing faculty/trainers, internship, advice on curriculum setting, in skill testing and certification, etc.
- Progressively move vocational education from an unviable 2-year stream, commencing after Class 10, to a stream that captures 9th Class dropouts and later on it should commence from Class 7, capturing 7th Class dropouts. Give emphasis to last mile employability related soft skills—viz., English language skills, quantitative skills, computer literacy, spreadsheet, word processing, computer graphics, presentation skills, behavioral and interpersonal skills, etc.

(IV) ACTION PLAN FOR RUDSETIS

Action: Ministry of Rural Development

- Set up 600 RUDSETIS—one in each district
 - State governments to provide land

- GoI to meet 75% of capital cost
- Banks to meet 25% of capital cost plus provide the following handholding services:-
 - i. Project consultancy and business counseling
 - ii. Incubation Assistance
 - iii. Marketing
 - iv. Sourcing of Credit and Raw Material Supply.
- Focus on Entrepreneurship Development Programmes.
- Link RUDSETIS to EDI of MSME.

(v) ACTION PLAN FOR SETTING UP A VIRTUAL SKILL DEVELOPMENT RESOURCE NETWORK LINKING 50000 SKILL DEVELOPMENT CENTRES (SDCs)

Action: DIT/ MSME/ MRD/ ARI/ Ministry of Textiles etc.

- It is proposed to set up 50000 SDCs to train approximately 200 persons per centre, i.e., 10 million people per year to take skill development to the doorstep of rural populations. Location could be chosen from the following:-
 - One lakh Common Service Centres (CSCs) set up by Ministry of Telecom and IT.
 - 108000 secondary schools being given IT support.
 - Over 147000 rural post offices or Panchayat offices per 6000 Block Headquarters.
- SDC to deliver training capsules of 8–12 week duration with an end of the course certification system. Instruction material to be provided on CD ROMS with 80–120 hours of computer time, 20% of which will be online, rest offline
- Training material will be created by participating ministries/enterprises/industry associations with help of NASSCOM.
- Mentor Groups for tutorial support in online interactive mode will be provided by service-providers engaged by industry associations.
- End of the programme toolkits will be provided by industry associations/State Governments.
- Employment *Melas* at the end of programmes to help unplaced trainees to get placed.

ACTION PLAN FOR COMPONENT II—PRIVATE SECTOR INITIATIVES

5.36. Twenty high growth sectors of industries and services have been identified which have the ability to provide expanded employment. The Mission, in its private arm, will encompass the efforts of industry associations of these sectors to identify and quantify skill deficiencies in their respective sectors and envision the sectoral plan to meet their growing skill needs. The

corporation/trust will be a PPP on skill development conceived as a non-profit entity. It will make periodic as well as an annual report of its plans and activities and put them in the public domain. The National Skill Development Corporation or the National Skill Development Trust, as the case may be, will identify areas where support and supplementation will be required from the government. In respect of each of these, the respective industry association or group of industry leaders will articulate the sectoral vision for the sectoral Skill Development Initiative. The corporation/trust will refine and validate this vision and ensure complementarity between private initiative and government action, in the light of policy directives from the Prime Minister's Council and the operational guidelines of the Coordination Board.

5.37. The Mission will engage with ten high growth sectors on manufacturing side and an equal number on services side. The Mission's dialogue with private sector industry will be focused on—(i) automobile and auto components (ii) electronics hardware (iii) textiles and garments (iv) leather and leather goods (v) chemicals and pharmaceuticals (vi) gem and jewellery (vii) building and construction (viii) food processing (ix) handlooms and handicrafts (x) building hardware and home furnishings. The Apex Industry Association in each of these sectors will evolve the Skill Development Vision & Plan for their respective sector. The following are some examples of how sector-specific initiatives might work:

- Society of Indian Automobile Manufacturers/Automobile Component Manufacturers Association of India will engage with the Mission to enable India's Automobile and Auto-components Industry to scale up by 2015–16 from current turnover of US\$ 45 billion to US\$ 145 billion and current employment of 10.5 million to target employment of 25.0 million. This industry is very skill-intensive (with 90% manpower as Skilled). They will require 6.25 million technical and managerial personnel and the training requirements of these will be in Manufacturing Management, SQC, TQM, 6-Sigma, Statistical Process Control, Kaizen practices, Lean Manufacturing & Breakthrough Management. The Skill-sets required will be at strategic and conceptual skills level and will, therefore, require retrofitting of special courses in IITs/IIMs and other Engineering and Management Institutes—courses like Infotronics/Mechatronics. For their shop-floor and other skilled personnel training modules imparting Computer Aided Design (CAD)/Computer

Aided Manufacturing (CAM)/CNC Skills, skills relating to low cost automation and process improvement will be required. It may be necessary to set up one 'National Centre for Quality Management' in Automotive sector. It may be necessary to set up a network of institutes for motor mechanics. Another useful step could be two-way sabbaticals between Industry Personnel and Personnel of Training Institutes.

- Electronics Hardware Industry is growing at the rate of 25.30% and expects to scale up by 2015–16, from current turn over of US\$ 30 bn to US\$ 320 bn, with employment increasing from 1.5 million direct and 3.0 million indirect to 7.14 million direct and 14.00 million indirect. The industry requires 5% graduate engineers, 15% diploma-holders, 50% skilled workers and 30% semi skilled. The range of skills required will vary from chip manufacturer and VLSI design, to embedded software, to mere mechanical assembly line operations.
- Similarly Textile/Apparel and Garments Industry expects to scale up by 2015–16, from current turnover of US\$ 47.0 billion to the targeted US\$ 115.0 billion, raising the employment from current workforce level of 35 million to 41.5 million. Of the 6.5 million accretion is workforce only 20% will be unskilled, 50% will be semi skilled, 20% will have ITI certificates and 10% will be Management and Technical graduates. This industry alone could over next five years take over a very large number of ITIs.

5.38. The three examples described above illustrate how individual sectors may deal their specific requirements with strategies and plan of action which will be vastly different from each other. For this reason no generic template is being suggested and the vision/strategy and plan will have to be crafted within the overall policy framework.

5.39. On the services side ten High Growth Sectors have been identified separately, viz. (i) ITs or software services sector (ii) ITES—BPO services, (iii) tourism hospitality and travel trade (iv) transportation/logistics/warehousing and packaging (v) organized retail (vi) real estate services (vii) media, entertainment, broadcasting, content creation, animation (viii) healthcare services (ix) banking/insurance & finance (x) education/skill development services. Mission will engage with each of these sectors. Industry association and workout the appropriate Sectoral Skill Development Plans, strategies and deliverables.

5.40. The National Skill Development Mission's orchestration of private sector initiatives in concert with

government action could give different results in different sectors, such as:

- Setting up of a domain-specific Apex Skill Development Institute for:
 - Domain specific Skill Development need assessment
 - Performance Rating of Institutions/Service Providers
 - Domain Standard setting and Quality benchmarking
 - Curriculum setting
 - Framework setting for end of programme testing and certification
 - Running special Skill Development Programmes in niche areas requiring superior skills
- Setting up of Regional Institutes/ Workshops/Tool-rooms and Online Mentoring Groups
- Retrofitting special courses in IITs/ IIMs/ NITs and other Engineering and Management Programmes or offering them as an elective
- Providing last mile employability training to engineering/management/ or other graduates from lesser known colleges.
- Establishing two-way Sabbatical Exchange Programme between Industry and Faculty of University/Colleges/VET schools/ ITIs, etc.
- Collaborative action for faculty development
- Collaborative action for online ‘Skill Development-content-creation’
- Private Management takeover of Public sector institutions viz. ITIs, polytechnics, vocational schools, etc.

PUBLIC–PRIVATE PARTNERSHIP (PPP)

5.41. PPP Mode will be the major vehicle for absorbing public expenditure in skill development in the Eleventh Five Year Plan. Apart from the financial contribution from the government, it is necessary to create an Enabling Environment for Private Investment in Skill Training. This requires the prescription of a National framework for domain specific standards and common principles such as (i) trainer not to be the examiner/certifier, (ii) certifier not to be the accreditation agency and (iii) a strict separation of all the three as the basic feature of the mechanism. The facilities for career tracking and placement—biometric smart card based ID, and a National database for location wise availability and shortage of skilled personnel will be established. The system should provide the options of multiple entry and exit points and total mobility between vocational, general

and technical streams. In order to take on board the vulnerable sections, provision for fee vouchers for BPL/ SC/ST/OBC/Minority would also be made available. To overcome the regional disparities due to diverse socio-economic factors, VGF approach would be adopted to address regional imbalances through PPP.

MISSION STRUCTURE

5.42. The Skill Development Mission has to be conceived in a manner which recognizes that many Ministries are involved and also many separate Industry and service sectors. The Structure consists of Prime Minister’s National Council on Skill Development for apex level policy directions, a National Skill Development Coordination Board, and a National Skill Development Corporation/Trust. The Central Ministries with Skill Development programmes will operate in a Mission mode and the State governments will gear their Departments/Agencies into a State Skill Development Mission. The private sector, especially the twenty high growth sectors will actively participate as the private arm of the Mission. The composition of the Prime Minister’s Council on Skill Development and National Skill Development Coordination Board are as described below.

5.43. **Prime Minister’s National Council on Skill Development:** The Council will comprise of Prime Minister as Chairman, Minister of Finance, HRD, Industries, Rural Development, Labour & Employment and Housing & Urban Poverty Alleviation, Deputy Chairman, Planning Commission, Chairperson, National Manufacturing Competitive Council, Chairperson of the National Skill Development Corporation, six experts in the area of Skill Development as Members and Pr. Secretary to Prime Minister as Member Secretary.

5.44. **National Skill Development Coordination Board:** This Committee will comprise of Deputy Chairman, Planning Commission as Chairman, Chairperson/Chief Executive Officer of the National Skill Development Corporation, Secretaries of Ministries of Finance, Human Resource Development, Labour and Employment, Rural Development, Housing and Employment, Rural Development, Housing & Urban Poverty Alleviation. Secretaries of Four States by rotation, for a period of two years, three Distinguished Academicians/Subject Area Specialists as Members and Secretary, Planning Commission as the Member Secretary.

Ministries of the Central Government having Skill Development Programmes

5.45. Line ministries/departments will continue to be responsible for the implementation of the skill development programmes, appropriately modifying them in line with the policies and strategies as decided by the Apex Committee into the Mission Mode.

5.46 Action by State Governments

- Transform Employment Exchanges to act as Career Counseling Centre
- Upgrade and strengthen State Council of Vocational Training
- Distance government and allow greater institutional autonomy. Maintain an arm's length relationship. Effectively delegate powers to local management of institutes
- Modernize the existing ITIs, etc. with better funding and enhancing the effectiveness of on-going programmes
- To cope with enhanced activities, existing vacancies in all training institutes must be filled
- Revamp the Institute Management Committee and ensure genuine PPP
- Draw up plan for strengthening existing infrastructure (short-term, medium-term and long-term)
- Personnel Policy to ensure accountability and outcomes.

State Skill Development Missions

5.47 The State Governments may establish State-level missions to gear skill development activities in the Mission mode, with appropriate structures. Departments of the State Governments having skill development programmes will be required to reorient their skill development strategies and programmes in line with the central objectives.

The Non-profit National Skill Development Corporation/Trust

5.48. The National Skill Development Corporation will be set up as a non-profit company under the Companies

Act with appropriate governance structure (board of directors being drawn from the outstanding professionals/experts). The head of the corporation will be a person of eminence/reputed professional in the field of Skill Development. The Chairperson may also be the Chief Executive Officer of the Corporation, in which case S/he shall be known as the Chairperson-cum-Chief Executive Officer. The National Skill Development Corporation will be set up with as Government Equity with a view to obtaining about Rs 15000 crore as capital from governments, the public and private sector, and bilateral and multilateral sources for the promotion of skill development. The Corporation will be a public private partnership on skill development conceived as a non-profit Corporation. It will make periodic as well as an annual report of its plans and activities and put them in the public domain. There may also be a National Skill Development Trust which can receive funds to be managed by the National Skill Development Corporation. The corporation/trust will be a flexible institutional arrangement to be able to deliver on jobs required by the market, related to its skill deficit, through training programmes operated or partnered by it.

CONCLUSION

5.49. The initiatives described above involving both the States and the Centre, often with private partnership will lead to the establishment of a credible, trustworthy and reliable training, testing and certification edifice linked to global standards and responsive to the needs of the ultimate consumers of skill. With an estimated 58.6 million new jobs in the domestic economy and about 45 million jobs in the international economy inviting skilled personnel for quality jobs beckoning the Indian youth, the government and private sector will act in a concerted manner so that these opportunities materialize and operate as an employability guarantee.

ANNEXURE 5.1.1
Current Attendance Rates in Educational Institutions per 1000 Persons of Different Age Groups during 2004–05

Category of persons	Age groups					
	5–14	15–19	20–24	25–29	5–29	0–29
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Rural						
Male	835	471	114	16	532	450
Female	767	333	45	11	436	370
Person	803	407	79	13	485	412
Urban						
Male	890	593	232	40	541	484
Female	879	571	164	21	519	465
Person	885	583	200	31	530	475
Rural + Urban						
Male	847	504	151	23	534	459
Female	792	396	77	14	456	393
Person	821	454	114	18	497	427

Source: NSS Report 517, Table 6.

ANNEXURE 5.1.2
Labour Force Participation Rates by Age, Area, and Sex, during 2004–05 (CDS)

Age Group	Rural Areas		Urban Areas	
	male	Female	male	female
(1)	(2)	(3)	(4)	(5)
5–9	2	2	3	2
10–14	58	52	50	28
15–19	486	231	370	116
20–24	853	295	755	216
25–29	950	365	944	221
30–34	959	413	979	256
35–39	963	467	975	288
40–44	954	457	973	266
45–49	949	459	962	229
50–54	928	405	926	225
55–59	890	376	802	190
60+	599	186	348	84
All age	531	237	561	150

Source: Report No. 515 (61/10/1)—NSS 61st Round (July 2004–June 2005).

ANNEXURE 5.1.3
Per 1000 Distribution of Persons in the Age Group 15–29 Years by Status of Vocational Training Received or being Received—2004–05

category of person	receiving formal vocational training	received vocational training			all (col. 3+4+5)	Received/receiving training (col. 2+6)	no vocational training	n.r.	total
		formal	Non-formal hereditary	others					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Rural									
Male	10	15	58	37	110	120	871	8	1000
Female	5	13	32	30	74	79	910	11	1000
Person	8	14	45	34	92	100	890	10	1000
Urban									
Male	33	52	31	61	144	178	817	5	1000
Female	19	45	17	32	12	113	881	6	1000
Person	27	49	25	48	121	148	847	6	1000
Rural + Urban									
Male	17	26	50	44	120	137	855	7	1000
Female	9	21	28	31	80	88	902	10	1000
Person	13	24	39	38	100	113	878	9	1000

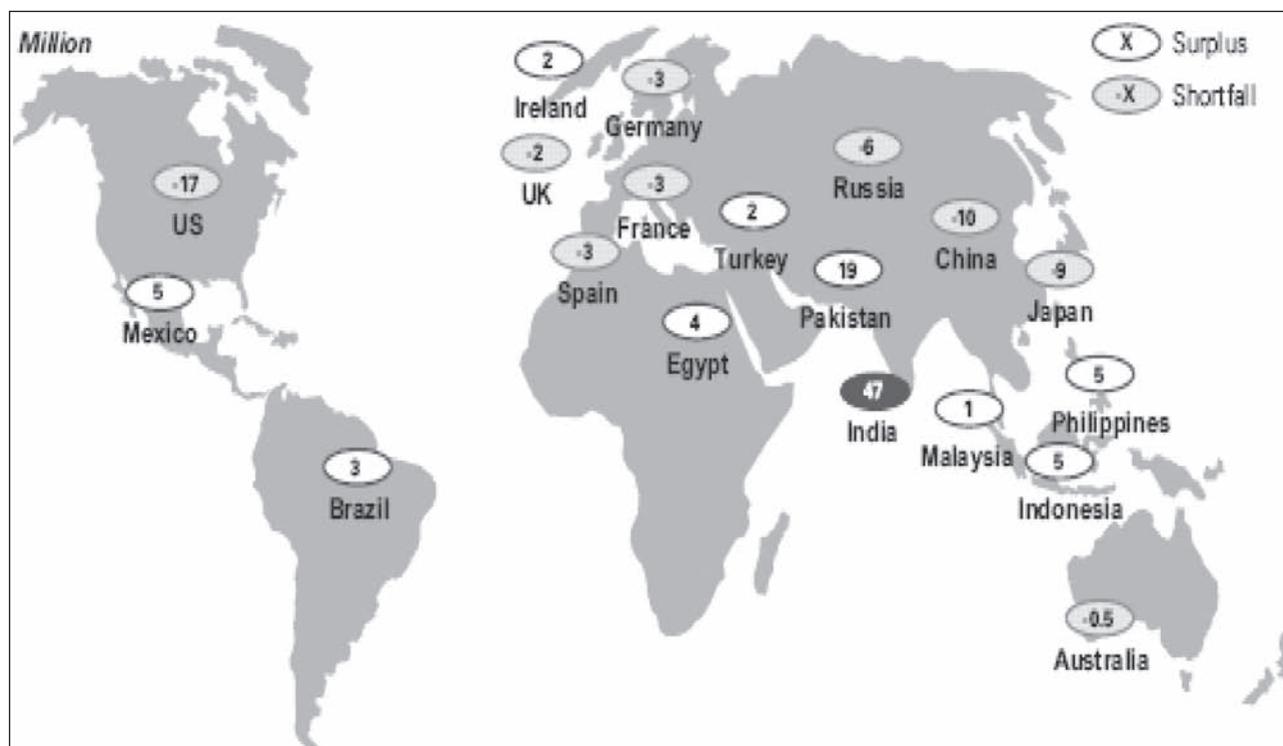
Source: NSS Report 517, Table 10

ANNEXURE 5.1.4
Number per 1000 Persons of Different Age Groups who Received Formal Vocational Training—2004–05

Category of Persons	Age Group				
	15–19	20–24	15–24	25–29	15–29
(1)	(2)	(3)	(4)	(5)	(6)
Rural					
Male	5	21	12	23	15
Female	7	15	11	16	13
Persons	6	18	11	19	14
Urban					
Male	19	72	45	69	52
Female	18	63	40	55	45
Persons	18	67	43	63	49
Rural + Urban					
Male	9	36	21	37	26
Female	10	28	19	26	21
Persons	9	32	20	32	24

Source: NSS Report 517, Table 10.

ANNEXURE 5.2
Potential Labour Surplus/Shortage in Working Age Group across the World (2020)



Note: Working population is defined at the 15–59 years age group. Ratio of working population to total population is assumed to be constant. Labor number are based on assumptions of no interventions by respective governments.

Source: US Census Bureau. BCG. 2002–2003.

ANNEXURE 5.3
List of Twenty High Growth Sectors

- | | |
|--|--|
| 1. Automobile and Auto-components | 12. ITES or BPO |
| 2. Banking/Insurance and Finance Services | 13. ITS or Software Services/Products |
| 3. Building and Construction Industry | 14. Leather and Leather goods |
| 4. Chemicals and Pharmaceuticals | 15. Media, Entertainment, Broadcasting, Content Creation and Animation |
| 5. Construction Materials/Building Hardware etc. | 16. Organised Retail |
| 6. Educational and Skill Development Services | 17. Real Estate Services |
| 7. Electronics Hardware | 18. Textiles, Apparel and Garments |
| 8. Food Processing/Cold Chain/Refrigeration | 19. Tourism, Hospitality and Travel Trade |
| 9. Furniture and Furnishings | 20. Transportation Logistics, Warehousing and Packaging etc. |
| 10. Gem and Jewellery | |
| 11. Health Care Services | |