Using Technological Interface in Vocational Education for Women in India

Theme: Skill Development
Sub Theme**: Skills Development for National Development**

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INTRODUCTION

Skills and knowledge are the engines of economic growth and social development of any country. Countries with higher and better levels of knowledge and skills respond more effectively and promptly to challenges and opportunities of globalisation. India is in transition to a knowledge based economy and its competitive edge will be determined by the abilities of its people to create, share and use knowledge more effectively. This transition will require India to develop workers into knowledge workers who will be more flexible, analytical, adaptable and multi skilled. In the new knowledge economy the skill sets will include professional, managerial, operational, behavioural, inter personal and inter functional skills. To achieve this goals, India needs flexible education and training system that will provide the foundation for learning, secondary and tertiary education and to develop required competencies as means of achieving lifelong learning (Goel, 2009). It is further substantiated by the Human Resource Development Minister, Govt. of India, Mr. Kapil Sibal, according to him, in the next 10 years developed nations would turn to India for a young workforce. According to 2009 estimates only 5.3% of India's population is older than 65, and 63% are aged between 15 and 65 comprising the country's working population. In contrast, populations in many developed countries are ageing, and the proportion of their workforce to the retired is decreasing - largely a consequence of declining birth rates and improving health care. The US Census Bureau has projected the European Union will see a 14% decrease in its workforce by 2030 (Mishra, 2010).

Skill Deficiency in India

As per National Skill Development Policy, Government of India, according to the 2007-08 Economic Survey, 64.8% of India"s population would be in the working age of 15-64 years in 2026 up from 62.9% in 2006. Other projections also indicate emergence of young India with 800 million in the productive age group by 2015 compared to 600 million in China.

In a study conducted by Confederation of Indian Industry and Boston Consulting Group (CII & BCG) India has a large population base of 1.14 billion with demographic shift in favor of working age group (15-59 years) while the overall population is projected to grow at 1.4% over the next five years the working age is expected to grow at 2.15%. If the present trend continues, 109 million persons will attain working age during the period of 2007-2012. The net addition to workforce is, therefore, expected to grow to 89 million of which around 13 million are likely to be graduates/post graduates and about 57 million are likely to be school drop outs or illiterates. A significant share of incremental demand is likely to be for skilled labour – graduates and vocationally trained people are expected to account for 23% of incremental demand by 2012. The **s**tudy further estimates that India is likely to increase deficit of 5.25 million employable graduates and vocationally trained workforce by 2012. Another study by Boston Consulting Group for PHD Chamber of Commerce & Industry has estimated that by 2020 the world will have shortage of 47 million working people but India will have a surplus of 56 million people. In order to reap the benefits of demographic dividend India will have to, therefore, equip this manpower to meet the requirement of skill talent across geographies

The Confederation of Indian Industries (CII) has conducted study in select sectors of economy in following States:-

Punjab – Textiles, Auto/Auto Components, Light Engineering, Food Processing, Real Estate and Construction, Retail and Location based entertainment. **Tamil Nadu –** Textiles, construction, auto/auto components, Light Engineering, IT/ITES, Leather. **Andhra Pradesh –** Construction, Textiles, Tourism, Healthcare, Engineering, IT/ITES, Pharma, Biotech, Paper, Minerals. **J&K –** Handicrafts, Hospitality, Agro-processing, Construction, ITES, Repair Servicing.

On the basis of above study CII has projected the following requirement of skilled workers at different levels by 2015:

Table 1: Skill Development and Sectors

SN	Sector	Demand (in Mn)	Skill Development Break-up
1	**Auto**	**2-2.5**	Specialised skills – 5% Skill category level II – 25% Skill category level I – 30% Minimal education skillable – 40%
2	**Construction**	**15**	Specialised skills – 2% Skill category level II – 11% Skill category level I – 12% Minimal education skillable – 75%
3	**Retail**	**4-5**	Specialised skills – 6-8% Skill category level II – 32-43% Skill category level I – 45-50% Minimal education skillable – 10-15%
4	**Healthcare**	**4-4.5**	Specialised skills – 10% Skill category level II – 40% Skill category level I – 16% Minimal education skillable – 34%
5	**Banking & Financial Services**	**4.5-5**	Specialised skills – 5% Skill category level II – 15% Skill category level I – 65% Minimal education skillable – 15%
6	**Creative Industry**	**0.5-0.8**	Specialised skills – 5% Skill category level II – 20% Skill category level I – 65% Minimal education skillable – 10%
7	**Logistics**	**51 (drivers)**	Warehouse Managers: 8000
	Total	**81-83.8Mn**	

Source: National Skill Development Policy, March 2009.

CII has further projected Incremental Human Resource Requirement till 2022, sector wise details of which are summarised in the table 2 below:

Table 2. Incremental Human Resources Requirement

Sectors	Incremental Human Resources Requirement
Mines and Minerals	1,754,881
Construction	55,199,568
Engineering	1,813,790
Banking and Insurance	3,947,139
Drugs and Pharma	1,383,721
Biotech	1,209,489
Healthcare	20,684,530
Textiles	86,545,390
IT and ITeS	14,806,299
Tourism	12,478,386
Agro and Food Processing	169,782
Paper	57,976
Chemicals and Fertilizers	1,391,948
Total	**201,442,899**

Source: National Skill Development Policy, March 2009.

Hence total requirement of skilled work force by 2022 will be about 300Mn.

NATIONAL POLICY ON SKILL DEVELOPMEN

To have broad framework towards sustainable development of trained and skill enriched human resources in India, a National Policy on Skill Development has been formulated by the Ministry of Labour & Employment. The objective is to create a workforce empowered with improved skills, knowledge and internationally recognized qualifications to gain access to decent employment and ensure India's competitiveness in the dynamic Global Labour market. It aims at increase in productivity of workforce both in the organized and the unorganized sectors, seeking increased participation of youth, women, disabled and other disadvantaged sections and to synergize efforts of various sectors and reform the present system.

At present the capacity of skill development in India is around 3.1 million persons per year. The XI Five Year Plan envisions an increase in that capacity to 15 million annually. India has target of creating 500 million skilled workers by 2022. Thus, there is a need for increasing capacity and capability of skill development programs. Skill development initiatives support employment generation, economic growth and social development process. Skill development policy will be an integral part of comprehensive economic, lobour and social policies and programmes. A framework for better coordination between various stakeholders – Ministries, States, Industry etc. will be established. It will promote excellence and will meet the requirements of knowledge economy

Mission

National Skill Development Initiative will empower all individuals through improved skills, knowledge, nationally and internationally recognised qualifications to gain access to decent employment and ensure India's competitiveness in the global market**.**

Aims

The aim of skill development in the country is to support achieving rapid and inclusive growth through:

• Enhancing individuals' employability (wage/ self employment) and ability to adapt to changing technologies and labour market demands.
• Improving productivity and living standards of the people.
• Strengthening competitiveness of the country.
• Attracting investment in skill development.

Objectives

The objectives of the national policy on skill development are to:

• Create opportunities for all to acquire skills throughout life, and especially for youth, Women and disadvantaged groups.
• Promote commitment by all stakeholders to own skill development initiatives.
• Develop a high-quality skilled workforce/ entrepreneur relevant to current and emerging employment market needs.
• Enable the establishment of flexible delivery mechanisms that respond to the characteristics of a wide range of needs of stakeholders.
• Enable effective coordination between different ministries, the centre and the states and public and private providers.

Scope

The coverage of the national policy on skill development includes the following:

• Institution-based skill development including ITIs/ITCs/Vocational schools/technical schools/ polytechnics/ professional colleges etc.
• Learning initiatives of sectoral skill development organised by different ministries/departments.
• Formal and informal apprenticeships and other types of training enterprises.
• Training for self employment/entrepreneurial development.
• Adult learning, retraining of retired or retiring employees and lifelong learning
• Non-formal training including training by civic society organisations.
• E-learning, web-based learning and distance learning.

Skill Development Programs and Training Institutions for Vocational Education

With the objective of enhancing the opportunities for skill development, ministries and other public and private institutions are offering numerous programmes/ courses and launching varied schemes for the benefit of target un skilled population. A summary of all such initiatives is given below in table 3.

Table 3. Training Programmes/ Schemes for Vocational Education and Skill development

SN	**Ministry/ Department**	**Schemes/ Programmes/ Institutions having provision for Vocational Education and Training programme**	**Target Group**	**Duration of Training (long-term / Short-term)**
1	Agriculture	Training in Agricultural Extension (21 training centres), Training in use of Agricultural Implements & machinery, Soil Conservation Training Centre, LFQC&TI, NPPTI, Cooperative Education and Training. Under the University stream, various under-graduate, post-graduate and Ph.D. courses are offered (DARE). There is one Central Agricultural University, thirty-one State Agricultural Universities (SAUs) and four National Institutes of Indian Council of Agricultural Research having the status of Deemed University. ICAR also arranges need based training programmes in any of State Agricultural University or ICAR Institutes in new and emerging areas. CIFNET – Regular courses and special training courses CIFNET – Refresher courses	Person engaged in Agricultural institutions and support services, members of cooperatives and Farmers. Under KVK, 550/589 districts are covered. Students with Qualifications as usual under University stream of education. Students with Qualifications as usual. Individual scientists or groups of scientists. 10th Standard students Lecturers/in-service	Short term courses U.G. courses – 4 years, P.G. courses – 2 years and Ph.D. as usual. As usual. One week to three months (or longer duration, as fixed). 6-18 months 4 weeks
2	Food Processing Industries	Grants were provided to NGOs for setting up of 326 Food Processing & Training Centres (FPTCs) during 1992-93 to 2000-01. Institutions like Central Food Technology Research Institute, Paddy Processing Research Centre, PHTC, Council of Entrepreneurial Development Programme (EDP) are also running training courses. Person power	SC, ST and other weaker sections of society Mainly persons in Food Processing Industry Open Open Candidates aspiring to be Managers, technician/ technologists, and entrepreneurs	Short term Short term Short term AICTE approved diploma/degree courses" durations as usual (Long-term)

		development in rural areas (FBTC Scheme) Entrepreneurship Development Programme Programmes for development of human resources in food processing, testing, training, quality management etc.		
3	Health and Family Welfare	Basic Training of multipurpose health worker (Female & Male) ⛀ *478 ANM/ MPW(F) Training Centres* ⛀ *28 HFWTC & 30 Basic MPWA(M) Schools* Promotional training of Female Health Assistant in 42 training centres. Training is also provided by Safdarjung Hospital, St. John Ambulance, NTCP, NPCB, NMHP, NACP, INC, CBHI, CLTRI, PWTRC, ECH etc.	-Educated youth with minimum 10th pass - Persons working in Health & family Welfare programme	12 to 18 months Short term
4	***Heavy Industries & Public Enterprises***	Counselling, Retraining and Redeployment of Rationalized Workers of CPSEs (Formerly NRF)	Workers who opt for voluntary retirement, rendered surplus or retrenched from CPSEs	Short term courses
5	***Human Resource Development***	Vocationalisation of Secondary Education *(6800 schools covered)* Polytechnics (1244) + Institutions for diploma in pharmacy (415), hotel management (63), architecture (25) Community Polytechnic Scheme (675 CPs) Jan Shikshan Sansthan (157 Vocational Training Centres run by NGOs offering more than 250 courses) *Support For Distance Education & Web Based Learning (NPTEL)* National Institute of Open Schooling - Distance Vocational Education Programmes	Student having passed 10th class 10th pass Poorer sections of society in both rural and urban areas Disadvantaged groups of adults. Priority is given to adult neo-literates/ semi-literates, SC and ST, women/girls, oppressed, migrants, slum/ pavement dwellers and working children Engineering and physical sciences under-graduates/post graduates in the country; all teachers/faculties in science and engineering	2 years 3 years diploma (3 to 6 months) Need Based (1- 4 weeks) (Designing course material – time bound project) 6 months to 2 years One year Faculty development through short-term crash programmes and long-term programmes

		[Practical training through Accredited Vocational Institutes (AVIs)] Apprenticeship Training for student of +2 Vocational stream National Programme on Earthquake Engineering Education (NPEEE)	Universities in India School leavers with 5th, 7th,,8th and 10th pass Students passing out of +2 Vocational stream Recognized engineering colleges/ polytechnics and schools of architecture having related academic degree or diploma programme	
6	***Information Technology***	DOEACC - „O" level CEDTI	Students or working persons with 10+2 pass It conducts courses in the field of Electronics, Telecommunications, IT, Process Control & Instrumentation	Flexible duration for passing examination Short term courses
7	***Labour & Employment (DGET)***	Craftsmen Training Scheme (CTS) (6834 ITI/ITCs) Apprenticeship Training Scheme (ATS) *(23,800 establishments)* Modular Employable Skills(MES) Crafts Instructor Training Scheme (CITS) (*6 Institutes)* Advanced Vocational Training Scheme and Hi-tech Training Scheme *(65 centres) Supervisory Training (2 institutes) Women Training Institutes(11 institutes) Central Staff Training and Research Institute* Model Training Institutes and Model Industrial Training Institutes.	School leavers with 8th, 10th and 12th pass School leavers with 8th, 10th and 12th pass or National Trade Certificate Holder School drop outs and unorganized sector workers Instructors of ITIs/ITCs Industrial Workers/ Technicians Supervisors from Industry Women (School leavers, Instructors and others) Training Executives and Principals School leavers with 8th, 10th and 12th pass	Six months to Three years Six months to 4 years Short term(60 hrs to 1000 hrs) 1 year Short Term courses Long and short term Long and short term Short Term One to Three years
8	***Rural Development***	National Institute of Rural Development (NIRD) Conducts about 150 programmes Swarnjayanti Gram Swarozgar Yojana (SGSY) RUDSETIS train about 1.25 Lakh per annum Skill development of BPL @50000 per annum	Practicising Manager in rural development Focus is on the vulnerable groups among the rural poor. SC/ STs would account for a minimum of 50%, women for 20% and disabled for 3% of the total swarozgaris during a year.	Short term Courses Need based short term Short term Short term

9	***MSME [Small Industries Development Organisation (SIDO)]***	Entrepreneurship Development Programme, Skill Development Programme (SDP), Management Development Programme It has 72 Institutes/ bodies SSSI – 30 Br. SSSI- 28 RTC – 4 Tool Rooms – 8 PPDC – 2	Workers Educated unemployed youth Entrepreneurs	Both short term and long term
10	***Khadi & Village Industries Commission under Ministry of MSME***	51 Training Centres run 35 types of programmes	Unemployed rural youth, In-job Artisans/Supervisors working in KVI instts, Prospective Entrepreneurs, Beneficiaries of different Government. Schemes desirous of undertaking KVI activities.	2 months to 12 months
11	***Social Justice & Empowerment***	National Institute of Mentally Handicapped, National Institute for the Orthopaedically Handicapped, Institute for Physically Handicapped, National Institute for the Hearing Handicapped, National Handicapped Finance and Development Corporation, National Scheme of Liberation and Rehabilitation of Scavengers and their Dependents, National Scheduled Castes and Scheduled Tribes Finance and Development Corporation, Rehabilitation Council of India	Disadvantaged and marginalized sections of the society viz., SC, Minorities, B.C., Persons with disabilities, Aged Persons, Street children and victims of Drug Abuse etc.	Short term training upto six months duration Orientation Programmes upto one week duration
12	Textiles	Decentralized Training Programme, 24 Weavers" Service Centres, Cooperative Training, 13 Power loom Centres, Indian Jute Industries Research	Skill upgradation of Workers in textile industry Workers in Garment Industry	Mainly short term (15 days to 3 months). Some courses under

		Association, Central Wool Development Board, Central Silk Board, Training Centres for Handicrafts, North – eastern Handicrafts and Handlooms development Corporation Apparel Export Promotion Council (AEPC)		Handicrafts are of 1 year duration. 3 months to 1 year
13	Tourism	15 Food Craft Institutes under State Governments	10th Pass	6 months – 1 year
14	Tribal Affairs	Vocational Training Centres (VTC) in Tribal Areas. (100% central assistance is given to State/ UT / NGO for setting up VTs.	Unemployed Tribal youth (Each person is given training in two trades)	6 months in VTC and 6 months with master craftsmen
15	***Urban Development & Poverty alleviation***	Urban Self Employment Programme under Swarna Jayanti Shahari Rozgar Yojana (SJSRY)	Urban Unemployed or underemployed poor below poverty line	Short term (2-6 months) subject to minimum 300 hours
16	***HUDCO & others in Construction sector under Ministry of Urban Development & Planning Commission***	640 Building Centres (HUDCO) Company run schools (NBCC HCC, L&T, ECC etc.) & association etc. Construction Industry Development Council (CIDC) & others	Persons engaged in Construction Industry Worker& Supervisor having qualification of Vth to XIIth Standard	Short term courses Short term courses 1 month to 6 months
17	***Women & Child Development***	Support to Training and Employment Programme for Women (STEP) Swalamban (previously NORAD) Training in home scale preservation of fruits and vegetables*,(by Community Food and Nutrition Extension Units (CFNEUs)* Central Social Welfare Board (programmes are organised by voluntary organisations) Women Empowerment Programme in collaboration with IGNOU (Training programme on "Empowering women through SHG") Kishori Shakti Yojana	To provide updated skills and new knowledge to poor and assetless women traditional sectors To train poor women mostly in non-traditional trades Housewives and adolescent girls with a view to promote preservation and consumption of fruits and vegetables which provide much needed micronutrients, as well as to provide necessary skills which could be useful for income generation purposes. To train women in marketable trades and also to	Short term courses Two weeks Minimum 60 days

		Other programmes like UDISHA, Training of Anganwadi Workers, NIPCCB, Rashtriya Mahila Kosh etc.	upgrade their skills for getting remunerative employment opportunities To organise women into effective Self Help Groups To train and equip adolescent girls to improve home based and vocational skills	

Source: National Skill Development Policy, March 2009.

A tabular presentation of training institutions, their annual capacity of training and projected number of trained persons by 2022 for different Ministries/ Departments / Organizations is given below. The targets are based on projected employment potential in the concerned sectors.

Table 4. Institutions and Projected number of Trained Persons

Sl/No	Ministry / Department/ Organisation	Present number of institutions	Present training capacity per annum (IN LAKH)	Projected number of trained persons by 2022 (IN LAKH)
1	National Skill Development Corporation	--	--	1500
2	Labour & Employment	33,000	12 .00	1000
3	Tourism	38	0.17	50
4	Textiles	277	0.15	100
5	Transport	1	0.02	300
6	Tribal Affairs	63	0. 06	
7	Rural Development (RUDSETI) and IL & FS	156	5.48	200
8	Women & Child Welfare	68	17.50	100
9	Agriculture	72	19.81	200
10	HRD Higher Education	10,000(Voc. schls)	19.60	500
	HRD Vocational Education	(Engg. Coll. 2297 Polytechnics 1675)	14.00	
11	Dept of Heavy Industry	*	*	100
12	Urban Development	34	0.013	150
13	Department of Information Technology	1000 (Affiliated centres) + 7 CDAC	1.37	100
14	Food Processing Industries	34	0.10	50
15	Construction Industry Development Council (under Planning Commission)	147	4.64	200
16	Health & Family Welfare	3802	1.35	100
17	Micro Small Medium Enterprise	356	2.92	150
18	Social Justice & Empowerment	Through NGOs & others		50
19	Overseas Indian Affairs	In partnership with MSME/stateGovernment/ CII/ NGO etc.	0.13	50
20	Finance-Insurance/Banking	*		100
22	Consumer Affairs	*		100
23	Chemicals & Fertilizers	6	0.19	50
24	Others (Power, Petroleum etc.)	NA		150
		Total	**99.46**	**5300**

i.e. 53 crore

Source: National Skill Development Policy, March 2009.

Table 5. Number of Government & Private ITIs/ITCs With Seating Capacities

Sl. No.	Name of State/UTs	Number of Govt. ITIs	Seating Capacity (Govt.)	Number of Pvt. ITCs	Seating Capacity (Pvt.)	Total ITIs/ITCs	Total Seating Capacity
1	CHANDIGARH	2	968	0	0	2	968
2	DELHI	16	11132	57	4140	73	15272
3	HARYANA	82	20824	85	9128	167	29952
4	HIMACHAL PRADESH	70	8260	82	7004	152	15264
5	JAMMU & KASHMIR	37	4087	1	110	38	4197
6	PUNJAB	94	19316	153	15008	247	34324
7	RAJASTHAN	114	13264	668	76671	782	89935
8	UTTAR PRADESH	300	31500	564	63886	864	95386
9	UTTRAKHAND	59	6395	29	2534	88	8929
SUB- TOTAL		774	115746	1639	178481	2413	294227
SOUTHERN REGION							
10	ANDHRA PRADESH	109	22510	506	97644	615	120154
11	KARNATAKA	150	25682	1046	78814	1196	104496
12	KERALA	36	15916	482	52890	518	68806
13	LAKSHDWEEP	1	96	0		1	96
14	PODUCHERRY	6	1352	9	508	15	1860
15	TAMIL NADU	60	21832	627	62590	687	84422
SUB-TOTAL		362	87388	2670	292446	3032	379834
EASTERN REGION							
16	ARUNACHAL PRADESH	5	512	0	0	5	512
17	A & N ISLAND	1	273	0	0	1	273
18	ASSAM	28	5696	3	80	31	5776
19	BIHAR	34	11433	225	32569	259	44002
20	JHARKHAND	20	4672	95	24232	115	28904
21	MANIPUR	7	540	0	0	7	540
22	MEGHALAYA	5	622	2	320	7	942
23	MIZORAM	1	294	0	0	1	294

24	NAGALAND	8	944	0	0	8	944
25	ORISSA	26	8464	495	84100	521	92564
26	SIKKIM	2	516	0	0	2	516
27	TRIPURA	8	944	0	0	8	944
28	WEST BENGAL	51	12700	22	1320	73	14020
SUB-TOTAL		196	47610	842	142621	1038	190231
WESTERN REGION							
29	CHATTISHGARH	87	10224	29	3376	116	13600
30	D & N HAVELI	1	228	0	0	1	228
31	DAMAN & DIU	2	388	0	0	2	388
32	GOA	10	3264	4	380	14	3644
33	GUJARAT	153	56172	350	20744	503	76916
34	MADHAYA PRADESH	160	24862	75	9954	235	34816
35	MAHARASHTRA	388	86124	297	35620	685	121744
SUB-TOTAL		801	181262	755	70074	1556	251336
GRAND TOTAL		2133	432006	5906	683622	8039	1115628

Source: DGET, Ministry of Labour, Govt. of India

ISSUES AND CHALLENGES IN SKILL DEVELOPMENT

According to the estimates of National Skill Development Policy, presently, skills base of the Indian economy is quite low as compared to other developed economies of the world. It is estimated based on NSSO data for 2004-05 that only 2% persons in the age group of 15-29 years have received formal vocational training and around 8% are reported to have received non-formal vocational training, indicating thereby that higher proportion of youth population actually enter the world of work without formal vocational training. Many of the developed economies have 60 to 80% of skilled workers. Korea has as high as 96% skilled work force. It is, therefore, necessary to enhance the skill development infrastructure in a manner that all those who enter the labour force acquire relevant skills beforehand.

The present vocational training capacity is estimated to be around 3.1 million while 12.8 million persons, as per 61st round of National Sample Survey Organization, 2004-05 enter the labour force every year. There are 8039 Industrial Training Institutes/Centres with seating capacity of 11.16 lakh in the country. Though, there has been an increase of about 1000 ITIs/ITCs adding about 1 lakh seats every year, steps need to be further taken to increase the numbers so that all those who enter the labour force get an opportunity to be skilled in the disciplines of their choice.

Quality of skill development is another important issue. Normally, there is an accreditation body at the national level which ensures quality of institutions imparting skill development. The system of awarding bodies ensures credible assessment of competencies and certification so that acquisition of standard competencies by the trainees is ensured. Efforts need to be made to ensure that the training institutions are credible and impart quality training.

Relevance of skills is another aspect of vocational training which needs urgent attention. Involvement of industry in skill development has not been in force and therefore, trainees are

not able to acquire industry specific skills in the training institutions. In order to make the training demand driven and relevant to the industry, skill development system needs to be driven by the industry.

Another challenge that the skill development system faces is the lack of labour market information. Different sectors of economy should throw up in the short, medium and long term basis, the requirement of skilled manpower by the industry and this task is normally performed by sector skills councils. These councils are also expected to define occupational standards, training standards, and develop credible assessment and certification system. They carry out research in a particular sector and interact with various stakeholders for systematic redressal of issues facing the sector. It is, therefore, important that sector skills councils are set up in order to make the skill development system relevant and demand driven.

While looking at the unorganized sector in the country, it constitutes about 94% of the work force. The formal skill development system is not taking care of skills requirement of the unorganized sector while the demand of skills in the unorganized sector is huge. Skills in the unorganized sector are acquired through informal apprentice system. There are large number of traditional skills which are passed down from one generation to another through informal training and many of them are well recognized and of international standards. However, they need to be brought in the formal system of skill development.

According to Indranil Biswas the training courses lack focus on the changing job market. As a result it was seen from various reports that the number of students is declining for long term vocational courses, mainly in ITIs. The training policy should be focused on the changing job market in order to attract young people. More autonomy needs to be provided to institutes and they should have market linked infrastructure. For publicly funded training, equity distribution is also a problem. But job creation must be done regionally, not centrally; otherwise it will create regional imbalances of trained manpower. According to NSSO report (No. 470, 55th round) about 27 per cent of the Indian population were migrants. The proportion of migrants was higher (33 per cent) in urban areas than (24 per cent) in the rural areas. It was mainly in search of jobs. Creating job opportunities regionally can help 6maintain the equilibrium in future days (Biswas, 2008)

Moreover funding for the public ITIs is very low compared to other countries like China and USA which have restructuring-funds, whose share goes for improvement of vocational training systems in order to achieve international quality. Although things have changed for the better in the 11th five year plan with the introduction of the National Skill Development Mission. But it is also desirable to have mechanisms to raise funds privately for up gradation of ITIs.

ITIs must focus on low-literate youth and provide new vocational qualifications/training programmes and also on unorganised sector, otherwise it will cause long term losses. To take an example automobile industry is a technology intensive industry but most of the workshops are running without formally trained staff (we have currently no database of that). Sometimes, lack of training skills may harm the delicate instrument of vehicles. A vital challenge is to formally train workers for the crafts industry where a considerable number of informally trained craftsman work together.

Lack of accountability and training/supply management are also major problems for ITI institutes.

In our country different institutes impart vocational training but they do not have coordination among themselves. Information about this sector is not available from a single source. In fact we need to create a central database from where one can get full access on vocational training system right from school level to ITI/ITC institutes.

In rural sector, radiographer and other trained para-medical persons are very less in comparison to the large number of the rural population. Policy makers should focus on the paramedical vocational studies, so that incremental change in number of trained paramedical worker can benefit rural masses.

A central vocational training standardization system, accredited nationally and globally, for maintaining the quality of the vocational education can enhance credibility of vocationally trained persons in the industry.

To attract more students from school level, reorientation of vocational courses is needed.

There should be a bridge organization to relate R&D institutes and vocational education system. It would help the vocationally trained person to get the benefits of R&D (Biswas, 2008)

INITIATIVES FOR SKILL DEVELOPMENT AND VOCATIONAL TRAINING

There has been significant focus on mitigating the problems related to skill development and thus, several measures have been initiated by the Government at various levels catering to different sectors of the economy. What follows here is a brief discussion of these important initiatives:

A. Institutional arrangement

A three tier institutional structure consisting of Prime Minister‟s National Council on Skill Development, Skill Development Co-ordination Board and National Skill Development Corporation has been set up to take forward the skill development agenda.

- **PM's National Council on Skill Development** has been set up as an apex body for policy advice, direction and review. The Council is chaired by PM with Ministers for Human Resource Development, Finance, Heavy Industry, Rural Development, Housing and Urban Poverty Alleviation, Labour and Employment and Micro, Small and Medium Enterprises as members. Deputy Chairman, Planning Commission, Chairperson of the National Manufacturing Competitiveness Council, Chairperson of National Skill Development Corporation and six experts in the area of skill development are other members. Principal Secretary to the PM is the Member Secretary of the Council. This Council has endorsed the vision to create 500 million skilled people by 2022 through skill development system which must have high degree of inclusivity in terms of gender, rural/urban, organized/unorganized, and traditional/contemporary.
- **National Skill Development Co-ordination Board** has been set up under the Chairmanship of Deputy Chairman of Planning Commission with Secretaries of Ministries of Human Resource Development, Labour and Employment, Rural Development, Housing and Urban Poverty Alleviation and Finance as members. Secretaries of four States by rotation for a period of two years, three distinguished academicians/subject area specialists are other members. Secretary, Planning Commission is Member Secretary of the Board. The Board is expected to enumerate the strategies to implement the decisions of the Prime Minister‟s National Council on Skill Development and create comprehensive guidelines and instructions for meeting the larger objectives of skill development.
- **National Skill Development Corporation**: The third tier of the co-ordinated action is the National Skill Development Corporation which is a non-profit company under the Companies Act, 1956 with an appropriate governance structure. The Head of the Corporation is a person of eminence/reputed professional in the field of skill development. The Corporation would constitute Sector Skills Councils with the following functions: a) Identification of skill development needs including preparing a catalogue of types of skills, range and depth of skills to facilitate individuals to choose from them; b) Development of a sector skill development plan and maintain skill inventory; c) Determining skills/competency standards and qualifications; d) Standardization of affiliation and accreditation process; e) Participation in affiliation, accreditation, examination and certification; f) Plan and execute Training of Trainers; g) Promotion of academies of excellence; and h) Establishment of a well structured sector specific Labour Market Information System (LMIS) to assist planning and delivery of training.

B. Upgradation of 1896 Government Industrial Training Institutes(ITIs)

- There were 1896 Government ITIs as on 1st January 2007 and it has been decided to modernize/upgrade all of them. 100 ITIs were taken up for upgradation in 2005-06 at a cost of Rs. 160 crore into Centres of Excellence. 21 new courses in production & manufacturing, hospitality, automobile, electrical, electronics, construction, information technology, industrial automation, refrigeration and air conditioning have been introduced in order to meet the requirement of these sectors. Upgradation of 400 ITIs through World Bank assisted Vocational Training Improvement Project was undertaken in 2006-07 at a cost of Rs. 1581 crore. New courses have been introduced in these ITIs and Institute Management Committees have been constituted to seek closer involvement of industry in skill development. These ITIs are under

different stages of modernization. Remaining 1396 Government ITIs are being upgraded at a cost of Rs. 3550 crore. Under the scheme, an interest free loan of Rs. 2.5 crore is granted to each ITI. The upgradation is carried out by Institute Management Committee which is headed by an Industrialist. In the last three years, 900 ITIs have been taken up which are at different stages of modernization.

- A special Prime Minister's Package for North-East and Jammu & Kashmir has also been given in which 35 existing ITIs in North East have been upgraded and 25 new ITIs have been set up at a cost of Rs. 113.7 crore. This scheme has increased the seating capacity from 7244 to 16,144 per annum. Under the same scheme, one new women ITI at Jammu has been set up and 37 existing ITIs have been upgraded at a cost of Rs. 37 crore. It has helped in increasing the seating capacity from 4364 to 6200 per annum. 14 more ITIs are being set up in Jammu & Kashmir as part of PM"s Reconstruction Plan. When these ITIs become fully functional, the capacity of Government ITIs will increase to about 10,000 per annum in Jammu & Kashmir.

C. Skill Development Initiative:

A new scheme was started in 2007-08 with an objective to train one million persons in short term modular courses in five years at a cost of Rs. 550 crore and then one million every year thereafter. Under the scheme, 1110 short term modular courses have already been developed. These courses cover 49 sectors and range from 60 hours to 960 hours. Training is being imparted through 5249 Vocational Training Providers and competencies of trainees assessed by 22 independent assessing bodies. On the basis of their assessment, National Council for Vocational Training Certificate is awarded to the trainees.

D. Role of Open and Distance Learning: Initiatives taken by IGNOU:

Indira Gandhi National Open University, the national open university in India has also undertaken skill development initiatives by establishing the School of Vocational Education and Training in August 2007 which aims at providing education and training for skills development besides endeavouring to meet the vocational as well as technical requirements for economic development of the country. The School is thriving to offer demand driven and value added courses/programmes, focusing both formal and informal sectors. Additionally, the School also has the mandate to develop courses that will encourage vertical mobility of vocational education and training. It is also engaged in conducting research for identifying the needs of society and industry.

The main objectives of this School are:

1. Design and develop Programs, and coordinate to educate and train skill of post-secondary schools students catering to the vocational as well technical requirement for economic development in the country.
2. Identify and promote centres of learning for practical exposure and experience of the students. These centres may include industrial firms, NGOs, Government and International Organisation.
3. To build national level networking for skills and social development through bonding these centres of learning in the outreach field.
4. Use ICT for value added growth of VET

The programmes that SOVET in IGNOU is presently offering are wide ranging and pertaining to a whole gamut of areas including a doctorate degree: Ph.D. (Vocational Education), masters level programmes such as M.Sc. in Actuarial Science (Face to Face, On Campus and Full-Time), MA in Fashion Retail Management, MA in Apparel Production Management, under graduate level programmes namely BA in Fashion Communication, BA in Apparel Design and Merchandising, BA in Fashion Design, BA in Textile Design, BA in Fashion Merchandising & Production, and numerous diploma and certificate programmes as for instance PG Diploma in Security Operations, PG Diploma in Pharmaceuticals Sales Management, PG Certificate in Security Operations, Diploma in Business Process Outsourcing - Finance and Accounting, Diploma in Entrepreneurship and Skill Development (face to face), Diploma in Security Management, Diploma in Fire Safety, Professional Certificate in Spoken English and Personality Development, Advanced Certificate in Security Management, Advanced Certificate in Fire Safety, Advanced Certificate in Spoken English and Personality Development, Certificate in Entrepreneurship and Skill Development (face to face), Certificate in Hospital Administrative Assistanceship, Certificate Security Management, Certificate in Fire Safety, Certificate in Spoken English and Personality Development,

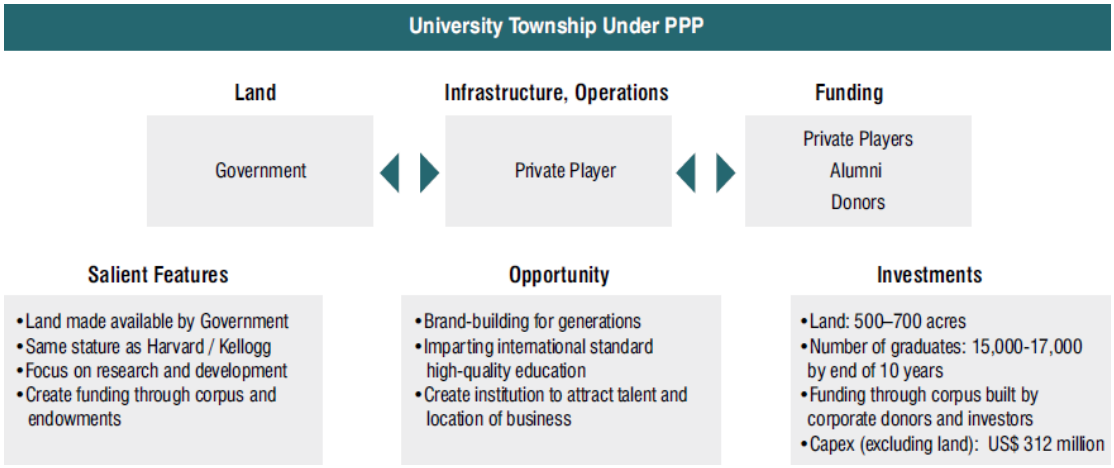
Certificate in Air Ticketing, Certificate in Airline IN-Flight Services, Certificate in Travel Agency Operations, Certificate in Tour Guiding Skills, Certificate in Firemanship from July 2010, and Diploma in Fire safety management.
The School is also in the process of developing a host of other useful skill development vocational programmes, for example, Bachelor in Vocational Education and Training, PG Diploma in Pharmaceuticals Analytical Techniques, PG Certificate/Diploma in Information Security, Post Graduate Certificate in Information & Assistive Technologies for the Instructors of Visually Impaired, Diploma in Vocational Teacher Education, Diploma in Information & Assistive Technologies for the Visually Impaired, and Certificate in Jewellery Designing.

E. Globalisation Driven by Technology and the Emerging Knowledge Economy
Occupational patterns are changing; new jobs and job titles, job enlargement, job enrichment, and new flexible work arrangements are emerging. Employment demands are shifting towards higher skill categories. It is imperative, therefore, for India to move up the skill-ladder and produce a larger number of people with higher education and generic training for new types of knowledge work, both in high skill services and high technology industrial production. Knowledge professionals will need support from middle-skilled workers in new knowledge and technology areas. The skill development system will need to meet this challenge. The response time is limited as the rate of change is high and accelerating.

F. Promoting Excellence
To promote excellence, a significant number of well performing institutions will be assisted to develop into institutions of excellence. These institutions will be generously resourced, equipped with internationally comparable facilities and high quality faculty and able to offer high quality programmes in current and emerging technology areas. These institutions will be networked with a number of training institutions in their vicinity and serve as lead institutions in supporting their development.

G. Experimentation, Innovation and Research
Policy encourages the creation of a National Skill Development Initiative that is highly dynamic and nimble-footed. This will always be extrapolating the future requirements. Besides, it will have to be constantly responsive to changes in the immediate as well as global environments, learn from them, and experiment with new approaches and structures. A culture of innovation will drive the future system. Research will be a key strategy for managing change and benefiting from it. Since experimentation and innovation flourishes in a vibrant and self-confident environment, flexibility and operational autonomy will be extended to deserving institutions. Research in international developments and in organizational practices and pedagogical approaches will be an on-going activity. Standing institutional arrangements will be established for the purpose and research will be funded both in these arrangements and in outside research institutions.

H. Developing Public-Private Partnership for VET in India
One of the guiding principles, under which PPP can be developed for vocational education and training, is the university township model as has been shown in Figure 1. Under this model, the land for the training institute is made available by the government, the infrastructure and operations are managed by a private player and the funding is provided by setting up a corpus of funds or grants by private players, alumni and donors. This not only helps in imparting international standards of high-quality education but also helps in providing the right mix of desired skilled workforce (Jasuja & Kashyap, 2010).



Source: **Luv Jasuja, Prashant Kashyap,** *Vocational Education in India: Key Challenges & New Directions, pg. 79*

Figure 1: University Township Model for Vocational Education and Training

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