

Skill Development of Construction Workers

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1.0 Introduction

Construction industry in India is growing in excess of 16% p.a. and is likely to reach 500000 crore billion by the end of the XIIth Five Year Plan period. In this industry, skills and knowledge are the driving forces of economic growth and social development. The economy becomes more productive, innovative and competitive through the development of more skilled human capital. There is always a difference between knowing and performing, and the gap is explained by inadequacy of skill. Skill development, therefore, means: all the efforts that allow somebody to learn to do something better than before, or do something new that the person has not done before, and which results in concrete change in their livelihoods.

2.0 Skill Development in Construction Sector

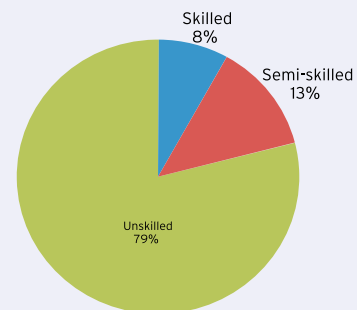
The construction industry (barring real estate developers) does not really sell a tangible product; it sells a service. The service that it may provide is determined by its clients and is performed at a time and place specified by them. Contractors neither have control on the demand for construction services nor can they stimulate it. But the vast majority of contracting firms operate in a product market where they have no control over demands, technology, materials, workplace, finance and labour supply.

The existing institutional framework for skill formation in various construction trades is inadequate. The Directorate General of Employment and Training (DGE&T) in the Ministry of Labour is responsible for vocational training in the country. It runs through state governments and private organisations ITIs all over the country. ITIs impart training in 43 engineering and 24 non-engineering trades. The engineering trades include carpentry, plumbing, masonry and plastering, which though not construction specific, may be relevant to it. As a rule, the training is oriented to the manufacturing and service sectors. Courses are of one to two year's duration and admissions are restricted to high school passouts. Very few construction workers have high school level education to qualify for admission or resources to maintain themselves over the long training period.

The other major programme for skill training is the Apprenticeship Training Scheme under the Apprentices Act, 1961. The trades in which apprentices may receive training, only 3 are construction specific (plumber, brick-layer and fitter) out of total number of trades. The National Network of Building Centres also trains construction workers.

In the absence of any institutional mechanism for skill formation, construction workers continue to be trained by the traditional master craftsmen. Apart from its inadequacy in quantitative terms, the traditional system neither utilises new technologies and work methods, nor does it absorb the benefits of research and development. Also, women workers are not trained in any trade and they remain head load carriers or helpers, all their working life.

It may be mentioned that authoritative serial data on the size of construction workforce and its distribution by skill, are not available. It is estimated that about 310 lakh workers are working in the construction sector, of which 79% are unskilled. Out of this, 210 lakh workers are seasonal construction workers, and the balance are regular construction workers. Women constitute 23%-27% of the construction workforce. The classification of workers based on their skills is given in the Fig. 1.



Classification of Construction workers

Fig. 1: Source: Report of the working group on Skill Development & Training

3.0 Skill Development Initiatives by Government Organisations

Among the Government Organizations CIDC has established itself as the leading organisation in the country for conducting skill development programmes and providing training to the construction workers in a very short span. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Swarnjayanti Gram Swarozgar Yojana (SGSY), Swarna Jayanti Shahari Rozgar Yojana (SJSRY) are some of the Government sponsored skilled development programmes for both urban and rural areas.

3.1 Skill Development Initiative Scheme (SDIS) by Ministry of Labour and Employment

The SDIS was launched by the Ministry of Labour and Employment in 2007-08 with the objective of meeting the growing requirement of skilled manpower in the industry through short-term courses. In less than three years, 1,108 Modular Employable Skills (MES) course modules have been developed covering 48 sectors of the economy. The duration of these courses ranges from 60

hours to 960 hours and they are modular in nature so that a person can acquire skills, get employed, come back to the institute, and acquire another skill according to his or her liking and the market requirement. The scheme has been very well received by the industry and youth.

3.2 The Construction Industry Development Council (CIDC)

CIDC under Planning Commission of India has developed Construction Workers Training Programme and Employee Development Programme to enhance the proficiencies of various trades working at execution of Construction Workers level and supervisory level duties respectively. All these programmes are running at various locations across the nation. Persons engaged in Construction Industry such as workers & supervisors having qualification from Vth to XIIth Standard can enroll for short term courses from 1 month to 6 months.

At present, apart from the Union Government, four State Governments (Rajasthan, Bihar, Haryana & M. P.), one National University (Indira Gandhi National Open University), Four State Universities, and almost 79 major Construction Companies, apart from three Industry Associations are working together with CIDC to nurture this programme, which is primarily self financing. Association with National Institute of Open Studies and the DGET, Ministry of Labour, Govt. of India, are on anvil, to enable this initiative to expand further.

3.2.1 Workers Training and Certification

The largest manpower segment of Construction Industry is the Construction Workers segment where the skill development and certification requirements are substantial. To cater these requirements, a program under the auspices of Ministry of Labour in 55 different construction trades has been launched for the first time in India.

The list of these trades is as follows:

Mason, Rubble Mason, Carpenter, Shuttering Carpenter, Bar-bender/Steel Fixer, Plasterer, Tiler, Painter, Plumber, Surveyor, Roof Sheet Layer, Foreman, Stone Cutter and Dresser, Plasters, Drillers, Excavator, General Works Supervisor Welder, Electrical Fitter, Electrical Wireman, Mate Spray Man, Electrician, Fitter, Auto Electrician, Black Smith, Block Maker, Fabricator, Turner, Dozer Operators, Floor Grinding Operator, Concrete Vibrator Operator, Concrete Mixer Operator, Hot Mix Plant Operator, OMC Technician, Vibratory Road Roller Operator, Riggers, Tar Boiler Operator, Mechanic - Earth Moving Equipment, Mechanic - Auto / Heavy vehicles, Hydraulic Excavator Operator, Motorized Grader Operator Wheeled Loader Operator, Crawler Dozer Operator, Crane Operator, Road Roller Operators, Batching Plant Operator, Machine Operator, Stone Crusher Operators, Store Keeper, Dumper

Operators, Public Health Related trades (Testing of Water & Sewerage etc.), Tower Crane Erection and Operations (Concreting Operations) and Laboratory Technicians (Concreting operations).

3.2.2 Vocational Training for Secondary Level Students in various supervisory level occupations

After consultation with various agencies concerned, CIDC has decided to set up this Construction Industry Vocational Training Council as the apex national agency concerned with the aspects of Human Resource Development of the Secondary segment of Construction Industry. After workers the next level in construction industry is the supervisory workmen segment. To cater to this need of workers training for this segment, Vocational Training for Secondary Level Students for different vocations is being conducted. A person either having the secondary level education or having workers certification can be educated through these courses.

In order to improve the work performance of construction industry and to generate value added employment opportunities, Construction Industry Development Council (CIDC) as the apex organization representing the Government and the construction Industry, had initiated a country wide Human Resource Development initiative focused on developing a formidable work force to fructify various Infrastructure Development Projects in the Nation and also abroad.

- Over the last 13 years CIDC has made substantial achievements in the area of HRD especially for construction workers, Artisans and Supervisory cadre personnel. The programme is now spread over 19 states and supported extensively by various State Governments.
- The support from the State Government has come by way of provision of physical infrastructure, 29 ITIs, nomination of learners under various central and state schemes such as NREGS, Chattisgarh Raj Mistry Yojana, Vocational Training for candidates belonging to SC/ST categories and training of Jail inmates.
- Over 250,000 personnel trained, tested and certified by CIDC for their skills. Almost 100% have found value added appropriate employment with leading industry organizations.

All CIDC training centers are equipped with course material, training kits and well trained staff to cater to the express needs of the students and often the teaching material is developed in vernacular to make the message well understood.

3.3 HUDCO (Housing and Urban Development Corporation)

HUDCO and others under Ministry of Urban Development and Planning Commission of India have established 640 Building Centres and Company run schools (NBCC HCC, L&T, ECC etc.) & association for skill development programmes.

3.4 Khadi & Village Industries Corporation (KVIC)

KVIC have 51 Training Centres and also running 35 types of programmes for Unemployed rural youths, Injob and Artisans/Supervisors working in KVI institutions, prospective Entrepreneurs, beneficiaries of different Govt. Schemes desirous of undertaking KVI activities for duration from 2 months to 12 months.

3.5 MSME (Micro, Small & Medium Enterprises)

MSME under Small Industries Development Organisation (SIDO) conducts Entrepreneurship Development Programme, Skill Development Programme (SDP), Management Development Programme in their 72 institutes/ bodies through out the country for unemployed educated youth for both short term and long term programmes.

4.0 Skill Development Initiatives by Public Private Participation (PPP) mode

There has been a paradigm shift in the national policy on skill development with the private sector playing a lead role instead of the government, as they are the job providers. The government's roles have changed from being a vocational training provider to a partner and facilitator.

4.1 National Skill Development Corporation (NSDC)

The National Skill Development Corporation India (NSDC) is a one of its kind, Public Private Partnership in India. It aims to promote skill development by catalyzing creation of large, quality, for-profit vocational institutions. It provides funding to build scalable, for-profit vocational training initiatives. Its mandate is also to enable support systems such as quality assurance, information systems and train the trainer academies either directly or through partnerships.

The objective is to contribute significantly (about 30 per cent) to the overall target of skilling / upskilling 500 million people in India by 2022, mainly by fostering private sector initiatives in skill development programmes and providing funding.

4.2 State Missions on Skill Development

State Governments have also been advised to set up State level missions under the chairmanship of Chief Ministers of respective States to guide and review the Skill Development activities at State level. As a

follow-up, many States have set up State Level Skill Development Mission.

4.3 Kaushal Vikas Yojana

In compliance with the announcement made by Hon'ble Prime Minister, DGE&T, Ministry of Labour & Employment has taken up a project titled Kaushal Vikas Yojana to set up 1500 new Industrial Training Institutes (ITIs) & 1000 Skill Development Centres (SDCs) in PPP by involving three partners:-

- Private Training Provider playing the lead role
- State Governments are expected to extend all the possible logistical support, land & provide basic infrastructural facilities free of cost and
- Central Government providing Viability Gap Funding (VGF)

4.4 Federation of Indian Chambers of Commerce & Industry (FICCI)

FICCI acts as a "skills development aggregator" to complement Government of India's ambition of training 500 million people by 2022. FICCI offers support and facilitation services through Policy Advocacy, Industry Intervention and International Collaboration so that the youth can acquire skills to meaningfully participate in and contribute to the economy.

4.5 Confederation of Indian Industries (CII)

CII has turned the limelight on skills development across the country to align industry manpower needs with the skilling initiatives underway and improve the employability of the working population including school drop-outs, semi-skilled and un-skilled workers. Due efforts are underway to create a new wave of entrepreneurship in the country that will result in further employment generation. CII has launched its own Skills Development Initiative, which is aligned, to the National Skills Development Agenda to skill 500 million people by 2022. In this endeavour, CII has set up its first skills centre at Chhindwara, MP, to train people in bar bending, grinding, pipe fitting, welding, etc. CII along with HPCL launched the 'Swavalamban' project to train 2,200 youth in multiple trades. The programmes have high local relevancy, in-built flexibility and are modular in form. Five sectoral studies have been released on skills requirements in the constructions, auto, retail, healthcare and banking & financial services sectors. Skills development projects are running across the length & breadth of the country with 20 projects already being successfully completed. Projects cover both rural & urban areas. Currently the projects are running in the rural areas in Maharashtra, Andhra Pradesh, Rajasthan, Haryana, Tamil Nadu and Punjab.

CII is also conducting “Skills Gap” studies across the country through credible partners. These studies have been successfully completed in Tamil Nadu and Maharashtra, while those in Jammu & Kashmir and Punjab are nearing completion. The study projects the skills needs and gaps of the state by 2015. Such an analysis helps understand the dimensions of the problem and opportunity within. Based on the findings CII works to create mechanisms to fill these gaps and address the needs of both the organised and the unorganised sector.

4.6 Delhi University-CII Professional Skills Project

CII has identified the need to bridge the employability skills gap among the youth by training them in skills as required and defined by the industry through open sessions and interaction between University and Industry to develop learned, successful and efficient manpower; to understand and explore the available resources in the University and open up avenues based on the existing learning; to assimilate the needs of industry and initiate suitable customization of the Universities’ learning.

4.7 Government of India- L & T (ECC Division) Training Programmes.

Ministry of Rural Development, Govt. of India, with a view to provide much needed training, testing and certification for construction workmen has taken initiative Jointly with L&T in three different trades such as (i) Bar Bending & Steel Fixing ,(ii) Masonry and (iii) Formwork & Shuttering Carpentry.

Structured Training period is for 3 months where 80% hands-on practical training and 20% Classroom teaching to be conducted at L&T Construction Skills Training Institutes / Centres in different locations across the country and one month on-the-job training at construction site. The objectives of these training programmes would be;

- To train unskilled BPL (Below Poverty Line) candidates and also upgrade the skill level of existing construction workers engaged in the Industry.
- To provide opportunities of employment and raise the economic level of the workers.
- To develop a pool of professionally qualified / proficient micro entrepreneurs for overall economic growth & development of the state.

The modus operandi of training programme as follows: State Governments on behalf of Central Govt. to select academically challenged youth preferably 10th & 12th class fail (but 5th class pass may also be recommended) in the age group between 18 years & 30 years from various Districts of five States namely Uttar Pradesh, Bihar, Madhya Pradesh, Jharkhand & Chhattisgarh, in India. Selected youth to be sent to L&T’s Construction Skills Training Institute / Construction Skills Training Centres across the country for training as per the requirement and vacancies mutually agreed upon from

time to time. After three months of training at CSTI / CSTC and one month on-the-job training, these trainees to be referred for engagement with the sub-contractors working at L&T Project sites. In one of the training programme trainees are exposed to Formwork & Shuttering as shown in Fig. 2.



Fig. 2: Hands on training on Formwork and Shuttering in L&T (ECC) programme

4.8 CPWD Regional Training Institutes

Workers Training Centres also work as part of Regional Training Institutes at four Metros. They impart skill improvement training to workers and Group D staff. The skill development courses for workers are conducted in associated with “Construction Industry Development Council”. After completion of the training, certification of the workers is also done through “IGNOU”.

4.9 Australian Vocational Training and Employment Group (AVTEG)

Australian Vocational Training and Employment Group (AVTEG) is an education consultancy that provides world class Vocational and Corporate training to ensure career development and skills training of the Indian workforce. AVTEG designs educational curriculum for targeted jobs and also provides “on the job training” that yields local job opportunities, certification from vocational training institutes and polytechnics in Australia and jobs in Australia. AVTEG certified workforce is locally employable, nationally valuable and globally acceptable.

AVTEG is a performance based vocational education and training organisation that promotes and supports sustainable skill development as a strategic tool for organic growth with competency Skills Training programs designed for specific Skill Development Sectors.

4.10 Artisan-friendly CSR (Corporate Social Responsibility) and educational interventions

- A “School of Construction Artisans” has been established recently in Coimbatore, Tamil Nadu, for imparting free residential training in concreting,

- carpentry and masonry as part of a CSR drive.
- Coimbatore Chapter of Builders Association of India (BAI) is cooperating with Shri Ramakrishna Mission Vidyalaya, Coimbatore to establish the countrys first school for artisans. The trainees will be inducted into the member construction companies of BAI (Builders Association of India) in Coimbatore.
- In Madhya Pradesh, Rewa ITI has been selected in the first phase of Centre of Excellence in the sector of Construction and Woodworking Industry.
- The Kerala government has started a 'Kerala Construction Academy' which imparts short-term training to unskilled workers in the construction industry and 'Kerala Skills Development Corporation' to train up to 20,000 Twelveth standard students every year in different engineering streams based on the educational system in Singapore under the guidance from the Singapore Cooperation Enterprise.

5.0 Conclusion

The nature of skill mix in building trades is of significance. The skills required to perform building trades vary considerably. A 'mazdoor' could easily be used to assist a mason, concreter, painter or a carpenter. But the skill requirements begin to increase as one moves up the technological ladder. Skills required to become a formwork and centring carpenter, are different from those required in a furniture making carpenter. Similar is

the case in masonry, plumbing, concreting etc. Each of these trades is semi-dependent, though a part of the construction process. Entry in the building job market is easy and quick at the bottom-end of the skill; the exit at this end is also easy though not as rapid. Unskilled workers keep moving in and out of the industry. But as the level of acquired skill grows, the opportunity for movement out of the industry declines. This is inevitable, as there is no demand for building skills in any other industry. They may change jobs from a contractor to an independent entrepreneur. But this does not happen to most of the workers. A female worker carrying loads on her head does the same job through out her life. One has to climb on technological ladder after acquiring certain skills and training but without any education there is no further growth. But to overcome those hindrances, Indira Gandhi National Open University (IGNOU) has announced a scheme for "Assessment and Certification of Prior Learning", which will enable skill assessment among the workforce and accordingly certify their skills. By their long work experience, people would have acquired knowledge, but would not have a degree. IGNOU will assess the skills of artisans, carpenters, office assistants and others in related fields, and give them suitable certification. The initiative will give them opportunities for vertical mobility and it will also lead to sustainable skill development.