

## Section 1: Background of the Study

### 1.1 The Context

Government of India is aiming to improve the quality of vocational training to match the world standards. In this regard, the World Bank proposed a project to assist the Government of India in upgrading selected industrial training institutes (ITIs) in a phased manner. The project proposes to (a) improve the quality of vocational training, (b) promote systemic reform and innovation, and (c) introduce and improve the monitoring and evaluation of the project. It's development objectives include; reducing dropout and improving completion rates, reducing the time taken by graduates to find employment, and enhancing the earnings of employed graduates.

The project also aims to increase institutional autonomy and private sector participation; and increase the percentage of institutions' recurrent costs recovered from industrial contributions, services provided, and trainees. As part of the foundation for long-term reform of the vocational education and training (VET) sector, the Project is expected to develop new curricula, a national qualification framework, a new regulatory framework for private providers of training, and a policy framework for the informal sector; and to assess the feasibility of a training fund.

As a part of the project implementation process, reforms are already introduced in 100 ITIs, termed as *Centers of Excellence* through domestic funding. Remaining 400 ITIs will be upgraded in a phased manner through the World Bank funding on a retroactive basis. In order to ensure that the disadvantaged groups are not excluded from this developmental process, the World Bank sought an independent consultancy report based on an empirical study on the status of disadvantaged groups, and to propose an equity assurance plan (See Annexure A for the Terms of the Reference).

The Directorate General of Education and Training (DGE&T), Ministry of Labour & Employment, Govt. of India commissioned the Indian Institute of Technology Delhi to

conduct the empirical study. The objectives the study are (a) to identify and describe the factors of poor outcomes for disadvantaged groups in the vocational educational training system in India; and (b) to prepare an Equity Assurance Plan (EAP) to overcome the same.

The purpose of the EAP is to ensure that students from disadvantaged backgrounds have equal opportunities to enter the ITIs, complete their training (on time), and achieve the desired outcomes.

## **1.2 Industrial Training Institutes in India**

It is indispensable that India needs to nurture the technical labour force in order to realize its dreams to become one of the largest economies in the world. Though it is known for abundance of cheap skilled engineering workforce, only five percent of the Indian industrial workforce is skilled as compared to the 85 percent of the south east Asian countries (DGET, 2006). Gasskov (2003) summarizes the national vocational education training as follows:

*“The vocational training system of India offers training through public Industrial Training Institutes (ITIs) as well as Industrial Training Centres (ITCs) that are private establishments. Enrolment-wise, the ITIs are much larger, while most private ITCs offer only a few trades. Therefore, in some states, the number of public ITIs is in dozens while the number of private ITCs is in hundreds. Until recently, the numbers of private ITCs had been growing very rapidly but reached saturation very soon and their numbers are now declining. The number of public ITIs has exhibited slow growth while student enrolments and graduations are diminishing.*

*The Government of India has made a considerable investment in skills development of young people through setting up the ITIs. Historically, they have been established with the major aim being to speed-up the process of industrialization in this country. This, however, determined the rather limited range of national vocational qualifications, the majority of which are basic industrial trades, while the non-engineering trades necessary for development of, for instance, the services sector, continue to be under-represented.*

*The training institutes, both public and private, operate under the general guidance of DGE&T, Ministry of Labour. At the national level, the DGE&T is the nodal department for formulating policies, laying down standards and some other technical requirements for vocational training. The State Government Departments are responsible for delivery of vocational training through ITIs that operationally report to and are funded by them. The principal training schemes are the Craftsmen Training Scheme (CTS) and the Apprenticeship Training Scheme (ATS). They deliver 67 nationally recognized trades, 43 of which are engineering and 24 non-engineering. In 2003, a number of new trades were introduced.*

*State governments operate some 4,650 ITIs with a total capacity of 678,000 training seats. Out of this, nearly 373,000 seats are established in some 1,800 government ITIs, and the residual 305,000 are in some 2,850 private ITCs. The number of vocational training institutes in India has shown a rapid increase over years with the current growth, however, being mostly driven by private training providers.*

*The formal training system of India, both public and private, offers training programmes only to the educated youth who reached Grade 8 and above. Given the rather low overall level of general education and high rates of school drop-outs in the country, it is only a relatively small share of Indian youth who could, in principle, access formal vocational training programmes.*

*The DGE&T's skills development system operates in competition with other providers of formal and non-formal skills programmes, such as high vocational schools (the so-called 10 plus 2 stream), colleges, polytechnics, etc. The share of ITI-based training seems to capture around 10-12 per cent of the total number of school graduates at Grade 10." (p. xii)*

### **1.3 Review of earlier studies**

There are three important primary studies that have evaluated the ITIs in India. They have identified set of problems and suggested various measures. Though the findings are illuminating and suggestions are useful, in-depth discussions about them is beyond the scope of present report. Still, a brief discussion about earlier studies is essential to get a better understanding about the status of VET system in the country, and provides the required background to the present study. Findings are summarized in the Table 1.

Table 1: Evaluation of Industrial Training Institutes in India

Agency	International Labour Organization (ILO)	Resource Development Center (RDC)	Federation of Indian Chambers of Commerce & Industry (FICCI)
<b>Objective</b>	Evaluation of Industrial Training Institutes (ITIs)	Evaluation of ITIs	Evaluation of CoE <sup>1</sup> ITIs
<b>Funded by</b>	DGE & T	DGE & T	Self
<b>Year of study</b>	2003	2005	2006
<b>Area of fieldwork (States / provinces)</b>	Orissa, Andra Pradesh, Maharashtra	Punjab, Haryana, and Rajasthan	All
<b>Sample size</b>	121 ITIs, 10 000 students, 70 enterprises	32 ITIs, 1180 students, 28 principals, 186 instructors, 16 employers	69 CoE ITIs excepting eastern states.
<b>Problems</b>	<ul style="list-style-type: none"> <li>• Declining internal efficiency (low enrolment, retaining and output)</li> <li>• Low external efficiency (poor employment record)</li> <li>• Public institutes have poor internal efficiency when compared to private</li> <li>• Unsatisfactory quality of private ITIs (trainer &amp; infrastructure)</li> <li>• Poor linkage with informal sector</li> <li>• Lack of Industry – Institute Interaction</li> <li>• No shared understanding of assessing skill between government and industry</li> <li>• Outdated &amp; non working machinery in most of the institutes</li> <li>• Lack of flexibility in training to suit the industry demands &amp; fluctuations</li> <li>• Inadequate refresher training for the trainers</li> <li>• Lack of Exposure to real work situations, especially quality and maintenance</li> <li>• Trades do not reflect the industry demands</li> <li>• Poor job opportunities is triggering low enrolment</li> <li>• Un-uniform inspection of ITIs by the monitoring body (11% NIL to 26% six times)</li> <li>• Salary as a major cost in the budget (77%). Staff training &amp; development; buying raw material (6%) neglected.</li> <li>• Under-representation of service trades</li> <li>• Differences across ITIs in number of trades offered.</li> <li>• Shortage of staff</li> </ul>		
<b>Suggestions</b>	<ul style="list-style-type: none"> <li>▪ Greater autonomy to ITIs &amp; introduce accountability</li> <li>▪ Funding to ITIs dependent on Enrolment / outputs</li> <li>▪ Need to encourage entrepreneurship and associated training (finance</li> </ul>		

<sup>1</sup> CoE – Centers of Excellence. 100 ITIs are converted into CoEs as a part of ongoing reformation of VET system in India. CoEs enjoy more autonomy in administration, curriculum development, industry participation and exhibit transparency.

	<p>and credit linkages)</p> <ul style="list-style-type: none"> <li>▪ Encourage fund generation activities</li> <li>▪ Upgrade ITI assets</li> <li>▪ Improve training supply management (analyze local needs, monitor private ITIs, improve efficiency of ITIs)</li> <li>▪ Flexible Training provisions (long term, short term, industrial &amp; non-industrial)</li> <li>▪ Skill recognition (modular programmes, certificate for practical experiencers)</li> <li>▪ Even out seat utilization trend</li> <li>▪ Build better staff strength</li> <li>▪ Introduce new trades to meet demands of the industry</li> <li>▪ Strengthen the monitoring system</li> </ul>
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A Mumbai based non-governmental organization, *iWatch* (2004) suggested the following:

- ITIs should be connected with the informal sector by establishing a registry of firms with 25 employees in local language for utilization by ITIs.
- Introduction of international (short and long term) quality certificates
- Impart enterprise skills development
- Use popular media to popularize ITIs
- Withdraw financial support in higher education and divert to ITI.
- Encourage private participation in ITIs more like in Tuitions and IT education.
- Encourage small enterprises to take ITI apprentices at nominal charges (minimum wages should not apply here)

Review of the earlier studies infers that the information on disadvantaged groups in VET system is inadequate. VET specific studies do not provide information on the disadvantaged groups. Specific studies on the disadvantaged groups do not focus on the VET system. For example, Hasan and Mehta (2006) examined the status of SC/STs in colleges and Parikh and Sukhatme (2004) investigated about women engineers. However, there is one exception, a study conducted by the National Institute of Educational Planning and Administration (NIEPA) in 1981-1982 on SC / STs in ITIs.

NIEPA conducted a quantitative study on scheduled castes (SCs) and scheduled tribes (STs) in ITIs for the Ministry of Human Resource Development, Govt. of India. The

study was conducted among 15 ITIs spread across five states, Andhra Pradesh, Bihar, Gujarat, Madhya Pradesh and Maharashtra. Primary tool of data collection was questionnaire, which was supplemented by secondary data from the government agencies.

Following are the important findings of the study:

- Seat utilization is better among SCs than STs. Underutilization by STs is mainly due to negligible population in the districts where ITIs are located. Sometimes SCs over utilize the reserved seats, due to presence of higher proportion of population in ITI locations.
- SC/STs prefer trades that do not require science in the school. SC/ST students are admitted in any trade once they fulfill the basic requirements. They are not given any guidance on trades and requirements.
- There is low internal efficiency among SC/STs. Major causes of drop outs are employment before completion of training, low learning abilities, lack of interest in studies, and financial burden. There is no difference between SC and others in drop out patterns.
- Unemployment is higher among SC/STs than general category students, and highest among ST pass outs than SC.
- SC / STs do not prefer self employment.
- Stipend disbursal is not done in time, and not uniform across the ITIs, and perceived as inadequate by the SC / STs.
- Hostel facilities are limited, and have poor infrastructure.
- Seats reserved for SC/STs are underutilized in north eastern regions & West Bengal which needs to be explored by future studies.
- Particular caste groups within SC dominate, which needs further investigation.

Though the NIEPA study is an important one in understanding the status of SC/STs in ITIs, it has few limitations. It does not provide any details on women, which is also an important disadvantaged group. SC/ST trainers are not covered by the study. It was conducted in 1981-1982, and there is a need to examine the present status of

disadvantaged groups in ITIs. Also national level data on the disadvantaged groups in ITIs is not available for any kind of secondary analysis.

Research at the global level on the disadvantaged groups (Neuman and Ziderman, 2003; Lankard, 1994; Rodgers and Boyer, 2006) infers that differences exist between gender and various racial groups in vocational education. In developing countries where unemployment is high and informal labour market dominates, vocational education does not enhance the economic welfare of the minorities. Family environment determine the entry of minorities. Children of working class parents prefer vocational education and enter the labour market early. In general, number of minority VET teachers / trainers is declining, which result in absence of threshold number of role models at the learning environment for the minority students. Also, trade preferences vary across gender and racial groups.

## Section 2: Methodology

In the light of the above discussions, the present study examined the following research questions:

1. Why do disadvantaged groups join ITIs?
2. What is the internal efficiency among them?
3. How is the learning environment for them?
4. What are their career plans and actions?
5. How is the work environment for the trainers from the disadvantaged groups?
6. What are the variations within different disadvantaged groups?

The present study focuses on scheduled castes (SCs), scheduled tribes (STs), and women among various disadvantaged groups. According to 2001 census, their contribution to the total population is: SCs 16.2 %; ST 8.2%; and women 48%.

Primary data was collected from 15 ITIs spread across four states Rajasthan, Karnataka, Assam and Chattisgarh. Sample is selected based on the region, significant proportion of SC/ST population, development status (indicated by the net domestic product), and proportion of public and private ITIs. Except Rajasthan, other states are not covered by the earlier studies. Since no other state fulfilled the above selection criteria in western region, Rajasthan is selected. Also, Assam and Chattisgarh are under developed states when compared to Rajasthan and Karnataka (Table 2).

Table 2: Sampling Frame

State	Region	Proportion in the population (2001) <sup>1</sup>		Net State Domestic Product <sup>2</sup>	Public: Private ITIs	Sample ITIs
		SC	ST			
Rajasthan	West	17.2	12.6	57750	91:45	5
Karnataka	South	16.2	6.6	71672	131:610	4
Assam	East	6.9	85.9	18004	24:3	3
Chattisgarh	North	11.6	31.8	18276	80:57	3

<sup>1</sup> At the national level, SC is 16.2 % and ST is 8.2%, 2001 Census

<sup>2</sup> Indian rupees crores, at the factor cost and constant prices with base 1983-1984.

In each ITI, focus group discussions were given priority to collect information from the trainees. In-depth, semi structured interviews were conducted, if adequate number of members for the discussion was not present. In-depth, semi-structured interviews were conducted with the principal, local community leaders, and industry representatives (see Table 3).

Table 3: Sample Distribution

	States				Total
	Rajasthan	Karnataka	Chattisgarh	Assam	
No of ITIs	5	4	3	3	15
<b>Focus Group Discussion (12)</b>					
Men	3	2	0	2	7
Women	1	3	0	1	5
<b>In-depth Interviews (85)</b>					
SC Trainee Men	1	2	3	0	6
SC Trainee Women	1	1	1	1	4
ST Trainee Men	0	1	0	0	1
ST Trainee Women	3	0	3	1	7
Open Men Trainee	0	1	0	0	1
Open Women Trainee	1	1	0	0	2
Ex-Trainee	2	1	2	0	5
Principal	3	3	3	2	11
Men SC Trainer	4	4	1	3	12
Women SC Trainer	1	1	3	1	6
Men ST Trainer	3	1	1	1	6
Women ST Trainer	1	0	1	0	2
Open Men Trainer	3	2	0	3	8
Open Women Trainer	1	1	1	0	3
Others	3	3	2	3	11

Notes:

1. Size of the focus groups discussion is eight in ten cases, six in one case and nine in one case. Due to lack of members from a particular group, SC or ST, both groups participated in all discussions.
2. Among ex-trainees, two were not working. All of them belong to any one of the disadvantaged groups.

Our attempts to contact the non working trainees and more number of employers (only two in the sample) were not successful. In two situations, information was collected based on in-depth discussions with three respondents at the same time. In one mixed ITI, focus group discussion with women trainees was conducted. Importance was given to only disadvantaged groups in the sample. Using an inventory, enrolment details of SC,

ST and women were also collected. Questionnaire, which is also used as focus group discussion guide, and the inventory are attached as Annexure B.

In order to elicit valid and reliable information, we promised the sample ITIs and respondents to protect their identities in the final report. Sample ITIs were selected randomly by the relevant VET state government bodies as directed by the DGET.

## **Section 3: Findings**

The study will present the findings that are directly related or affect the disadvantaged groups. It corroborates the findings of the NIEPA study, and highlights new issues that are related to participation of disadvantaged groups in ITIs.

The present study echoes the problems presented by the earlier studies about the overall ITI situation: poor linkage between training imparted, and local and national market demands; poor and outdated machinery and infrastructure; inadequate funding for purchase of raw materials; staff shortage; and uneven distribution of number of trades. These problems need to be addressed at once, as they deeply affect the overall ITI system including all categories of trainees and trainers. The existing problems have far reaching impacts on the disadvantaged groups.

### **3.1 Determinants of ITI enrolment of the disadvantaged**

ITIs are last resort for the disadvantaged groups in their educational preference. With passing marks in tenth standard they enter the 11<sup>th</sup> standard, if possible. If they are able to pass the 12<sup>th</sup> standard public exam, they enter the colleges. If they are not able to get 11<sup>th</sup> standard admission or fail in 12<sup>th</sup> standard, they try to enter polytechnics. Overall, after their failed attempts in all the domains, they enter the ITIs.

Majority of SC/ST trainees join the ITIs without any prior knowledge based on the information received indirectly from a person at the village. Even though they are not willing to join, family members force them to do so. There is a strong perception that a degree or a diploma or a certificate in addition to school education will fetch them public employment. As trainees are too young to take decisions related to selection of streams, parents take decision. Failure of the trainees to enter or pass other educational streams result in low confidence in studies and they reluctantly join the ITIs.

Majority of the trainees select trades based on common trend, not on any evaluation or judgment. Fitter and miller grinder trades are most preferred followed by electrician and electronics trades. For instance, welder trade is not preferred despite the market demand. They feel that welding trade will harm their eyes.

Though none of the SC/ST trainees mentioned about the stipend as one of the motivating factors to join ITIs, there is common perception among the trainers that stipend is one of the significant determinants.

Especially among urban ITIs, parents or close relatives of the trainees have studied in ITIs and possess information about the ITIs and the possible employment opportunities. These trainees join ITIs willingly and are aware of the career opportunities available for certain trades.

### **3.2 Internal efficiency among disadvantaged groups in ITIs**

Internal efficiency is measured using three indicators (Gasskov, 2003): Utilization of the ITI seating capacity (per cent of the total number of sanctioned (planned) training places filled at the time of enrolment); Student retention rate (per cent of students who appeared for a trade test out of those enrolled at the beginning of the course); and Student graduation rate (per cent of students who passed the trade test out of those appeared for the trade test). Observations from the present study conclude that internal efficiency is low among the disadvantaged groups (Table 3). Though the study attempted to examine the internal efficiency for the year 2004, scarce data furnished by the sample ITIs did not permit required investigation, and the analysis is done for only 2005.

Earlier research among all trainees in three states (Gasskov, 2003) shows that seat utilization rate varies from 77% to 102%. Each state has separate reservation quota for SC / STs. Percentage of reservation for SC-ST in Rajasthan is 16-12, for Karnataka 15-3, Assam 7 -15, and Chattisgarh 15-21. SC/ST -Percent of enrolment rate should be compared with the respective states.

In the sample (see Table 4), seat utilization for the disadvantaged group varies from under utilization to over utilization. Among the 15 sample ITIs, SCs underutilized their seats in seven institutes, over utilized in four, and in three institutes they filled exactly. STs underutilized in eight institutes, over utilized in four, and exactly filled the seats in two places. Women underutilized their seats in eight of the nine mixed ITIs. Thus, the study indicates that the seat utilization is low among the disadvantaged groups. It is low in government ITIs, and negligible in private ITIs.

Seat under utilization is more prevalent at the private ITIs. Private ITIs have autonomy in admission of the candidates in various trades. Their insistence on meritorious entry of the candidates acts as a barrier for the disadvantaged groups, especially SC/STs. Other forms of barriers are no government stipend, non free hostel facilities and higher tuition fees. Private ITIs admit that disadvantageous groups are underrepresented in their institutes and having problems in filling the reserved seats. In public ITIs, seat under utilization is due to negligible number of candidates from the disadvantaged groups present in the location of ITIs. It is also dependent on nature of trades offered. If the trades are not women oriented (for example, welder), women representation is low.

Over utilization is observed among ITIs, especially public, that are located in the regions where particular group is dominant in number. Seat utilization rate among women is also dependent on the nature of trades offered at the institutes. Women do not prefer trades like fitter and welder. In the sample ITIs, number of trades offered varied from two to fifteen which do not permit cross comparison of trades across the institutes.

Earlier research showed (Gasskov, 2003) that percentage of retention rate for all categories of trainees ranges from 68.3% to 85.6%. In the sample, it ranges for SCs between 55-100; STs 47-100, and women 25-100, with median percentages 82, 80 and 81 respectively. 100% retention rate needs to be treated as an outlier, since the number of student enrolled is very low (two or three). The general perception is that retention rate is lower among the disadvantaged than others.

Table 4: Internal Efficiency of Disadvantaged Groups in ITIs in 2005

Region	Type of ITI	Total Seats Sanctioned	% of Seat Utilization Rate <sup>2</sup> (Enrolment / sanctioned seats)			% of Retention Rate (Test Appearance / Group Enrolment)			% of Graduation Rate (Test Pass / Test Appearance)		
			SC	ST	Wom	SC	ST	Wom	SC	ST	Wom
West / Rajasthan	GW	42	31.0	7.1	69.0	76.9	66.7	51.7	70.0	100.0	60.0
	P W	57	0.0	0.0	50.9	ze	ze	86.2	ze	Ze	92.0
	Gov	330	10.3	49.4	1.2	55.9	47.9	75.0	21.1	53.8	66.7
	Gov	284	5.6	57.7	1.4	62.5	60.4	25.0	70.0	57.6	100.0
	Pvt	76	3.9	2.6	0.0	100.0	100.0	ze	100.0	100.0	Ze
South / Kar	Pvt	92	2.2	0.0	26.1	0.0	ze	100.0	0.0	Ze	100.0
	GW	40	25.0	0.0	45.0	100.0	ze	100.0	80.0	Ze	77.8
	Gov	428	15.9	4.0	9.3	88.2	82.4	100.0	31.7	21.4	67.5
East / Assa	GW	64	7.8	12.5	40.6	60.0	87.5	76.9	100.0	100.0	100.0
	Govt	284	10.2	10.2	7.0	89.7	79.3	60.0	76.9	73.9	91.7
	Pvt	32	3.1	53.1	0.0	100.0	94.1	0.0	100.0	100.0	0.0
North / Chat	Gov	136	19.1	19.1	4.4	96.2	84.6	100.0	68.0	68.2	50.0
	GW	100	16.0	7.0	72.0	75.0	85.7	94.4	41.7	0.0	41.2
	Govt	576	11.1	7.6	1.4	100.0	100.0	100.0	10.9	13.6	0.0

Notes:

1. All the disadvantaged groups should be treated separately. In mixed ITIs, there could be SC or ST within women and vice versa. In women ITIs, 'women' indicate general category. Since the sample size is small, detailed analysis at the sub- group level is not followed. *Nevertheless, this is a limitation of the study.* One institute is not presented in the table due to inadequate data.
2. Each state has separate reservation quota for SC / STs, and 25% of seats are reserved for women in general ITIs in all states. Percentage of reservation for SC-ST in Rajasthan is 16-12, for Karnataka 15-3, Assam 7 -15, and Chattisgarh 15-21. SC/ST Percent of Enrolment rate should be compared with the respective states.
3. GW – Government / Public Women; Gov – Government; Pvt. – Private; P W – Private Women.
4. ze – Zero enrolment.

According to the earlier research (Gasskov, 2003), graduation rate varies between 62.9% to 88%. In the sample, the range is between 0-100 for SC, STs and Women, with median percentages 69, 57 and 67 respectively. Extreme values are due to either no enrolment or very small number of trainees (two). In general, women and ST are having better graduation rate than STs.

Retention and graduation rate is better in private ITIs than public ones. Barriers to entry to the disadvantaged groups, as mentioned earlier, permits only meritorious trainees to enroll at private ITIs. This in turn, results in better retention and graduation rates.

The findings corroborate the conclusions reached by the NIEPA study that the internal efficiency is low among the disadvantaged groups.

Most of the dropouts happen within first six months of the enrolment, with higher incidence in the first three months. Following are the three major causes for the dropouts: Alien pedagogy and curriculum; weaker economic status, and home environment.

### ***Alien pedagogy and curriculum***

Mode of teaching and nature of curriculum at the ITIs is different from the school system. Trainees are expected to understand the concepts which are applied in the practical classes. Most of the concepts are new and hard to learn for the trainees. Practical classes are found to be relatively manageable than the lecture classes. Handling machines are perceived easier than understanding theoretical concepts.

Trainees are required to take notes in the theoretical classes, and need to rewrite clearly in their class note books. Rewriting notes or preparing laboratory reports involves lot of time and effort. In one ITI, women trainees wanted to drop out because of writing workload.

As mentioned earlier, trainees from the disadvantaged groups who enter ITIs are residues from other educational options. Also, they are forced to take up ITI education which they are not interested and do not know what is expected out of them. As a result, these trainees do not put in additional efforts to compensate their inadequacy when compared with others.

In the first level, they found it difficult to cope up with the new teaching method and curriculum. Even if they are willing to work hard and spend extra time and energy, home environment and economic status are not permitting.

### ***Home environment***

Most of the SC/ST trainees are from poor households which expect labour time from them. Trainees are expected to help their parents in household and home-based income generating activities (agricultural land, animal husbandry etc) in post institute hours, if they are available at home. Parents do not recognize the importance of homework and need for extra work of their wards. This leads to trainees spending less time on their studies. Subsequently their performance in the class is poor, resulting in dropouts.

There is prevalence of early marriage among SC/ST trainees. In some cases of ST and women, child marriages, some at the age of 6 years, are common. This leads to increasing responsibilities in terms of taking care of spouse and other family needs. Also there is pressure to support the home economically. When they find some employment in the local informal sector, they drop out of the ITIs.

### ***Weaker economic status***

Weaker economic status of the SC/ST students causes dropouts in many ways. Poor economic status of the trainees forces them to opt for public ITIs for at least two reasons: free education and stipend. However, most of the trainees need to travel long distance everyday to reach their institutes. In some cases, trainees travel up to 80 kilometers per day. They use combination of multiple modes of transportation, bicycle, walk and public transport buses.

Trainees depend on public transport services, as they are cheap and subsidized or free. Even otherwise, they are preferred as private buses are not economical to the trainees on everyday basis. Irregular and delayed services hamper the full attendance of the trainees. They miss classes often, and pressure to finish the forgone class work at home increases. Given the non conducive home environment, their performance is affected badly. Also, they are not able to stay back at the institute in the post-class hours to attend extra classes or clarify doubts with friends, as they need to catch the 'last bus' to go home.

Cost of purchasing required books and stationeries during the training period is relatively high for the poor SC/ST students. This cost is additional to the transportation and opportunity cost to the family. The stipend provided by the government is too small (Rs. 100 from the central government + stipend from the state government) to meet the cost incurred. Also stipend disbursal is delayed all the time. In some cases, stipend is still six months due for the already graduated students. In one region, stipend disbursal is eighteen months delayed. Principals of the sample ITIs opined that state government agencies are delaying the stipend disbursal. A state representative during discussion of the report at the workshop organized by the DGE&T, disagreed, and said principals do not send the list of SC/ST trainees, in time, to the government for stipend disbursal.

With lack of institutionalized educational lending, ITI education of the trainees becomes a financial burden to the family. This also results in dropouts.

Hostel facilities are not available in all public ITIs. They are smaller in number than the required. Wherever they are available, hostels have poor infrastructure and not managed properly. In one case there was no warden and trainees are left to manage themselves. There are security problems as the hostel becomes target to the local thieves and non social elements.

Free public hostels meant for SC/STs and women who study in colleges are not open for ITI trainees. Staying privately, taking up rooms nearby ITIs is very expensive to the trainees. Also food is not given at the hostels and trainees need to cook themselves or buy from outside. Given the poor condition of the family, these options are not affordable.

### **3.3 Learning environment**

Trainees feel that mode of teaching and curriculum is completely different from their school education. There is lot of individual responsibility and more homework needs to be done. Practical classes are relatively easier than theoretical ones.

Trainees are satisfied with the trainers / faculties, also called as junior training officers. Mostly, trainers are open for discussion or repeat teaching for the weak students outside the class hours.

Trainees do not face discrimination because of their lower social status. In some cases, SC / ST trainees themselves feel inferior about themselves. In particular, trainees those who come from villages and tribal belt take time to interact with their classmates. This reluctance is present during first six to nine months of their training period. After this initial phase, their interaction with other classmates who are from other upper social groups is normal, and there is no feeling of discrimination. In very few cases, when a SC / ST and an upper caste trainee from the same village study together, it takes longer time to reach the normal interaction. This is due to continuance of village level stratification at the institute level.

Trainers feel that there is no difference between a general category trainee and a disadvantaged one after the initial phase (six months to one year). In few cases, SC / ST trainees are one among the toppers of the ITIs.

In few cases, trainers observed small degree of indifference among the men disadvantaged trainees when compared to the general ones. Indulging in bad habits like smoking, and unruly behavior in the classrooms is high. There is high degree of disinterest in attending classes and completing the homework. Also missing classes, and still be visible in the campus is also prevalent among them. On trainer commented that these trainees have joined the ITIs only for the stipend money and not for learning.

Disadvantaged trainees do not have role models in the form of trainers. Majority of the trainers are not from the disadvantaged groups (see Table 4). Research (Lankard, 1994) shows that teachers from the same social category understand the students' ability and social environment. Their presence as role models for minorities greatly enhances the performance and career aspirations of the students.

Table 5: Trainers from the Disadvantaged Groups

Region	ITI Type	Total Trainers	Percentage of Trainers		
			SC	ST	Women
West / Rajasthan	Govt. Wo	14	0	0	21
	Pvt Wo	4	0	0	75
	Govt	19	0	0	11
	Govt	15	13	7	7
	Pvt	10	20	0	0
	Govt	55	24	2	18
South / Karnataka	Govt Wo	8	25	0	13
	Govt	55	24	2	18
East / Assam	Govt Wo	8	13	13	38
	Govt	35	9	11	9
	Pvt	3	0	0	0
North / Chattisgarh	Govt	13	23	23	8
	Govt. Wo	8	12	0	75
	Govt	17	6	6	0

Note: All the disadvantaged groups should be treated separately. In mixed ITIs, there could be SC or ST within women and vice versa. In women ITIs, 'women' represent general category. Since the sample size is small, detailed analysis at the sub- group level is not followed. Nevertheless, this is a limitation of the study. Two institutes are not presented in the table due to inadequate data.

Sample infers that number of trainers from the disadvantaged groups is small in the ITIs. It ranges from zero percentage to 25% for SC. For ST, it ranges from 0% to 24%, and for women it is 0% to 38%. While fulfilling the positions reserved as per the government rules, SCs they did not fulfill in nine ITIs out of thirteen, and STs did not fulfill in ten cases. In mixed ITIs, if the trade is not women centric, representation of women trainers is lowest. In two cases, women compose 75%, out of which one case has a total of four trainers, and the other one is women ITI which offers purely women oriented trades like tailoring, sewing, stenography etc.

Also, number of vacancies available in the sample ITIs is small (12), and out of vacant positions, none is reserved for the disadvantaged groups. Out of six part time trainers employed by the sample ITIs, only two are women and none is from SC/ST category.

In one case, trainers are irregular in teaching classes. There trainees complained of very few classes and poor understanding of the subject by themselves and the trainers. As per the trainees, principal was not punishing them due to trainers' political connections.

### 3.4 Career Aspirations and Trends

Excluding rare cases, all SC / ST trainees are interested in public employment. In fact most of them have joined ITIs to get the 'certificate' which is essential to get the government job, especially in railways. Private employment is preferred next and will be taken up as a temporary arrangement till they receive the public employment.

Earlier research (Gasskov, 2003) shows that successful employment of all social categories graduated trainees vary from 16% (Orisaa) to 41% (Maharastra). Within the employed graduates, utilization of skills learned at the ITIs varies from 27% (Andra Pradesh) to 80.5% (Maharastra).

Excepting for the ITIs that are located nearby the industry, employment opportunities for the graduates are few. There are cases of inter state migration in search of employment. Trainers and heads of the ITIs told that SC / ST graduates work in the private sector if they do not get government jobs. Most of their employment does not utilize the skills learnt.

In some regions, they strongly felt that training offered in the ITIs is not able to fetch employment at the local markets, and is not suitable to get jobs easily. However, one employer opined that basic knowledge imparted at the ITIs forms the platform for further training in the job. Disadvantaged, especially SC/STs, trainees actively look for apprenticeships during their training period, and nearly half of them do not get due to low marks.

In many cases, they do not find employment anywhere and they will return to their native places. Principals and trainers were not able to comment on the pattern of their employment status, but few opined that unemployed trainees would continue the family occupations or work in informal markets where their training is not utilized.

Public employment is preferred because of the job security, and remuneration is perceived as adequate. Trainees do not select the trades based on their evaluation of market demand. Their mode of trade selection is arbitrary and not driven by any market demand evaluation. For instance, welder is not preferred as it will harm their eyes. Their awareness about the employment opportunities is inadequate and they do not have any clear career plans. Though they are focusing on the public employment, they do not know what kind of jobs are available to what kind of trades, and when jobs will be notified.

Government of India is aware of the problems related to career among SC/STs, and has established Coaching-cum-Guidance center for SC / STs (CGC) in 1969. There are 22 centers located across India. ITIs are also covered under CGCs. Given the size of CGCs, it is nearly impossible to cover all the SC/ST graduates in the ITIs. Very small amount of trainees remembered the visit of career counselors, and are not able to recollect what they were told. Overall, career guidance to the trainees is almost absent.

In one case, ST trainees have problems in getting caste certificate from the government owing to problems in the existing policies. ST trainees strongly feel that they are not able to get public employment due to non possession of caste certificate.

In eastern region, trainees are not looking for government jobs. Though they prefer public employment as a top priority, their hope of getting one is minimal. Private or self employment is considered seriously as a career option.

### **3.5 Work environment for trainers from the disadvantaged groups**

As mentioned earlier (Table 4), trainers from the disadvantaged groups are less in numbers when compared to the other category in the sample ITIs. Still, they do not feel discriminated in the work environment. However, it is interesting to note that, at the higher hierarchical level their presence is thin. None of the principals in the sample belong to the disadvantaged groups, SC / ST and women. Even the principals of the women ITIs are not women.

Trainers opt for teaching career at the ITIs if they don't get better government jobs. Most of them have worked for a year or two either in a private organization or a lower government job. They will migrate to better government jobs, if offered. In a very few cases, trainers felt that current employment is good enough to continue, as there is job security.

There is overall job dissatisfaction due to five major reasons: slow promotion, low salary, insufficient raw materials to run the machinery, inapplicability of the refresher courses, and additional responsibilities. The reasons of job dissatisfaction are more or less similar across the trainers, and not exclusive to the disadvantaged groups. Most of them felt that their promotions are slower. Very rarely, trainers become vice principals or principals.

Basic salary offered to the trainers is low. One trainer complained that Rs. 3000 as basic salary after ten years of experience is not good remuneration for the work they are doing. Trainers also face problems in running the workshops as they are not able to get sufficient raw materials in time. Funds received from the government are inadequate. One principal noted that he receives 0.1 million rupees per annum (one lakh) to run the workshops, while the required money is 0.4 million (four lakhs). This problem is restricted to the public ITIs. Fees collected from the students are deposited as revenues to the government, and are not under the discretion of the principals.

In few cases, applicability of the refresher courses is problematic for the trainers. During the refresher courses they were exposed to new machinery in the multimedia screens not on- hands. They face problems when they need to handle the machines themselves in the initial phases. Some times it leads to non-use of the machinery. Also lack of infrastructure at the ITIs to hold the new machinery also leads to the non-use.

Trainers also feel that they are overburdened with other responsibilities, due to Lack of recruitment at the state level. In some cases, there are only three trainers to run two trade courses. Number of vacancies approved by the government is less, and none of them is

reserved for SC/STs. According to the principals, the state government has either stopped or postponed recruitment of new trainers, irrespective of the group.

There is general reluctance among general category trainers to discuss about SC/ST trainers. Few of them felt that promotions are relatively faster among SC/ST trainers, and are given undue 'special' treatment by the government.

### **3.6 Variations within disadvantaged groups**

#### ***Women and Others***

Women exhibit similar behavior in opting for VET career like men. ITIs were the last resort after their failed attempts to enter or pass other educational streams. They and their parents do not have direct information on the nature of educational system, especially related to trades and employment opportunities. They join ITIs based on indirect information received from their domicile. They perceive that ITI certificate will fetch them government jobs. One more reason, though not predominant, for women to join ITIs is to raise their value at the marriage market. A woman with an ITI certificate is considered to be a prospective revenue earner.

There is high degree of married women opting for trades like tailoring, and computer operator. Due to reasons like, heavy financial demands, destitution, and dependency on parental homes, they join ITIs to become economically self independent. Though they also prefer government jobs, they are clear about possibilities of earning money through self or private employment. Existing rule that there is no maximum age limit for women for enrollment is well utilized by these women.

Reasons for dropouts are same as men, with marriage as one of the additional important reasons than men. Their continuation in ITIs is also dependent on the marital home.

Perceptions about the learning environment are same as men. Theoretical classes are difficult than practical classes. In women ITI, SC / ST women felt discriminated in the

class rooms as they were ignored by the classmates. They do not interact with upper caste women and have their own caste based groups. It appears that women tend to carry on the outside societal value systems within classrooms more than men. However, similar behavior was not observed in other regions and mixed gender ITIs. Trainers do not exhibit any bias against SC / ST students.

Trainers do not feel any difference between women and other trainees in learning ability and class room behavior. In ITIs located in the developed regions, women are considered to be more studious than men. This is also reflected in the better graduation rate of women when compared with others.

Women feel that men dominate in the workshops or practical classes. Most of the time, the machinery is under the control of men trainees, and women are forced to do the work after men complete their work. This is prevalent on trades where there are mixed trainees. This problem is not expressed by women who are studying women dominating trades like sewing and tailoring. Though this is not serious problem which may lead to dropouts, but women perceive it as one of the significant ones in the ITIs. Trainers knew that this problem exists, but they do not consider it as a serious problem to be addressed.

Women trainees are asked to commute from home rather than staying at hostels, by their parents. Though women also travel around 20-30 KMs per day to attend classes, there may be women who did not join ITIs due to long distances. However, this is not the case among urban, non-poor SC/ST women trainees who are permitted to stay in hostels wherever available.

Women tend to join government jobs or private jobs after their training, owing to 33% reservation in the public organizations. There is high incidence of self employment among married women in the tailoring trade. Those who join computer operator trade receive employment from government and private organizations. Women's decision to work is also determined by her marital home.

Women trainers are less in number like other disadvantaged groups. Their perception about the work environment and reasons for dissatisfaction are similar to men. They do not feel discriminated by the men in their workplace. In few cases, women feel motivated to take additional responsibilities, which are encouraged by the ITIs. Few women trainers commented that they are given 'extra care'.

In mixed ITIs, infrastructure is adequate for women. In general there is a perception among women trainees that rest rooms are not properly maintained. However, researchers observed that even men toilets are not equally maintained.

### ***SC and ST***

There are no distinct differences between SCs and STs in the ITIs. The differences between these two groups reflect the general educational achievement trends in India, with SCs are doing better than STs (Hasan and Mehta, 2006; Xaxa, 2005). STs are more in numbers where ITI is located in the tribal belts. Early age marriages are more prevalent among STs than SCs which also leads to dropouts. There is no visible difference between SC and ST trainers on work environment experiences.

### ***Poor Rural and Urban non-poor***

The differences between poor and non-poor disadvantaged groups are clearly visible. Majority of the non-poor are located in urban localities, hail from household whose father or parents are doing non agricultural work. Trainees from this particular background, non-poor urban (NpU), have greater awareness about the VET system. NpU trainees are dominant in ITIs that are located in urban localities, and smaller in number in rural ITIs. They have been directed by the father or a close relative to join ITIs. These direct and close advisers are either ITI graduates themselves or closely working with ITI graduates.

NpU trainees have a supporting home environment which does not expect any additional inputs in terms time and money. In some cases, NpU trainees are better than general

trainees in economic status and performance at the ITIs. In one case, NpU SC trainee is one among the district toppers.

NpU trainees are also clear about the nature of trade they are interested in studying. They point out the employment opportunities available to the particular trade. In some cases, they travel to nearby districts to study the desired trade. In few cases, they also try exerting indirect pressure on the ITI administration like money, and recommendations from political parties to get the desired trades.

Their career plans are also clear. They look out for apprenticeship during their training. However, public employment is a priority, but they are not averse to the private employment. In certain trades like in electrician and electronic mechanic, self employment is kept as a last option.

They do not experience the cost burden of the training while commuting, staying in paid accommodations, and purchasing stationery. Private ITIs are also open to them as they can the higher cost of training.

On the other hand, trainees from rural and poor background (RP) are at the disadvantageous position. They are dominant population in ITIs that are located at the rural localities and smaller in number in urban ITIs. They knew little about ITIs before they join, due to home pressure. They struggle to understand the alien pedagogy and curriculum. However, they are able to cope up after a period of time through imitating their classmates and learning from them.

Opportunity cost of training for rural disadvantaged trainees is high in addition to the cost of traveling and buying required study material and stationery. The trainees do not know the nature of employment opportunities available to them. Location of rural ITIs which is far away from industrial centers, increases the cost of job search.